OFFICE OF THE PROVOST AND
EXECUTIVE VICE PRESIDENT FOR ACADEMIC AFFAIRS

OFFICE OF THE PRESIDENT
1111 Franklin Street, 12th Floor
Oakland, California 94607-5200

April 8, 2019

ACADEMIC COUNCIL CHAIR ROBERT MAY

Re: Research Grants Program Office (RGPO) Review

Dear Robert:

As you know, last year President Napolitano announced she would like to begin the consultation process on whether and how to transition selected systemwide programs to campuses. As part of that process, I have led a review of the Research Grants Program Office (RGPO) to gain a better understanding of its current state and determine the best options for RGPO's future.

I have now completed that assessment and would like to share with the Academic Senate the report for review and feedback. This report was developed based on interviews with and data collected from various stakeholders, including RGPO staff, current and former chairs of research program advisory and oversight committees, Vice Chancellors for Research, as well as other stakeholders. It was refined based on feedback from the RGPO leadership team.

This report contains both a detailed current state assessment and a proposal for the future state. The current state assessment comprises my understanding of RGPO's mission, history, ongoing programs, organizational structure, and financials. It includes several suggestions for how RGPO and its situation could be changed to better meet its mission and ends with a proposal for the future of RGPO, including a vision, set of goals, and changes necessary to meet those goals.

I would appreciate receiving the Academic Senate's comments no later than **July 8, 2019**. Please submit your comments to provost@ucop.edu. If you have any questions, please contact Kimberly Peterson at Kimberly.Peterson@ucop.edu or (510) 587-6303.

Thank you again for your time and attention to this matter.

Appreciatively,

Michael T. Brown, Ph.D.
Provost and
Executive Vice President for Academic Affairs

Enclosure: Research Grants Program Office Current State Assessment Report, February 27, 2019

Cc: Vice Chair Bhavnani
       Vice President Ellis
       Associate Vice President Nelson
       Executive Director Aoki
       Executive Director Baxter
       Chief of Staff Peterson

Research Grants Program Office

Current State Assessment Report

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LETTER FROM PROVOST MICHAEL BROWN

OFFICE OF THE PROVOST AND
EXECUTIVE VICE PRESIDENT FOR ACADEMIC AFFAIRS

February 27, 2019

Dear Colleagues,

At President Napolitano's direction, I initiated an extensive assessment of the *Research Grants Program Office* (*RGPO*) in August 2018. Over the past year, many members of our community including the Board of Regents, campus leaders, and external stakeholders expressed interest in understanding *RGPO's* grant operations better, especially as its budget grew to be more than one-sixth of the total budget for the UC Office of the President. I sought to understand the current state of *RGPO* and to understand what our community members felt should be maintained, improved, and changed in the future.

This document is an initial draft of that assessment and includes detailed information on *RGPO*, based on over 50 interviews and a substantial reading of background materials. This document also includes a high-level proposal for the future of *RGPO*, which is based on findings that were identified during the interviews and data analysis. This proposal is not intended to cover every detail, and it is not a formal decision. However, I believe it provides essential information and data for informing consultation with my colleagues and stakeholders from across the University and for working with President Napolitano to formalize a decision on the future of *RGPO*.

Several things are clear to me at the conclusion of this review. *RGPO*, and the broader UC Office of the President, has been put in a difficult situation over the past few years. The State has provided significantly more funding for its research programs at the same time that staffing levels have been constrained and the budget for the UC Office of the President has been publicly scrutinized. The fact that *RGPO* has been able to manage the influx of new funds for grant competitions with minimal increases to its expenses and headcount is a testament to its staff and leadership. The State and the UC system has been well served by their ability to handle this difficult situation and continue maintaining their high standards.

It is also clear to me that *RGPO* can and should be a central engine of growth and grant-making that attracts additional resources to the UC system and advances our tripartite mission of research, teaching, and public service. We have not yet begun to scratch the surface of potential for *RGPO*, and potential for *RGPO* means potential for the UC system and the State of California. How we leverage and scale *RGPO* to achieve that vision is a difficult question, but one that I attempted to address in the proposal at the end of this report.

Also, this assessment was at least partially initiated to help determine the most appropriate administrative home for *RGPO*. I discussed this topic with the Chancellors and Executive Vice Chancellors/Provosts from all ten UC campuses, and my team collected perspectives from stakeholders across the UC system and the State. It is clear to me from these conversations that *RGPO*, as a central resource for the UC system and the State of California, should be connected and operated by the UC Office of the President. While *RGPO* could function and operate in a different structure, doing so would reduce its efficacy and perceptions of its impartiality. Most members of our community made it clear that *RGPO* should remain exactly where it currently is, and I believe that we should listen to our community.

During this assessment, we also identified several necessary changes that should help *RGPO* scale and grow in the future:

- **Financial Stability**: As will be clear in this report, *RGPO's* core statewide programs will likely face diminished funds in the coming years and our systemwide programs risk decreased funding due to limited State appropriations for the UC system more broadly. We must identify other means of raising funds and developing new funding streams to counterbalance these decreases.
- **Flexibility**: *RGPO* needs to adapt its current organizational structure and staffing model to be able to easily change its priorities and activities based on changes to funding or stakeholder feedback. Flexibility must be ingrained in the culture and operations to ensure *RGPO* can provide the maximum value to the UC system and the State.
- **Accountability & Transparency**: Though most stakeholders spoke highly of *RGPO*, many noted that its operations and finances were unclear or difficult to assess. I know that *RGPO's* staff are extremely dedicated and qualified and go to great lengths to comply with regulations, policies, and stakeholder feedback. However, we clearly must highlight those attributes for stakeholders across the State and the UC system better. I am confident that others will come to the same conclusions I have about *RGPO* if we increase transparency into its operations in the future.

After the conclusion of such a lengthy assessment and report, I am excited. I am excited about the potential for this office – which is already a unique asset in American higher education. I am excited to see how we leverage this office to advance the mission that unites all of us across the UC system. And I am excited to continue to show how we can be both the University of California, *and* the **University for California**.

I want to thank all the individuals who participated in this assessment through thoughtful conversations with me and my team. I also want to thank Vice President Art Ellis from the Research & Graduate Studies department, and Executive Director Bart Aoki, Director Mhel Kavanaugh-Lynch, and Director Kathleen Erwin from *RGPO* for supporting the office and leading it so successfully over the past few years. On behalf of the University of California, thank you.

This report is still a draft, and I would encourage you to contact me with questions and comments. Over the coming weeks, I will be working with President Napolitano and my colleagues across the University to determine the next steps.

Appreciatively,

Michael T. Brown, Ph.D.
Provost and
Executive Vice President for Academic Affairs

EXECUTIVE SUMMARY

The report that follows is a current state analysis of the *Research Grants Program Office (RGPO)* conducted by UC Provost Michael Brown, a team from Academic Affairs, and staff within *RGPO*. The report includes an assessment of *RGPO's* mission, history, ongoing programs, organizational structure, and financials. It includes several suggestions for how *RGPO* and its situation could be changed to better meet its mission and ends with a proposal for the future of *RGPO*, including a vision, set of goals, and changes necessary to meet those goals.

This assessment was conducted over the course of five months, from August 2018 to January 2019, using several methods to collect and analyze data, including:

- **Interviews**: The team interviewed 51 stakeholders across the UC system and external groups,[1] and summarized themes from these interviews which are provided throughout the report;
- **Staff Survey**: The team conducted an internal survey amongst *RGPO* staff to analyze differences in backgrounds, workloads, perceptions, and satisfaction;
- **Data & Document Analysis**: The team collected and reviewed 111 total documents and data sets provided by program stakeholders;[2] and
- **Background Research**: The team researched other large grant-making organizations across the State of California and the United States to identify common practices and comparable metrics.

RGPO's current activities can be summarized into two primary types of research programs and initiatives, which are highlighted throughout this report:

- **State-sponsored research programs and initiatives**, which are available to researchers from any institution or organization within the State of California and focus on topics such as tobacco-related diseases, breast cancer, and HIV/AIDS; and
- **UC-sponsored research programs and initiatives**, which are only available to researchers from the UC campuses, national laboratories, and related entities (like the Agricultural Research Stations) and focus on multicampus, interdisciplinary, and/or strategic research topics.

This assessment identified several significant findings and opportunities, which should be considered when determining the future-state for *RGPO*. These findings include:

- **Growth Constraints**: *RGPO* has received significantly more funds in recent years, but has been constrained in its ability to hire staff to administer those funds;
- **Diminishing Fund Sources**: At the same time, *RGPO's* primary sources of funding are expected to decrease in the coming years due to a diminishing tax base and the impact of inflation;
- **Fixed Internal Costs**: *RGPO's* internal costs for administering research programs are relatively fixed, and are difficult to decrease as funding for research programs decrease;
- **Historical Structure**: *RGPO's* staff have been organized into teams that have not changed much over the past ten years even as funding levels have changed;
- **Complex Data Management**: Complexity in the way *RGPO* and the UC Office of the President track data makes analysis and reporting on the research programs and initiatives difficult; and
- **Limited Career Pathways**: There are few, if any, pathways for *RGPO* staff to grow in the organization over the course of their careers.

Ultimately, Provost Brown and President Napolitano will decide on changes for *RGPO*, and whether to implement the changes included in the ***Proposal for the Future State*** included at the end of this report.

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[1] For more information on the interviewees, see Appendix II: Stakeholder Interviews.
[2] For more information on the data and documents reviewed for this report, see Appendix III: List of Documents and Data.

BACKGROUND

The following sections provide background and context for the **mission**, **history**, and **programs** within the *Research Grants Program Office* (*RGPO*) at the UC Office of the President.

Mission and Purpose

RGPO oversees a broad portfolio of research programs and grants, representing more than 500 active research awards totaling $348 million and approximately $110 million in annual grant payments. These programs are funded by a variety of unique sources and generally seek to:

- Advance research in areas of importance to California, the nation, and the world;
- Provide first-mover advantage to UC and California investigators in areas yet to be prioritized or funded by federal and other larger funders;
- Enhance research capacity and excellence, making it easier to attract and retain outstanding faculty, promote public-private partnerships, and secure federal funding for California-based research; and
- Create opportunities for undergraduate, graduate, and postdoctoral researchers to develop new research and launch successful careers.

The stated mission of *RGPO* is "**funding research to address the most critical needs of California**." Its vision consists of three items:[3]

- Providing leadership in innovative grantmaking; and best practices;
- Ensuring high levels of trust as a steward of public research funds;
- Providing scientific leadership and facilitating research collaborations to advance California.

RGPO plays a unique role for the University of California and the State of California by seeding early stage studies, as well as cross-campus and community collaborations, to position them for success in attracting extramural funding. *RGPO* grants are generally awarded after rigorous peer review and modeled on the institutional best practices of the National Institutes of Health (NIH) and the National Science Foundation (NSF). These federal agencies have annual grantmaking budgets of approximately $30 billion and $7 billion, respectively; *RGPO*'s total budget for FY19 is approximately $118 million by comparison.

In interviews with staff and stakeholders, **some individuals expressed a desire to see a more clearly defined mission and vision statement**. These individuals commented that "a better definition makes this organization more attractive for additional opportunities," and that *RGPO* has a "higher level value of integrity, accountability, and research excellence" that needs to be communicated.

Overview of Programs

RGPO's programs have made significant contributions to scientific advancement, while also helping to recruit high quality talent to the University. Across all of its programs, *RGPO* helps to:

- Identify and foster the highest quality research;
- Share resources and best practices across institutions;
- Support researchers in achieving successful research outcomes; and

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[3] "*About the Research Grants Program Office,*" UC Office of the President, https://www.ucop.edu/research-grants-program/about-research-grants-program-office-rgpo.html.

- Measure and communicate the impact of research at UC and throughout California.

Currently, *RGPO* has six major active programs that fall into one of two categories:
- **Statewide Research Programs (SRPs)**, which are operated by the University of California on behalf of the State, are accountable to large numbers of external stakeholders (including the State Legislature), and make grants to both UC and non-UC researchers across the State; and
- **UC Research Initiatives (UCRI)**, which are a series of internal grant programs operated by the University of California for University affiliates only; UCRI awards are not typically given to researchers outside the UC system.[4]

Statewide Research Programs

All Statewide Research Programs make grants to researchers across the State. Each SRP is supported by its own dedicated team that consists of a Program Director and multiple Program Officers. These programs are summarized in the table below.

TABLE 1: STATEWIDE RESEARCH PROGRAMS

Program	Acronym	Founded	Description	Key Funding Sources	FY19 Budget
California Breast Cancer Research Program *("Breast Cancer Program")*	*CBCRP*	1993	Supports the State's research into the cause, cure, treatment, detection, and prevention of breast cancer. As cigarette use in California has declined, *CBCRP's* funding base has fallen as well.	Cigarette Taxes; Voluntary Tax check-offs	$10.8 million
California HIV/AIDS Research Program *("HIV/AIDS Program")*	*CHRP*	1983	Seeks to foster outstanding and innovative research that responds to the needs of all Californians, especially underserved populations, by accelerating progress in prevention, education, care, treatment, and a cure for HIV/AIDS.	State General Funds (set-aside); previously funded through State budget line-item allocation	$8.8 million
Tobacco-Related Disease Research Program *("Tobacco Program")*	*TRDRP*	1988	Seeks to fund research that enhances understanding of tobacco use, prevention, and cessation; the social, economic, and policy-related aspects of tobacco use; and tobacco-related diseases in California. With the recent passage of Proposition 56 (the Tobacco Tax Increase Initiative), funding for *TRDRP* has increased dramatically.	Tobacco Product Taxes (including e-cigarettes)	$64.4 million

UC Research Initiatives

UC Research Initiatives are a series of programs administered collectively by an *RGPO* team of the same name (UCRI). The UCRI team includes a Program Director and a team of Program Officers, who share

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[4] The *UC National Laboratory Fees Research Program* also makes grants to some researchers at Los Alamos and Lawrence Livermore National Labs who are technically not employed by the University.

responsibilities across, and contribute to, each funding opportunity. Most UCRI opportunities are limited to UC researchers. The table below summarizes the primary UCRI programs.

TABLE 2: UC RESEARCH INITIATIVES

Program	Acronym	Founded	Description	Key Funding Sources	FY19 Budget
UC National Laboratory Fees Research Program ("*Lab Fees Program*")	*LFRP*	2008	Seeks to engage UC faculty and graduate student researchers with UC-affiliated national laboratory scientists, facilities, and resources. Research grants are awarded to collaborations linking UC and national laboratory scientists.	National Laboratory management fees[5]	$15.3 million
Multicampus Research Programs & Initiatives ("*MRPI*")	*MRPI*	2008	Promotes systemwide, collaborative research that strengthens the UC research enterprise. *MRPI* has absorbed regular funding cuts over the past decade, leading to funding success rates that substantially trail those of the NIH and NSF.	State General Funds; previously funded via Systemwide Assessment	$8.4 million
Cancer Research Coordinating Committee ("*Cancer Research Program*")	*CRCC*	1947	Supports faculty seed grants and graduate fellowships in innovative cancer research. It is the oldest grantmaking program at UC; in 2015, its administration moved to *RGPO* from UC Davis.	• Income from bequests (since 1947) • Endowments • Voluntary Tax check-offs (since 2017)	$2.3 million

History

Origins

RGPO's current structure is the product of two major reorganizations over the past decade, which consolidated and reshaped the grant programs that *RGPO* administers today and expanded central service teams to support them. Prior to the first reorganization in 2008, the UC Office of the President hosted multiple systemwide research grant programs that operated under two separate divisions, each with independence and autonomy from the others.

The Office of Research, which existed within Academic Affairs and reported to the Provost, administered the Multicampus Research Units (MRUs). MRUs received funding annually on a non-competitive basis to support established programs that spread across multiple campuses. In addition, the Office of Research provided broad oversight over:
- **The Welfare Policy Research Project (WPRP)**, which was created through special State appropriations after the national welfare reform of the mid-1990s; and

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[5] Funds are derived from the net fee income that UC receives from its participation in the joint ventures responsible for managing the Lawrence Livermore National Laboratory and the Los Alamos National Laboratory.

- The **Industry-University Cooperative Research Program (IUCRP)**, located on the UC Berkeley campus, which administered the *UC Discovery Grant* (a $16 million annual program that offered matching grants to UC faculty who received industry support).

The Office of Health Affairs (the predecessor to the UC Health Division) operated the Statewide Research Programs – then called "Special Research Programs." In 1995, the passage of legislation in support of the *Breast Cancer Program* added a third SRP to the Office of Health Affairs. At that time, the Director of the *Tobacco Program*, Larry Gruder, was asked to take on leadership of all SRPs as the first Executive Director of Special Research Programs.

2008 Reorganization

RGPO was created as part of a broader reorganization of the UC Office of the President in 2008. That year, the UC Regents called on the Monitor Group to perform an external review of the UC Office of the President on the heels of multiple public relations issues, which included the loss of the sole management contracts for Los Alamos National Laboratory (LANL) and Lawrence Livermore National Laboratory (LLNL). The resulting report recommended a significant restructuring and downsizing of the UC Office of the President and recommended consolidating all grantmaking programs into the Office of Research. Responsibility for SRPs was given to the new Vice President for Research, Steven Beckwith. As part of this restructuring, Vice President Beckwith was also authorized to further reorganize the Office of Research.

Vice President Beckwith first sought to evaluate the amount of the Office of Research's funding spent on administration of research grant programs relative to the amount of grant funding sent to campuses and external institutions, and how well the subject matter for the programs aligned with UC's research mission. This initial analysis led to a strategy focused on minimizing overhead costs and creating program teams that reflected the broad priorities of both external funders and UC academics. The subsequent reorganization had four primary outcomes:

- **Instituting Competitive Applications**: Funding that had traditionally been designated for MRUs was opened up for peer-reviewed grant competitions, and most MRUs were required to recompete against new or proposed programs for funding. This competitive funding opportunity was named *Multicampus Research Programs & Initiatives (MRPI)*. MRUs continue to be subject to regular five-year and 15-year sunset reviews by the Academic Senate, and *RGPO's* UCRI team continues to coordinate the administration of these reviews on behalf of the Vice President for Research and Graduate Studies. At the same time, the *Lab Fees Program* was established to create a competitive mechanism for deciding how to best invest net fee income derived from UC's participation in the LLCs that manage LLNL and LANL.[6]
- **Disbanding Legacy Programs**: The WPRP and the IUCRP grants were disbanded, although IUCRP's *UC Discovery Grant* competition was initially spun off and moved to *RGPO*. As a result of State and University fiscal challenges, funding for the *UC Discovery Grant* was cut from the UC Office of the President budget in 2011.
- **Launching the *RGPO***: The *Research Grants Programs Office* was created in 2008 to oversee the newly aligned programs, and the SRPs were moved from the Office of Health Affairs into the new office. Director Gruder departed the organization shortly thereafter, and Vice President Beckwith hired Mary Croughan as the first Executive Director of *RGPO* in 2010.

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[6] In 2007, management of LLNL and LANL transitioned to limited liability corporations (LANS and LLNS), which are joint ventures in which UC participates. Per UC Regents policy, the University's net fee income–the annual operating surplus from LLNS and LANS – is directed to research, and provides the funding for the *Lab Fee Program* – which was created a year after the transition in UC's oversight of those national laboratories.

- **Utilizing Shared Services**: Prior to Executive Director Croughan's appointment, Vice President Beckwith expanded shared service units including a Proposal Application and Review Center (PARC), a Program Administration and Assessment Center (PAAC), and a Grants Budget, Finance, and Administration (GBFA) team, which were tasked with providing central administrative services for the *UC Discovery Grant*, *MRPI*, and *Lab Fees Program.* These units also offered peer review administrative support on behalf of the SRPs.

The changes championed by Vice President Beckwith were not universally well received. While some staff and stakeholders appreciated the expansion of "shared services" teams – reflecting a broader trend in higher education administration – others were initially concerned that such teams tend not to offer the same degree of program-specific expertise as analysts who are assigned to serve a particular team or program. In addition, the reorganization eliminated preexisting evaluation and dissemination capacity from the SRPs. The *Breast Cancer Program* and *Tobacco Program* are required by statute to disseminate the findings of their research to stakeholders and communities across California, and the loss of dedicated capacity for that particular function is still felt by staff today.

With respect to the newly created *MRPI* and *Lab Fees Program* funding opportunities, some campus stakeholders commented that the requirement for longstanding, established campus research centers to compete for funding created greater administrative burdens for those campus centers. These leaders felt that the campus centers had already been proven successful and had leveraged substantial external funding, and that the greater volatility associated with competitive funding compromised the ability of established collaborations to conduct long-term planning and leverage outside funding. As one stakeholder said, "[The UC Office of the President] decided to kill those programs to control where the money was going, and it was disastrous. UC kind of dismantled them for its own purposes, and the programs have kind of limped along since."

At the same time, though, **most stakeholders noted that forcing programs to recompete for funding ensures that the University's resources are being allocated equitably and strategically to projects that are most meritorious in terms of quality and impact.** These stakeholders commented on the high number of proposals that have been subsequently submitted for both the *Lab Fees Program* and *MRPI* as evidence of the popularity of these changes, and some *RGPO* employees suggested that the economies of scale realized through the 2008 consolidation and reorganization of these programs allowed for the efficient operation of competitive reviews across all grant programs.

2010 Reorganization

One of Executive Director Croughan's first goals was to assess the new *RGPO* and its initial strengths and weaknesses. She soon realized that the organization lacked the capacity to adequately support all of its grant programs and that additional staffing would be needed. In addition, she identified a need for the shared service units to have a fair and sustainable funding mechanism.

Executive Director Croughan reassigned all pre-award and post-award administrative staff to a newly established Contracts and Grants (C&G) unit that replaced the PARC and PAAC. The new shared services units, C&G and GBFA, were funded by a recharge from each grant program in proportion to the amount of work expected and their ability to pay, as had been a longstanding practice within the predecessor SRPs. Metrics such as the number of peer review meetings, the number of peer reviewers to whom honoraria would be paid, and the number of grants to be managed through the post-award process all factored into the calculation.

Collectively, the 2008 and 2010 reorganizations represented a substantive shift in *RGPO*'s talent strategy, as administrative staff that had previously been embedded within specific programs were redeployed as functional specialists to cover a portfolio of multiple programs. As noted above, this transition to a shared services model was not initially well received by all staff members, as there were concerns about the loss of internal administrative support on each team. To this day, each of the three SRP programs retains a Program Specialist or Administrative Analyst.

In addition to designing *RGPO*'s current shared service units, Executive Director Croughan also created the UC Research Initiatives (UCRI) team to provide strategic program management of the *UC Discovery Grant*, *MRPI*, *Lab Fees Program*, and any future UC systemwide grant programs. For example, the UCRI team has managed several University initiatives that have arisen since 2010, including the California-Canada Strategic Innovation Partnership, the Proof of Concept Commercialization Gap Grant, and the *President's Research Catalyst Award*, among others. In 2015, UCRI also absorbed the *Cancer Research Coordinating Committee (CRCC or Cancer Research Program)*, which previously operated out of UC Davis. Executive Director Croughan also proposed the creation of an Evaluation and Dissemination team to evaluate *RGPO*'s work and disseminate the results of research programs funded by *RGPO* grants but **staffing for this group was eliminated in 2011 due to budget cuts and never again approved**. Vice President Beckwith left the UC Office of the President in 2014, and Executive Director Croughan departed in 2017, but the structures they established during the 2008 and 2010 reorganizations remain largely in place today.

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ORGANIZATIONAL STRUCTURE

The following sections provide a detailed overview of *RGPO*'s organizational structure and staffing model, including:

- *RGPO's* **Administrative Home** within the UC Office of the President;
- *RGPO's* **Employees** and the teams in which they work; and
- The **Organizational Challenges,** including staffing and budgetary pressures, that impact *RGPO's* structure.

Administrative Home

Today, *RGPO* is one of five units within the Research and Graduate Studies department (RGS) within the Academic Affairs division at the UC Office of the President. The other units include *Graduate Studies*, the *Natural Reserve System (NRS)*, *Research Policy Analysis & Coordination (RPAC)*, and the recently acquired *Knowledge Transfer Office (KTO)*. The figure below provides an overview of *RGPO*'s placement within Academic Affairs.

FIGURE 1: UC OFFICE OF THE PRESIDENT ACADEMIC AFFAIRS ORGANIZATIONAL CHART
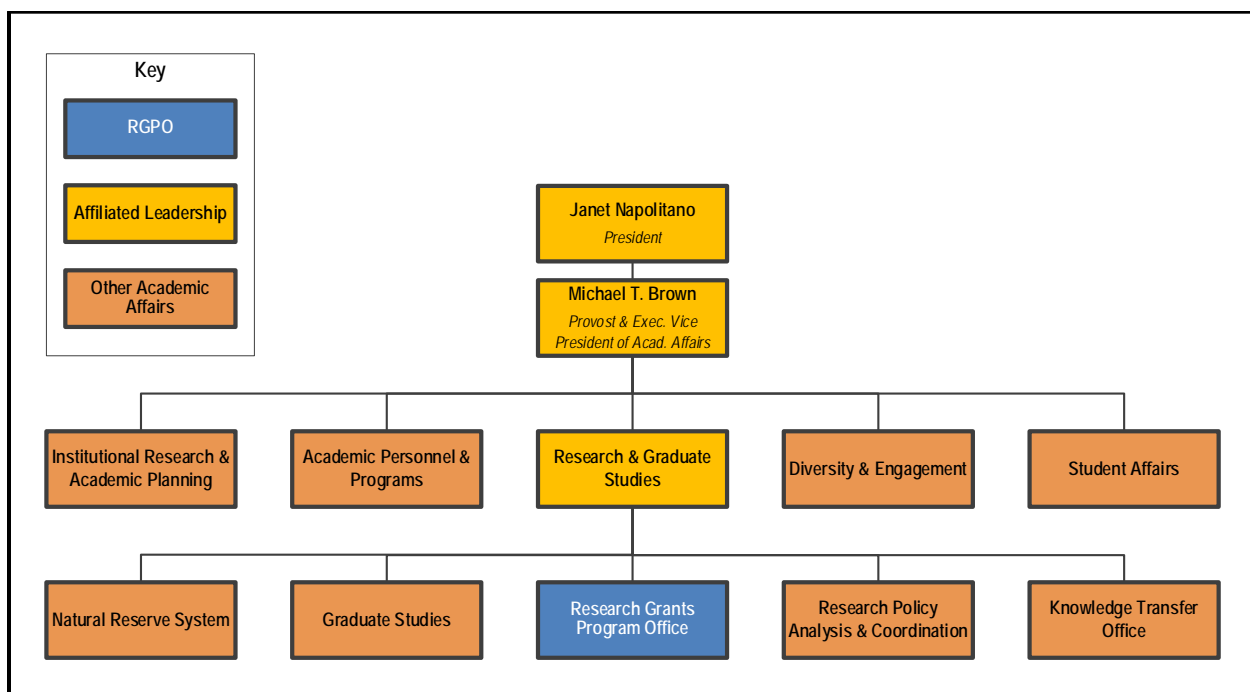
Although several of these units work closely with one another or many of the same campus research administrators, notably, *RGPO* is physically separated from the rest of the department. *RGPO* sits at the UC Office of the President's auxiliary offices, located at the Kaiser Center in Oakland, approximately 0.7 miles away from the UC Office of the President's primary offices at 1111 Franklin Street. The figure below displays *RGPO*'s location in relation to the UC Office of the President's headquarters.
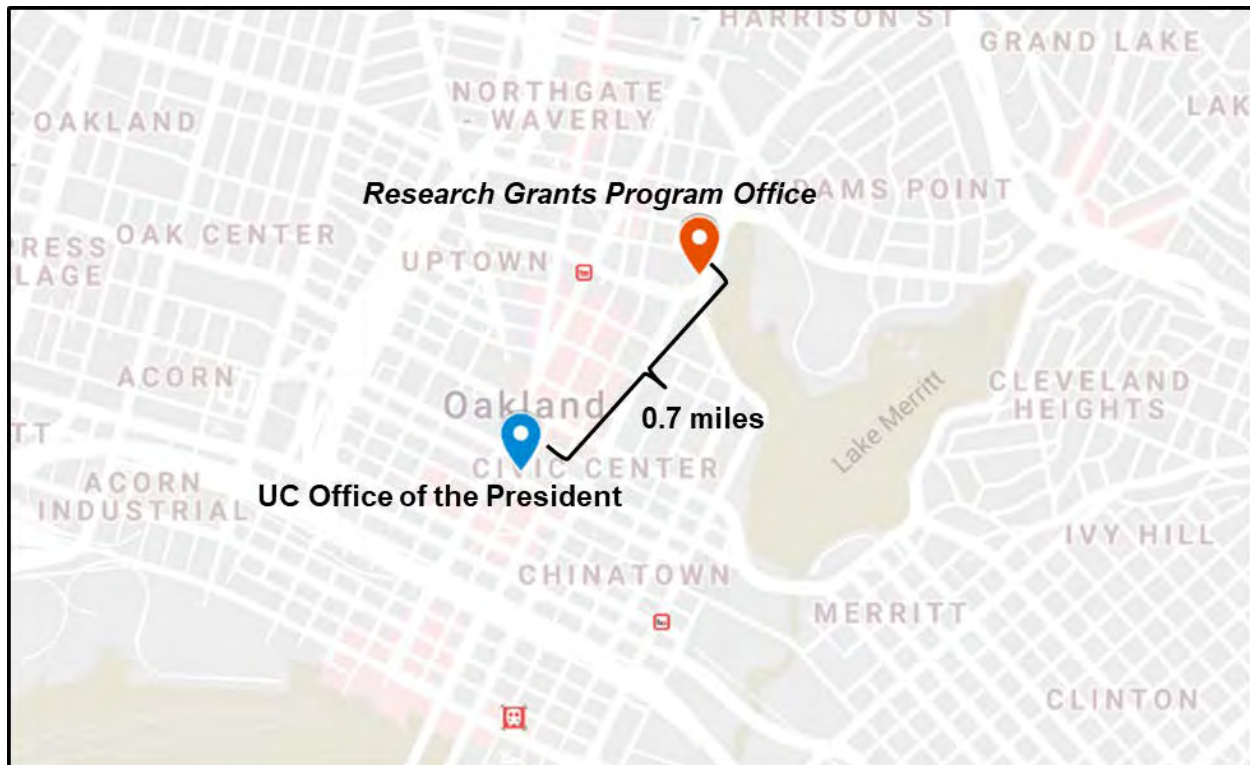
In interviews, several UC Office of the President stakeholders and *RGPO* staff members **expressed a desire for *RGPO* to be physically integrated into the broader organization**. These interviewees expressed hope that moving *RGPO* closer to 1111 Franklin Street could help increase collaboration and support between *RGPO* and other units within the UC Office of the President. *RGPO* is currently slated to move into the new building that is being constructed adjacent to 1111 Franklin Street.

Employees

RGPO's employees are currently organized into seven teams, including:
- Four **program teams** which focus on directing and overseeing grant-making for the statewide and systemwide research programs;
- Two **central service teams** which offer shared accounting, budget, pre-award, and post-award services to program teams; and
- The Executive Director's **Immediate Office**.

The table below describes these teams in further detail as of the September 2018, though further staffing changes have been subsequently made.

TABLE 3: *RGPO* STAFF TEAMS

Team	Description	# of Program Officers	Total Staff
Immediate Office	Provides leadership and administrative support across all of *RGPO*	0	4 (including 1 vacancy and 1 contractor)
Central Service Teams			
Contracts and Grants (C&G)	Supports pre-award evaluation and post-award monitoring efforts of the program teams	0	13 (including vacant Director position and 2 additional vacancies)
Grants Budget, Finance, and Administration (GBFA)	Supports *RGPO's* general administration and the processing of award payments to grantees	0	7 (including 1`contractor)
Program Teams			
UC Research Initiatives (UCRI)	Directs various UC systemwide funding opportunities and coordinates MRU reviews	3	4
California Breast Cancer Research Program (CBCRP)	Directs the statewide grant-making program that supports Breast Cancer research.	3	5
California HIV/AIDS Research Program (CHRP)	Directs the statewide grant-making program that supports HIV and AIDS research.	3	5
Tobacco-Related Disease Research Program (TRDRP)	Directs the statewide grant-making program that supports tobacco-related disease research.	7 (including 1 vacancy)	9 (including vacant Director position and 1 additional vacancy)

All *RGPO* staff report to one of six Directors, who report to the Executive Director, resulting in three layers in the organization. This structure is largely a product of the 2008 and 2010 reorganizations. Within these seven teams, there are several distinct roles in addition to the Executive Director and Director, including:

- **Program Officers**, who provide subject matter expertise to program teams for an assigned portfolio (e.g., Clinical and Prevention Sciences). They support program planning, RFP development, reviewer/applicant relations, application/award management, representation of the program, and dissemination of research findings to community partners and the broader public.
- **Program Specialists**, who provide administrative and analytic support for all aspects of program or unit management.
- **Portfolio Analysts and Team Leads**, who specialize in Pre-Award or Post-Award administration within the C&G team and support the full range of activities associated with the solicitation, receipt and management of grant applications, peer review, and award funding and monitoring. Analysts monitor the online database system and process the receipt and assignment of applications for review. This includes providing support to applicants and peer reviewers and in-person assistance at review meetings.
- **Budget Analysts**, who work within *RGPO*'s central support teams (C&G and GBFA) to support all four program teams in the timely awarding of grant payments and ongoing development and management of program budgets.

The organizational chart on the following page further details *RGPO*'s staff structure. Please note that the staff and positions on this chart are accurate as of September 2018 and have subsequently changed.

FIGURE 3: *RGPO* ORGANIZATIONAL CHART

Key

RGPO Staff	
Affiliated Leadership	
Contract FTE	
Vacant	

Janet Napolitano
President

Michael T. Brown
Provost & Exec. Vice President of Acad. Affairs

Arthur Ellis
Vice President for Research & Graduate Studies

Lee Ann Beckley
Executive Analyst

Bart Aoki
Executive Director

Marty Bayer
IT Project Manager

Vacant
Special Projects

Vacant
Director, C&G

Rosemary Chengson
Director, GBFA

Kathleen Erwin
Director, UCRI

Andrew Forsyth
Director, CHRP

Vacant
Director, TRDRP

Mhel Kavanaugh-Lynch
Director, CBCRP

Nancy Chamberlain
Pre-Award Team Lead

Teresa Johnson
Post-Award Team Lead

Nina Lwai
Lead Budget Analyst

Christopher Spitzer
Program Officer

Lisa Loeb-Stanga
Program Officer

Raymond Boyle
Senior Program Officer

Nicholas Anthis
Program Officer

Vacant
Pre-Award Team Lead

Susan Witt
Post-Award Team Lead

Harvey Wong
Senior Budget Analyst

Jessica Wu
Program Officer

Tyler Martz
Program Officer

Vacant
Senior Program Officer

Katherine McKenzie
Program Officer

Rebecca Stanek-Rykoff
Pre-Award Team Lead

Sandra Alexander
Portfolio Analyst

Nancy Yim
Senior Budget Analyst

Leila Sievanen
Program Officer

Laura Packel
Program Officer

Ginny Delaney
Program Officer

Senaida Poole
Program Officer

Samantha Toy
Pre-Award Analyst

Katherine Guerrero
Portfolio Analyst

Bernardino Cabradilla
Budget Analyst

Vacant
Program Specialist

Phillip Gardiner
Program Officer

Lisa Arneson-Minniefield
Program Specialist

Lyn Dunagan
Portfolio Analyst

Christine Tasto-Olsen
Portfolio Analyst

DeShawn Boyd
Program Assistant

Uta Grieshammer
Program Officer

Mary Daughtry
Portfolio Assistant

Vacant
Portfolio Analyst

Michael Alleman
TM1 Contractor

Norval Hickman
Program Officer

Tracy McKnight
Program Officer

Jennifer Jackson
Program Specialist

Employee Capacity

In the staff survey, *RGPO* employees from all seven teams were asked to estimate (on a scale of one to five) their utilization in each of the past 12 months, to better understand how work is distributed over the course of the year. The figure below illustrates the results of this utilization estimation from the survey, anonymized by team. While there are clear peaks and valleys over the course of the year, and some divergence in self-perceived capacity across teams, it is also clear that staff utilization across *RGPO* is correlated. This correlation is indicative of efforts to strategically spread *RGPO's* workload across the calendar year, though the stratification of individual teams' self-perceived capacity may also reflect the opinions of staff members (67% of those interviewed) who believe that there may be greater opportunities to deploy staff across multiple teams.

FIGURE 4: *RGPO* STAFF SELF-REPORTED UTILIZATION
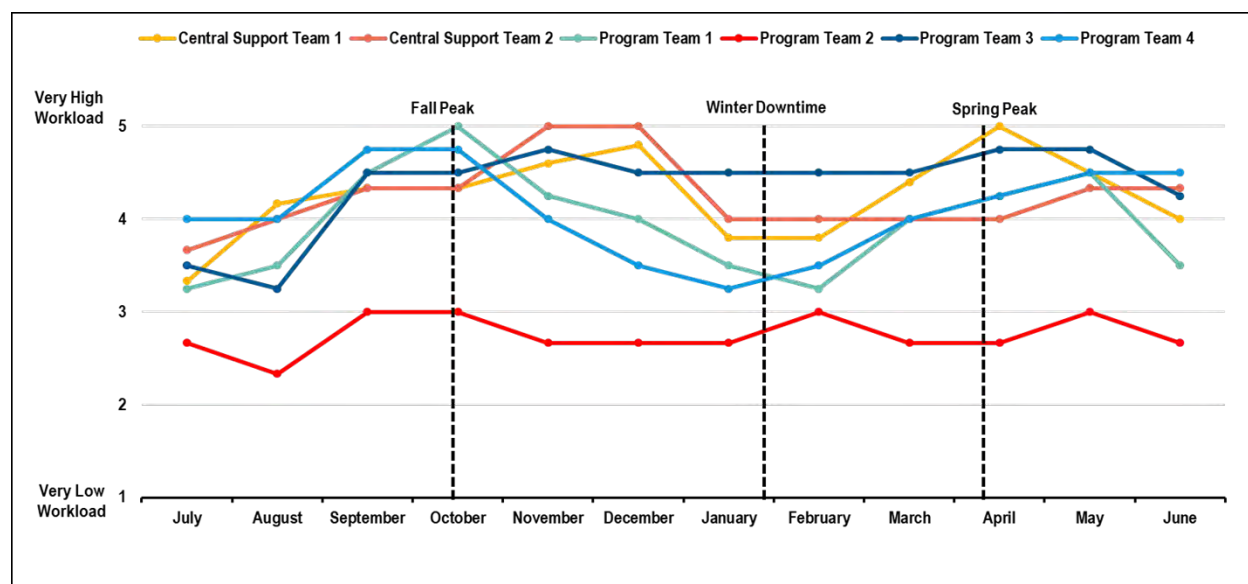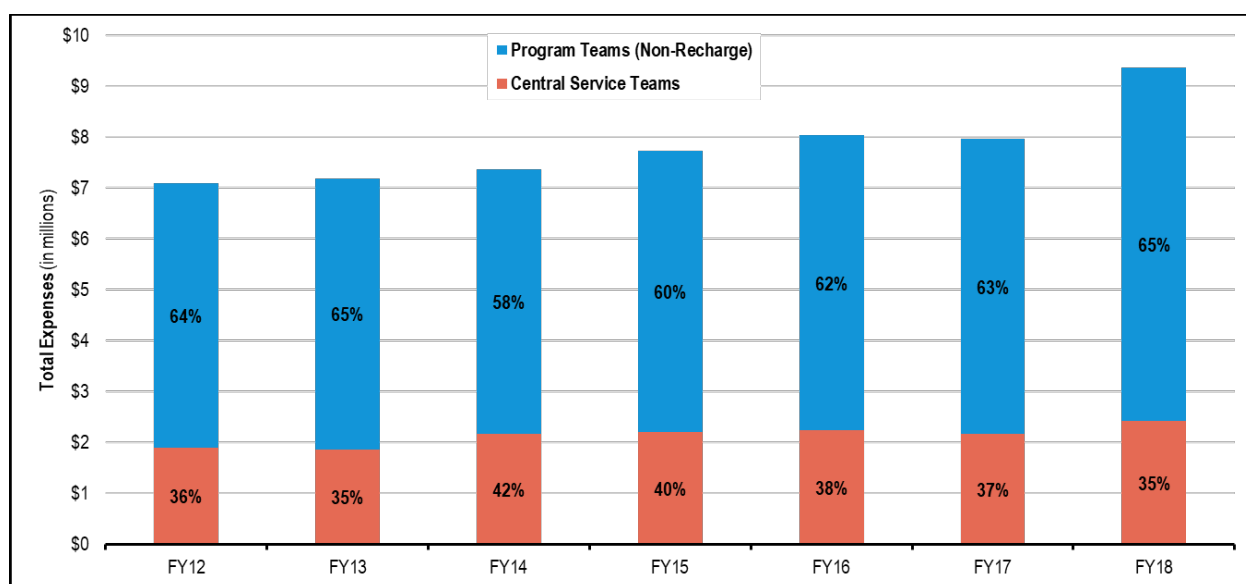

Central Service Teams

In addition to and in support of the four program teams, which are described in their respective sections of this report, *RGPO* has two central service teams:

- **Contracts & Grants (C&G),** which consists of 12 staff (including two vacancies) who support Program Officers across all teams in the planning and facilitation of review meetings and all aspects of pre-award and post-award administration; and
- **Grants Budget, Finance, & Administration (GBFA)**, which consists of five staff who similarly support all Program Teams through budget management, award set-up and close, facilitating payments and other transactions, and liaising with peers in the UC Office of the President's Budget & Finance office.

C&G and GBFA are both funded through a recharge model. *RGPO* utilizes a formula that is meant to assess overall central service team workload in support of each *RGPO* program; those program teams' budgets are then utilized in turn to pay for the services that C&G and GBFA provide. Since the current

recharge model was fully adopted earlier this decade, recharge payments to central service teams have accounted for between 35% and 40% of total internal expenses (not including grant payments) each year, as shown in the figure below. This **strongly reflects the matrixed model that was envisioned when the legacy SRP shared services teams were expanded** upon the creation of *RGPO*, as these central service staff members are able to nimbly flex across grant programs and award types, while *RGPO* is able to leverage economies of scale – as with the transition to SmartSimple, which these teams are leading.

FIGURE 5: DISTRIBUTION OF INTERNAL *RGPO* EXPENSES AMONG TYPES OF TEAMS

At present, both central service teams allocate 40% of personnel time to Administration, while the remaining 60% of personnel costs support Research Evaluation and Research Dissemination & Support. *RGPO* staff believe that this allocation to Administration may be inflated, and that central service staff are in fact spending less time on Administration than *RGPO* programs are currently assessed for. As such, *RGPO* is exploring the use of effort reporting for central service teams for the first time.

Both C&G and GBFA leverage senior-level positions to provide coaching and support to colleagues. The C&G Director departed *RGPO* in November of 2018, and three "Team Leads" are currently taking on formal management responsibilities of their colleagues on a temporary basis until that vacancy is filled. In interviews, *RGPO* staff expressed hope that this arrangement could continue into the future, though acknowledged that this could result in increased personnel costs.

Program Teams

RGPO's highly trained, well regarded Program Officers are an asset*;* every Program Officer across *RGPO* holds a doctoral-level degree and is an accomplished researcher in their own right. Scientific staff typically join *RGPO* as full Program Officers. Because there is not a more junior position and there are limited opportunities for advancement, however, most remain in this role for the duration of their

employment with *RGPO*. Only recently has *RGPO* established the Senior Program Officer position, hiring one for the *Tobacco Program[7]* and currently looking to hire another on that same team.

Among staff, one of the most common interview and survey themes was a perceived need for greater career pathways for Program Officers and a desire to see more intermediate positions between Program Officers and Program Directors. 44% of *RGPO* staff independently expressed concern about the lack of upward mobility for Program Officers during interviews, and in the survey, 36% of staff proposed the creation of intermediate positions between Program Officers and Program Directors.

While staff perceive a need for greater mobility at the high end of the Program Officer career path, benchmarking analysis also reveals a potential for additional junior positions at the lower end of the career path. As noted above, all Program Officers hold doctoral level degrees and have significant research experience prior to joining *RGPO*, and there are no additional positions – akin to a "Junior Program Officer" – beneath these roles. Notably, *RGPO's* predecessor programs did have more career levels within program teams, but these other positions were transitioned or eliminated in the 2008 and 2010 reorganizations.

To a certain extent, *RGPO* does not have any true benchmarks, as a scan of the national landscape failed to surface another statewide grantmaking organization operating out of a public university. That said, staff and stakeholders did identify organizations whose grantmaking practices and/or career pathways provided relevant – if imperfect – comparisons to *RGPO*. Research of publicly available information – including posted job descriptions, Government Services Association career bands (for federal agencies, and Glassdoor salary information – was then utilized to draw comparisons across several criteria, including:

- **Entry-Level Requirements**, in terms of both education and work experience, for the lowest-level Program Officer positions (defined as grantmaking roles or non-administrative roles in support of those individuals with decision-making authority);
- **Salary Ranges** for those entry-level roles; and
- **Career Pathways**, in terms of levels between junior program positions and Program Directors (or equivalents). [8]

As shown in the figure below, *RGPO* requires significantly more experience and education for Program Officer applicants than comparison organizations do for their most junior roles. At the same time, the low end of *RGPO's* published salary range for new Program Officers is significantly lower than those organizations requiring equivalent education *or* experience, which is represented by the bubble sizes in the figure.

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[7] *RGPO* is currently (as of December 2018) looking to fill a vacancy for an additional Senior Program Officer on *TRDRP*.

[8] In some organizations – such as the NIH – "Director" can refer to a significantly more senior, executive-level position. In these instances, analogs were identified to enable clearer comparisons to *RGPO's* program directors in terms of portfolio and responsibilities.

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FIGURE 6: BENCHMARKING OF ENTRY-LEVEL PROGRAM OFFICER REQUIREMENTS
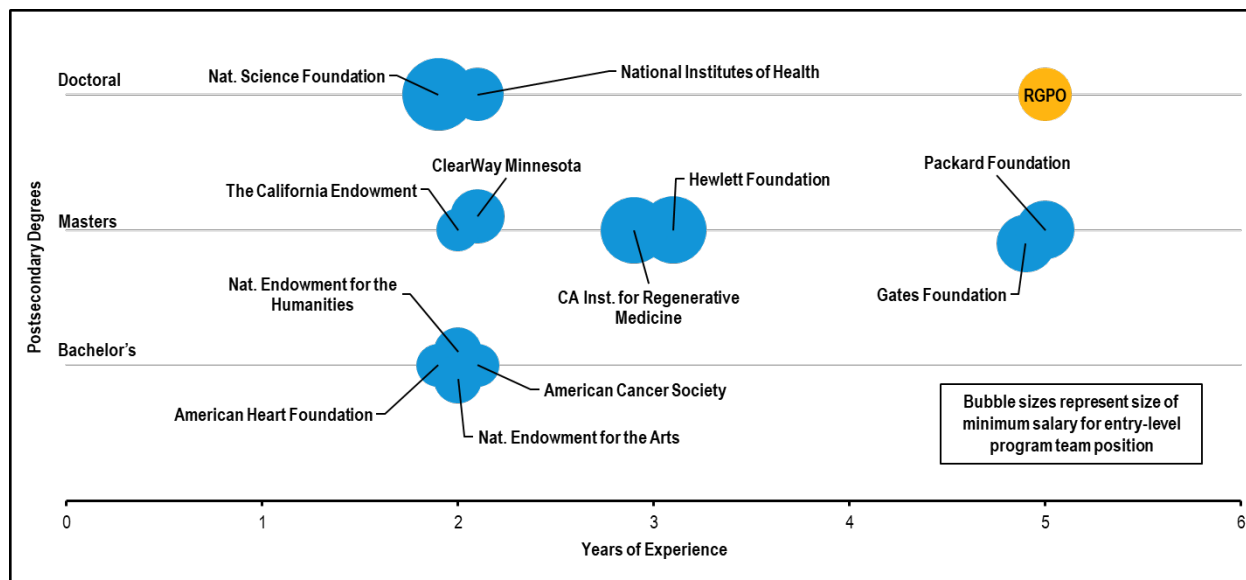
In reality, new Program Officers at *RGPO* make far more than the minimum salary in the posted job description. This may reflect a concern shared by some staff in interviews: that program positions in *RGPO* don't align well with UC Office of the President job types and career bands, necessitating wider salary bands than may be necessary.

A comparison to entry-level program positions at the same benchmarks confirms that *RGPO*'s Program Officer salary band is unusually broad, as shown in the figure below. Most *RGPO* Program Officers' salaries are very close to the midpoint of the range, which is toward the higher end of these comparisons. Taken together, the relatively high salaries for *RGPO* Program Officers, stringent prerequisite requirements for education and work experience, wide career bands, and lack of more junior or senior positions may all reflect an unrealized potential for splitting the current "Program Officer" position into two or more levels.

FIGURE 7: SALARY RANGES FOR ENTRY-LEVEL PROGRAM ROLES AT COMPARABLE ORGS
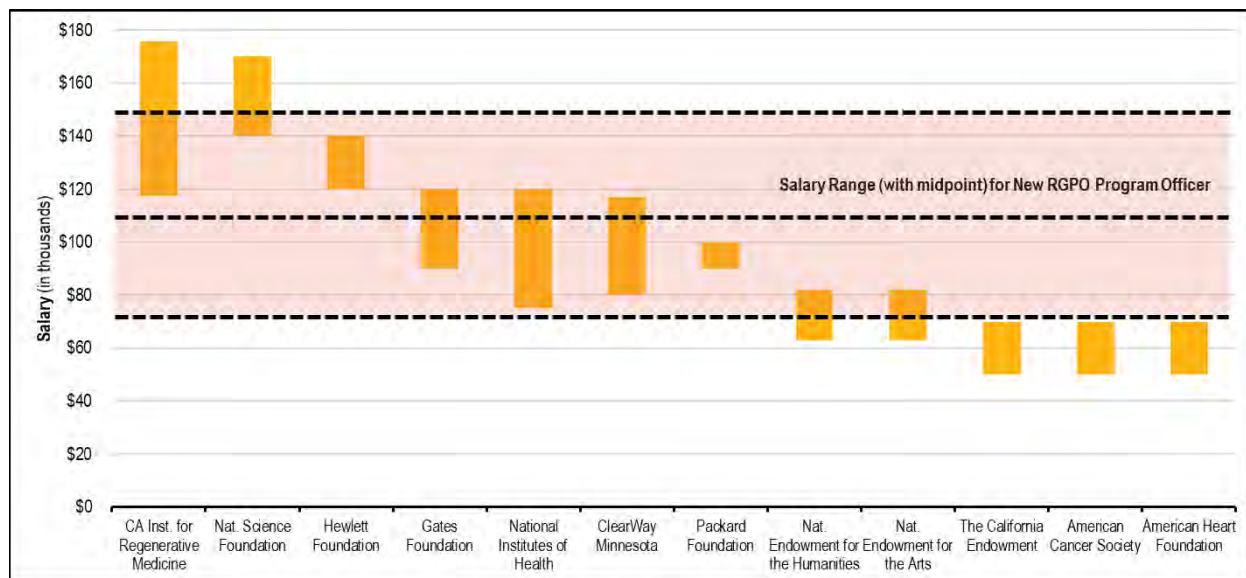
In the past, *RGPO* has also occasionally drawn upon the capacity of graduate student employees from the UC Berkeley School of Public Health. These temporary roles provided *RGPO* program teams with affordable capacity, while also providing the students with a learning experience that the University of California is uniquely positioned to offer. After 2016, though, *RGPO* was unable to continue leveraging this strategy because of concerns about overall headcount within the broader UC Office of the President. The organization remains hopeful that these positions might be offered again in FY20 and is working directly with UC Berkeley on an MOU and subsidy so that graduate student workers would be employees of that campus, rather than the UC Office of the President. While this arrangement would allow *RGPO* to surmount headcount restrictions within the UC Office of the President, it also excludes students from other campuses, including nearby UC San Francisco, from this unique opportunity.

Program Officers are not the only employees who some staff believe need more career development opportunities within *RGPO*. Some of *RGPO's* Directors have unusually high numbers of direct reports; for example, the Director of the C&G team has 12 direct reports and the *Tobacco Program* Director has eight. Some staff expressed that stratification among these reports could simultaneously provide career development opportunities as well as alleviate strain on these Directors. As noted above, all staff within *RGPO* report directly to a Director. Over the long-term, creating an additional level within *RGPO's* organizational chart may alleviate the need to replace more expensive Director roles as they open up, as Team Leads and Senior Program Officers could help to manage staff.

Organizational Challenges

In 2018, the California Senate's Office of Research published a report that explicitly identified *RGPO* as a best-practice, replicable, and scalable model for the management of SRPs. Specifically, the paper cited

RGPO's lean program staff, utilization of doctoral-level Directors, and access to shared support services – both within *RGPO* as well as more broadly within the UC Office of the President. [9]

At the same time, the UC Office of the President has faced increasing political pressure and budget constraints in recent years. In turn, *RGPO*'s ability to fill vacancies and gain approval for new openings has been constrained. This is partially illustrated in the figure below, which shows *RGPO*'s total expenditures over the past nine fiscal years, broken down into three distinct categories: grant payments, personnel expenses, and other internal (within *RGPO*) expenses. This figure shows actual expenditures, which – as noted elsewhere in this report – naturally reflect changes to funding in a lagging manner; as such, it **does not fully reflect the surge in funding from Proposition 56, which will take full effect in FY19 and FY20**.

FIGURE 8: *RGPO* EXPENSES BY CATEGORY (FY10-FY18)
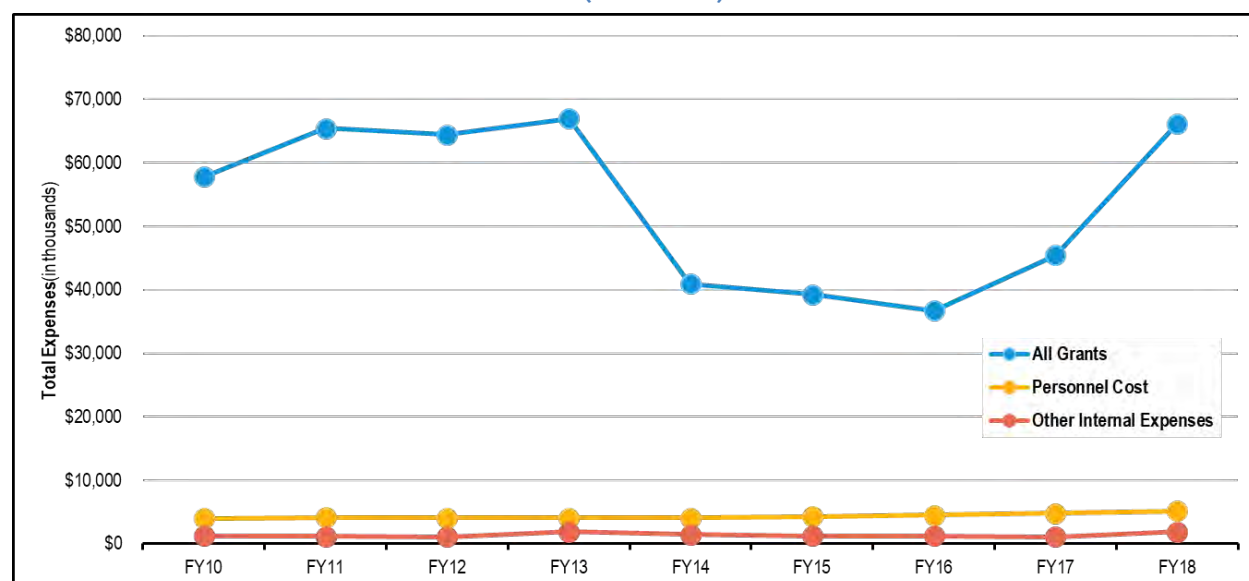
In FY13 *RGPO* had 31 FTE to process $67 million in grant payments and a declining budget from which to award new grants. With the passage of Proposition 56, the organization's budget has dramatically increased, and its total budget for FY19 will surpass $200 million, of which 68% will be dedicated to the *Tobacco Program*. Despite this large cumulative increase, *RGPO*'s staffing (in terms of FTE) stood at only 36 in October of 2018, not including vacancies that were yet to be filled.

The figure below shows *RGPO's* personnel costs as a percentage of total costs across all programs. As *RGPO's* budget has increased, the proportion of expenses allocated to personnel costs has consistently declined, and is positioned to fall further in FY19, even with the growth in *Tobacco Program* and central shared services staff, which increase *RGPO*'s total budgeted personnel costs from $5.5 million to $12.5 million. Although *RGPO* had similar proportional spending on personnel costs earlier in the decade (as low as 5.6% in FY13), these proportions may have reflected the continuing tail of payments that were previously awarded, coupled with staffing reductions that took place in response to budget cuts. Thus, while relatively low personnel expenses (as a share of total expenses) from FY10-FY13 may have been a

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function of falling funds for new grants and reductions in headcount, the more recent decline in personnel costs reflects a different scenario: rising budgets coupled with constraints on hiring.

FIGURE 9: *RGPO* PERSONNEL EXPENSES (FY10-FY18)
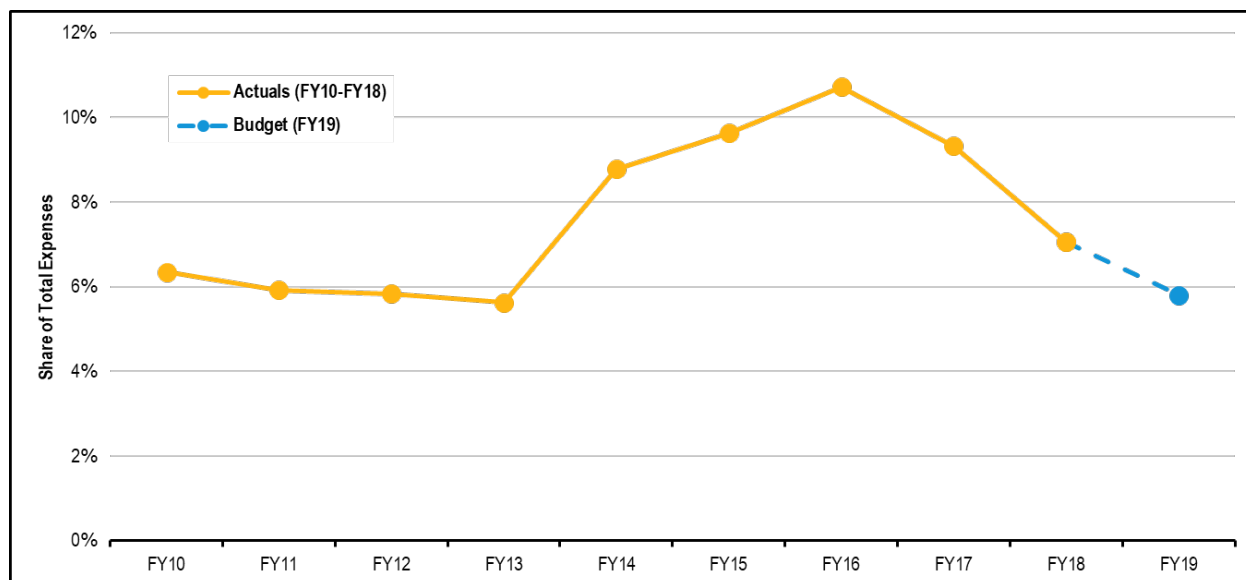
Additional delays in hiring, including for approved vacancies, have continued to strain staff over the course of FY19. Some staff believe that these delays are at least partially attributable to processes that have been established within the UC Office of the President because of the constraints that the broader organization has faced in recent years. Over dozens of interviews with *RGPO* staff, advisory committee chairs, campus Vice Chancellors for Research (VCRs), and other stakeholders, the sentiments that *RGPO* is short-staffed and that certain administrative processes at the UC Office of the President constrain *RGPO* both emerged as top themes.

GRANTS MANAGEMENT

Despite differences in the structure, funding, and audience for *RGPO's* various programs, many of them share similar administrative requirements and procedures. One important benefit of the consolidation of grants programs into *RGPO* has been the ability to utilize economies of scale to administer these common processes. On an open response survey question, 36% of *RGPO* staff identified the ability to leverage central resources as a key benefit of the current organizational structure, particularly for programs that share common statutory requirements. The following section will outline some of the common requirements and processes involved with administering grants across *RGPO*'s many programs, including:

- The **Application Process** through which Principal Investigators apply for *RGPO* grants;
- **Grantee Restrictions**, including disbursement and costing policies, that dictate the management of *RGPO*'s programs and their recipients;
- **Allowable Expenses**, which are dictated by State statute for some programs and impact the administration of these programs;
- **Key Performance Indicators** by which *RGPO* measures the effectiveness of its programs; and
- The **Technology Systems** deployed by *RGPO* to facilitate all grants management processes.

Application Process

Most – though not all – grant competitions that are managed by *RGPO* follow a similar, multistage process, reflecting the best-practice peer review model that *RGPO* has adapted from the NIH and the NSF. Funding decisions are made based on scientific merit and programmatic responsiveness, and all applications are reviewed for scientific and programmatic relevance in multiple steps:

- **Request for Proposals**: In consultation with advisory groups, *RGPO* program teams develop and finalize a Request for Proposals (RFP), or alternatively a Call for Applications, that reflects programmatic strategy and scientific need.
- **Letter of Intent Review**: A Letter of Intent (LOI) is typically due one to two months after the RFP is released. It is reviewed by program staff or advisory councils for alignment with the program's research priorities and must be approved prior to submission of a full proposal.
- **Applications Peer Review**: Neutral researchers (as well as community advocates for some programs) rate applications for scientific merit and rank proposals according to a predetermined scoring rubric. The review period typically begins approximately several months after the submission of applications.
- **Award Notification and Start**: Successful applicants are notified approximately six months after the initial Call Release, and awards begin two months thereafter.

RFPs and Calls for Applications are developed by Program Officers in consultation with key stakeholders and advisory groups. If a program is managing multiple types of awards in a single cycle, these are typically folded into the same RFP or Call.

LOIs are required to apply for most (though not all) award types across *RGPO* programs. LOIs are typically due within one to two months of the release of a Call for Applications or RFP and are reviewed for eligibility as well as alignment with each program's research priorities. LOIs must be approved before a researcher may submit a full application for funding.

Notably, at least one *RGPO* program – *CHRP* (the *HIV/AIDS Program*) – recently used the LOI review stage to limit the total number of applications received, in light of limited funding. During the program's

2017 grant cycle, it stated that no more than 50 researchers would be invited to submit full applications for its "One Step Ahead" awards, based upon the LOI review stage. Seventy-five LOIs were submitted, and 39 accepted. Ultimately, only 30 full proposals were submitted, and the program was able to keep applicants' success rates above 13%, and average annual award sizes above $500,000. As noted throughout this report, these two benchmarks – success rates and award sizes – are key performance indicators in the minds of campus stakeholders but are challenging to elevate as real funding for most *RGPO* programs continues to decline. **The utilization of the LOI stage to focus on the application process may well be an effective strategy for *RGPO* programs in the future.**

Following the LOI review, researchers are invited to submit full proposals, which are **subject to rigorous peer review** – the hallmark of all *RGPO* competitive programs. Each *RGPO* program utilizes peer reviewers to rate applications for scientific merit. Generally, this entails identifying neutral reviewers who are experts in relevant fields, securing their participation in the process, and convening them for at least one multiday review meeting, a process that is labor-intensive for *RGPO* staff. Besides the efforts of scientific staff, the C&G and GBFA teams support the review process by helping facilitate the meetings themselves, along with UC Office of the President's Building and Administrative Service Center (BASC). At the review meetings, reviewers then discuss the programs and proposals, and score and rank applications based on a rubric.

This process varies slightly across *RGPO*'s six major programs; SRPs utilize out-of-state researchers (to avoid conflicts of interest) and advocates, who frequently return from cycle to cycle to take part in the peer review process. *LFRP* (the *Lab Fees Program)* and *MRPI* reviews draw upon reviewers from within the University as well as external researchers, who are selected based on the proposals under consideration; *MRPI* also utilizes a two-tiered peer review process. These differences may help account for lower Research Evaluation costs for UCRI than other program teams within *RGPO*. *CRCC* (the *Cancer Research Program)*, meanwhile, relies on a UC faculty committee to conduct its peer review and provide academic oversight, reflecting the unique nature of its Committee membership (who consist of subject matter experts at UC campuses and function as peer reviewers).

Following the peer review, the various advisory councils that support and oversee the SRPs review the rankings and commentary of the peer reviewers, before making final selections or recommendations on funding decisions. The *Lab Fees Program* and *MRPI*, as well as most internal grant competitions, do not utilize this extra review, though staff can make additional recommendations. For most programs, final grantmaking decisions are at the discretion of the Executive Director of *RGPO*.

Depending on the program and award type, successful applicants receive notice between six and ten months after the announcement of the funding opportunity. Awards typically start one to three months after notification.

With grant cycles occurring simultaneously across multiple programs, *RGPO* utilizes a grant master calendar to maximize the capacity of central service teams and ideally to utilize Program Officer support across various programs. The figure below highlights key steps in the FY19 calendar across the six major programs; events in blue represent actions taken by *RGPO* staff, while yellow and orange events indicate applicant and reviewer/committee events, respectively.

FIGURE 10: *RGPO* FY19 GRANT CALENDAR

	July	August	September	October	November	December	January	February	March	April	May	June
CRCC						Call Release	LOI Review / LOIs Due			Applications Due		Committee Review
MRPI		Applications Due		Peer Review		Award Notification	Award Start					
LFRP			Grad Fellow Apps Due		Grad Fellow Review	Grad Fellow Notification			CRT Award Call Release	Grad Fellow Award Start	CRT Award LOIs Due	
TRDRP Cycle A	Call Release	LOI Review / LOIs Due	Apps Due			Peer Review	Council Meeting / Award Notification			Award Start		
TRDRP Cycle B							Call Release	LOI Review / LOIs Due	Apps Due		Peer Review	Council Meeting
CBCRP		Call Release	LOIs Due		Call Release			Applications Due	Peer Review	Council Meeting		
CHRP							Call Release	LOIs Due				Applications Due

Grantee Restrictions

RGPO follows different disbursement processes and costing policies for different grants and programs depending on the source of funding and whether the Principal Investigator is a UC researcher or from outside the UC system. These processes reflect State policies regarding payments to State organizations (as UC is considered a State organization) and non-State organizations (including private institutions like Stanford University).

Disbursements

Non-UC institutions that receive funding through one of *RGPO's* SRPs (i.e. the *Breast Cancer*, *HIV/AIDS*, and *Tobacco Programs*) have simpler processes for receiving and administering payment than UC campuses, and may realize slight financial gains because of this difference. As is the case for all state-funded operations, UC submits reimbursement requests to the State for activities it has already completed and is paid after the fact within a month. As such, *RGPO* may pay out all grant dollars to non-UC institutions upfront after the award is announced and receive a full reimbursement for those grants from the State within the month. However, when *RGPO* makes an award to a UC researcher, the grant is treated as an internal budget transfer, and campus administrations must submit reimbursement claims to the State for the full life of the award. Although the process for the UC campuses is relatively standard for research grants, it is nonetheless significantly more time-consuming and labor-intensive than the process used for non-UC institutions, and the dichotomy is a source of frustration for GBFA and campus staff.

Non-UC institutions are also required to repay interest to the University for the grant funds that are distributed to the recipient in advance of the funded research. As a hypothetical example (using sample figures for the sake of simplicity), a researcher at Stanford University who receives a $1 million, two-year grant with equivalent spending in each month would be required to repay interest on the $500,000 in funding that isn't expended until Year 2 of the grant, at a rate of approximately 1% ($5,000). In this case, Stanford can retain the difference between the interest it owes back to *RGPO* and any returns it earns from its own investment of the $500,000. While this realized investment income off of each individual grant is likely negligible, the collective size could be considerable. In 2018, UC awarded $38.6 million in

grants to external Principal Investigators for awards lasting longer than one year. A 50-basis point yield (half of one percent) on funds expended after the first year would have returned approximately $121,000 to non-UC institutions. Had UC been able to realize the same returns on multi-year *Tobacco* and *Breast Cancer Program* awards it distributed to UC principal investigators in the 2018 cycle alone, the University would have realized returns of approximately $170,000.

At the same time, however, some stakeholders noted that the State similarly administers short-term investment pools. As such, the funds that are available for SRP allocations already reflect the potential yields on these multi-year grant commitments.

Indirect Cost Recovery

Costing policies vary significantly across *RGPO* programs, depending on legislative intent and program strategy. For all SRPs, UC institutions may claim a maximum of 25% indirect cost recovery. External recipients of *HIV/AIDS Program* funding are also limited to a maximum of 25% indirect cost recovery – or their existing F&A rate, which is less than 25% for some community-based organizations. The underlying legislation behind the *Breast Cancer* and *Tobacco Programs*, though, explicitly entitles external institutions to their full indirect costs, while UC researchers may claim their full indirect rates only for certain UCRI programs. The differences between these policies are summarized in the table below.

TABLE 4: INDIRECT COST RECOVERY MAXIMUMS, BY GRANT PROGRAM AND PI INSTITUTION[10]

Program	UC Campuses	External Institutions
California Breast Cancer Research Program	25%	Full F&A Rate
California HIV/AIDS Research Program	25%	25%
Tobacco-Related Disease Research Program	25%	Full F&A Rate
UC National Laboratory Fees Research Program	Full F&A Rate	Full F&A Rate

Some staff and stakeholders expressed frustration with the divergent policies on indirect cost recovery between UC campuses and other institutions, as many non-UC institutions, like Stanford University and the University of Southern California, have F&A Rates much higher than the 25% cap for UC campuses. Other stakeholders indicated that there may be potential to increase the cap on UC campuses for the SRPs in the future, as has been recently done through AB20 (though this cap is still not at the same level as non-UC institutions).

Allowable Expenses

State statute defines the classifications of allowable expenses for two SRPs: the *Breast Cancer* and *Tobacco Programs*, and **stipulates that administrative costs not exceed 5%**. Indeed, the minimal allowance for administrative overhead was cited as a selling point to voters during the campaigns for Proposition 99 and Proposition 56. Although other programs within *RGPO* have discretion over how to track and classify expenditures, *RGPO* applies these State classifications and expense caps to all programs in order to ensure consistency.

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[10] Across all *RGPO* programs, certain grant types – such as graduate fellowships – have smaller limits on indirect cost recovery. These limits are detailed in the corresponding sections on *CBCRP, CHRP, TRDRP, and* UCRI.

The State has also been clear that administrative expenses do not include program-related expenses, which need not take the form of grant payments. These classifications have been further clarified by the California State Auditor, in order to support *RGPO*'s efforts to keep administrative costs for these programs below the legislatively allowed maximum of 5%. Allowable expenses include:

- **Grant Payments:** Any amounts distributed by the University through a contract or grant to support program-related research, including indirect costs;
- **Research Evaluation:** Amounts expended within *RGPO* for activities related to the "solicitation of contract and grant applications, the peer review of contract and grant applications, and the monitoring of contract and grant progress and award expenditures;" [11]
- **Research Development and Dissemination:** Expenses in support of the "dissemination of research findings, the development of new strategic research initiatives, and the holding of conferences and legislative briefings;"[12] and
- **Administration:** Expenses in support of all other activities related to the management of research grants programs, including (but not limited to) general staff meetings, trainings, personnel management, infrastructure unrelated to defined non-administrative expenses, and fundraising.

Maximum Administrative Expenses

The 5% maximum on administrative expenses is in line with the stated goals of the NIH and the NSF, which are widely considered to be best-in-class grantmaking entities. As such, *RGPO* has sought to follow the same guidelines for all of its programs even though it is not required to do so.

As shown in the figure below, *RGPO*'s administrative expenses tend to be relatively fixed regardless of how much grant funding is offered per year. In this figure, the black line represents what 5% of *RGPO's* total expenditures would be each year, while the blue portion of each column represents that year's reported internal spending on Administration.[13] In leaner budgetary environments, which are apparent in FY14-FY17, the cushion between actual Administration expenses and the amounts allowed by law can quickly narrow, as **shrinking budgets equate to smaller levels of permissible administrative expenses**.

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[11] "Final Text of Regulations: California Healthcare, Research and Prevention Tobacco Tax Act of 2016," California State Auditor, 14 March 2018, https://www.bsa.ca.gov/pdfs/rulemaking/regulations.pdf.
[12] Ibid.
[13] Certain program teams began tracking internal costs in accordance with the State Auditor's definitions during this period, which may distort the internal composition of costs in the earlier years of this sample.

FIGURE 11: *RGPO* EXPENSES (FY10-FY18)
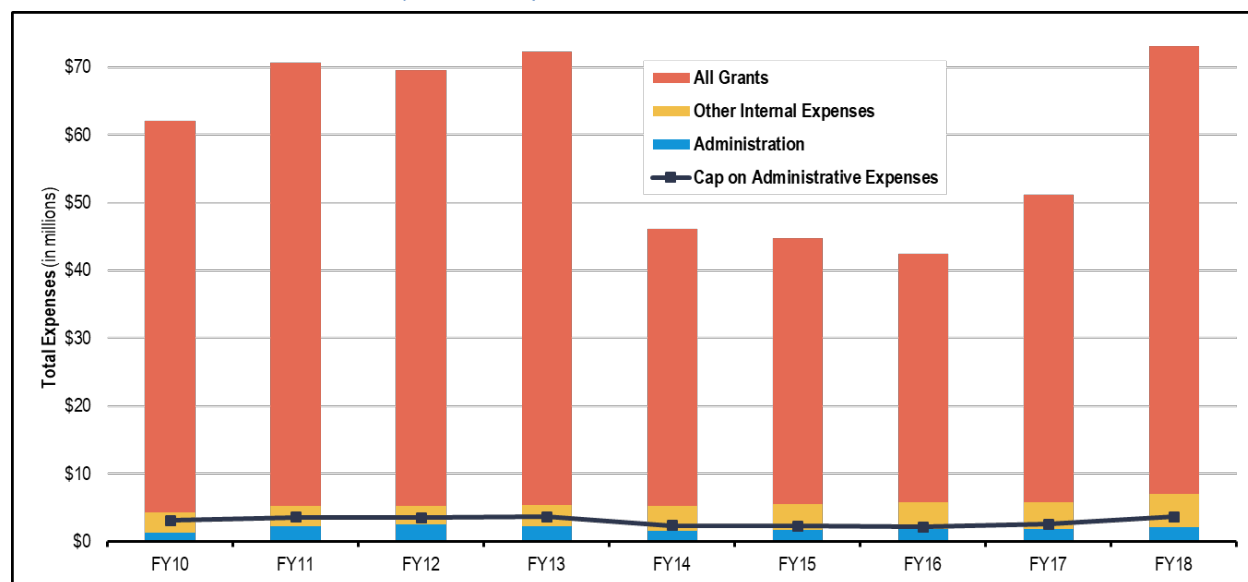
This relationship is more pronounced among individual programs, whose funding streams are not as diversified as *RGPO* writ-large, as subsequent sections in this report detail. In some years over the past decade, individual programs have crossed the 5% threshold after unexpectedly large drops in funding. In light of this reality, the State agreed to interpret the 5% cap on administrative expenses as a five-year rolling average rather than an annual figure, providing programs with a longer timeline to reduce expenses when necessary.

Effort Reporting

The largest driver of administrative expenses within *RGPO* is personnel, which accounted for 58% of administrative expenses in FY18.[14] An important factor in determining what proportion of personnel expenses is administrative in nature is the effort reporting factor that each *RGPO* team uses.

RGPO staff time is divided across the three allowable expense categories (Administration, Research Evaluation, Research Development and Dissemination) based on predetermined percentages. In the past, staff were asked to submit detailed monthly estimates of the time they had spent on these three categories; these estimates were used to allocate personnel costs across each category of expenses. *RGPO* determined that this effort reporting was relatively inefficient, though – in part because the time for staff to report constituted additional administrative costs – and in recent years *RGPO* has utilized historical averages for each staff member.

Although each program team has varying levels of capacity dedicated to Research Evaluation and Research Development & Dissemination (formerly known as "Research Support") based upon historical effort reporting, the proportion of Program Officer time allocated to Administration is relatively consistent

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[14] This analysis excludes recharges. Recharge expenses for program teams are classified as "supplies and expenses," but net out to zero across all *RGPO* once recharge credits from central service teams (C&G and GBFA) are factored in. Per the guidance of *RGPO* leadership, 40% of central service team personnel costs are allocated to Administration expenses.

for SRPs. Each of the SRPs has approximately 9-10% of Program Officer capacity focused on Administration, while the allocation for UCRI is approximately 16%.[15] The table below shows the planned allocation of Program Officer capacity across *RGPO*'s program teams.

TABLE 5: ALLOCATION OF OVERALL *RGPO* PROGRAM OFFICER CAPACITY

Program Team	Administration	Research Evaluation	Research Dissemination & Support
California Breast Cancer Research Program	12.5%	28.6%	58.8%
California HIV/AIDS Research Program	15.1%	32.0%	53.0%
Tobacco-Related Disease Research Program	10.0%	30.0%	60.0%
UC Research Initiatives	9.2%	20.8%	70.0%

RGPO has discussed revisiting these allocations based on updated activity surveys, and a survey of all staff notably found some differentials in how Program Officers believe they are spending their time.

In the survey, Program Officers were provided with activity definitions and asked to estimate the percentage of time they devoted to each activity category in the past year. As shown in the table below, which includes both the average allocations of time provided by *RGPO* as well as the average responses from Program Officers in the staff survey, this exercise yielded some deviations from the time allocations that *RGPO* currently uses based on past effort reporting. For each team, certain circumstances may have contributed to these shifts; the *HIV/AIDS Program*, for example, did not conduct a grant cycle in FY18, so it is not surprising that there may have been a temporary increase in Program Officer capacity focused on Administration – particularly as some Program Officers were diverted to support the influx of Proposition 56 funding for the *Tobacco Program*. Regardless, these deviations may warrant further investigation through a more robust activity survey or a temporary reinstitution of effort reporting and tracking.

TABLE 6: ALLOCATION OF *RGPO* PROGRAM OFFICER CAPACITY TO ADMINISTRATION[16]

Program Team	Planned Allocation	Self-Reported Allocation	Variance
California Breast Cancer Research Program	12.5%	11.7%	0.8%
California HIV/AIDS Research Program	15.1%	26.7%	11.6%
Tobacco-Related Disease Research Program	10.0%	9.0%	1.0%
UC Research Initiatives	9.2%	11.3%	2.1%

Among *RGPO*'s two central service teams (C&G and GBFA), 40% of staff capacity is allocated toward Administration, which some staff within *RGPO* believe to be an overstated estimate that inflates *RGPO*'s administrative expenses. Staff on these teams are currently asked to track time spent in support of each *RGPO* program, which is utilized for purposes of recharge calculations, but do not currently track their time in support of each type of expense classification.

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[15] "Program Officer Percent Distributions" for July 2018, provided by *RGPO* staff.
[16] Figures exclude allocations of some *CBCRP* staff capacity toward "Initiatives."

Key Performance Indicators

During interviews that were conducted with VCRs (and/or their delegates) on all ten campuses, two key performance indicators (KPIs) were identified as being critical for the effective management of grants programs:[17]

- **Success Rates**, defined as the percentage of applicants who ultimately receive funding; and
- **Average Award Size**, defined as the total grant commitment over the full lifespan of the award.

When asked to elaborate, campus stakeholders cited optimal success rates ranging from 15%-30%, or alternatively "higher than the NSF/NIH." The NSF had a collective 24% success rate (also known as "funding rate") in FY18,[18] while the NIH had a collective success rate of 18.7% in FY17 (the most recent year for which data is available).[19] In the staff survey, 14 Program Officers and Directors across all programs shared opinions on the optimal success rates; the median answer identified was 20%, and the geometric mean was 22%. Other *RGPO* staff and leaders indicated that NSF/NIH success rates are appropriate benchmarks, but that the target rates should be specific to the comparable funding area. Success rates for federally funded research into HIV/AIDS, for example, tend to be substantially lower than NSF/NIH as a whole, and these interviewees suggested that the appropriate target for the *HIV/AIDS Program* should be consequently lower as well.

While staff were not asked to share opinions on optimal award size, campus stakeholders pointed to NIH guidelines and suggested that junior faculty would require at least $100,000-$125,000 per year to justify pursuit of a grant, while more senior researchers would require annual funding of 2-3 times that figure. Campus stakeholders reported that success rates or award sizes that are too low discourage the best researchers from applying, as the expected return on their time would be limited, while acknowledging that success rates that are too high may result from funding weaker proposals, or alternatively splitting available funds into awards that are similarly too small to justify pursuit.

Campus stakeholders identified several methods to keep success rates around 20% and awards appropriately sized when faced with limited or shrinking funding. These strategies include:

- **Limited scope**, wherein stakeholders and program staff would together determine narrower research priorities for the current cycle;
- **Limited eligibility,** wherein eligibility for particular grants or award cycles would be more restrictive;
- **Less frequent cycles**, wherein grant funds are distributed less frequently to allow for greater concentration and distribution of funding than would be possible with annual cycles; and
- **Smaller awards,** wherein funding is spread out among more recipients, with the caveat that such funding be significant enough to justify initial pursuit of funding.

VCRs were particularly supportive of limited scopes as a strategy to improve success rates moving forward.

These two KPIs are important to understand in relation to each other, as an increase in expected award size tends to attract more applicants, which in turn lowers success rates. Thus, a large increase in funding does not necessarily lead to an increase in overall success rates, as was the case for the

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[17] Success Rates were identified in 6 of 10 interviews, and Award Sizes in 4 of 10. These themes ranked 4th and 6th out of all themes identified by campus stakeholders.

[18] "Funding Rate by State and Organization," National Science Foundation, https://bit.ly/2Q8UUn2.

[19] "Research Project Success Rates by NIH Institute for 2017," National Institutes of Health, https://bit.ly/1PhdEWv.

Tobacco Program after the influx of Proposition 56 funding in FY18, when average award sizes were significantly increased and overall success rates (across all grant types) fell from 36% to 19%.

One additional KPI that was cited by some stakeholders is the share of funding allocated toward grant payments, rather than internal expenses (including both Research Evaluation and Research Dissemination & Support, in addition to Administration). Over the past decade, an average of 90% of *RGPO* expenses each year have been in the form of grant payments, but this figure has changed as a function of total overall funding. As shown in the figure below and discussed elsewhere in this report, *RGPO's* proportional expenditure on grant payments drops when its total expenses fall, indicating that internal expenses are relatively fixed. This exacerbates the impact of falling budgets on *RGPO's* ability to meet its mission, as reductions disproportionately impact its grantmaking ability relative to its internal expenditures on Administration, Research Support, and Research Development & Dissemination.

FIGURE 12: *RGPO* EXPENSES (FY10-FY18)
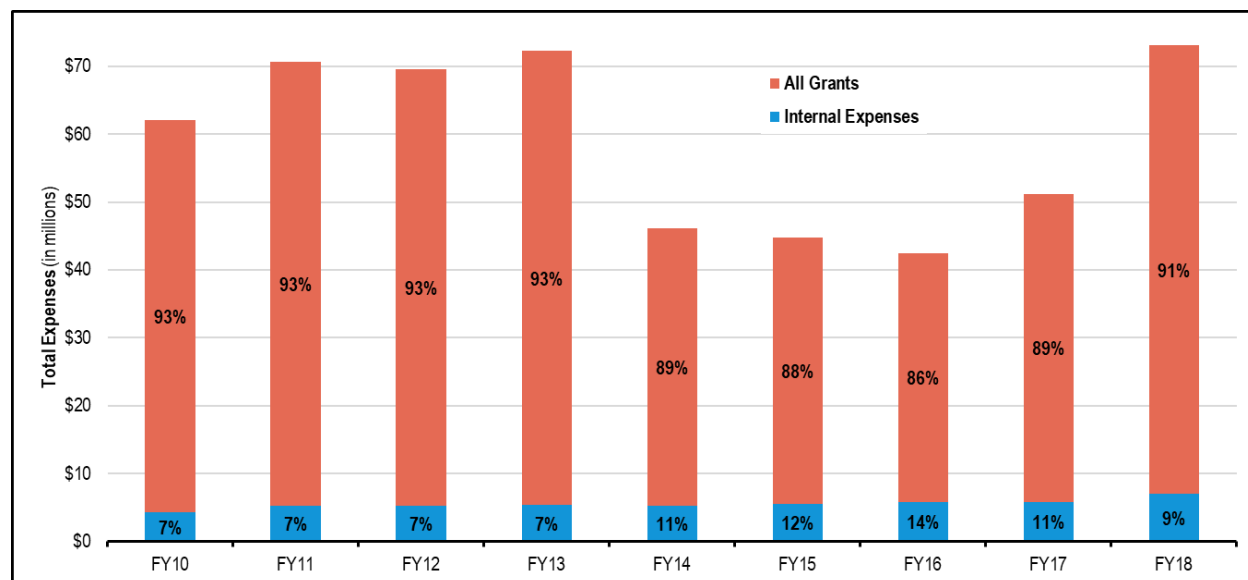
Technology Systems

Since January 2018, *RGPO* has gradually built and implemented a new online research grant database system. The new system, SmartSimple, is replacing two legacy systems, GRAIL and proposalCENTRAL, that *RGPO* is still utilizing for previously awarded grants that have not yet closed. Thus, although 33% of staff independently raised SmartSimple in interviews as an important and promising new platform for increasing pre-award and post-award efficiency, central service teams in particular are expending added effort to maintain proposals and grant awards across multiple systems simultaneously.

Although proposalCENTRAL was well-regarded when it was initially adopted, it was quickly determined that the SRPs in particular required additional features that it was unable to provide. These features were unique to *RGPO's* role as a manager of state-sponsored funds and reflected specific accounting and programmatic challenges that the off-the-shelf version of proposalCENTRAL did not support. As such, *RGPO* continued using GRAIL to make all accounting changes for the SRPs, even though GRAIL is not supported by recent versions of Microsoft Windows, while using proposalCENTRAL to manage

applications and reviews. *RGPO* then tried to work with Altum, the vendor of proposalCENTRAL, to produce a custom-built platform ("EasyGrants"). After multiple years of effort, though, that project was cancelled, and *RGPO* has since been working to implement SmartSimple to facilitate its grant administration. Until SmartSimple is fully implemented, though, *RGPO* continues to work across both proposalCENTRAL and GRAIL to manage its existing grants.

In interviews, multiple staff and *RGPO* leaders also shared their perception that the implementation of a new database system has also been prolonged by a lack of sufficient staffing. As noted elsewhere in this report, the large influx of funding that has accompanied Proposition 56, along with constraints on hiring within the UC Office of the President, has significantly strained staff capacity. It has thus been difficult for *RGPO* to invest capacity in completing data conversion and full implementation. This challenge may have been magnified by the decision to manage the implementation within *RGPO*, given the programs' specific needs, rather in collaboration with Information Technology Services within the UC Office of the President.

Campus stakeholders have also reported excitement over the transition to SmartSimple, as well as frustration with some elements of its implementation. In some cases, VCRs and/or their delegates reported that SmartSimple has certain components that don't well fit their institution, and/or that the platform had led to instances of principal investigators submitting proposals without the notification of their campus research administration officers. By and large, though, campuses expressed greater frustration with the legacy systems that SmartSimple is replacing, and eagerness to complete the transition.

CALIFORNIA BREAST CANCER RESEARCH PROGRAM

The UC Office of the President, through its operation of the *California Breast Cancer Research Program* (*CBCRP* or the *Breast Cancer Program*), supports the State of California's research into the cause, cure, treatment, detection, and prevention of breast cancer. Since its inception in 1993, *CBCRP* has awarded more than $290 million, spread across over 1,000 grants to well over 100 institutions and community organizations throughout the state. [20]

CBCRP is deeply committed to advocate involvement in all aspects of its rigorously peer-reviewed research, as it was initially established through the vision and efforts of breast cancer advocates. Breast cancer or other appropriate community advocates must be actively involved in *CBCRP*-funded research, and all letters of intent (LOI) and applications are evaluated in part on the extent to which advocates are substantively involved. Funding decisions are made based on scientific merit and programmatic responsiveness.

CBCRP is funding three different types of grants in its current call for applications, in addition to grants that are supported through two initiatives that are distributed off-cycle. *CBCRP* is supported by a team of five, including the Program Director, three Program Officers, and a Program Specialist. The *CBCRP* team has recently lent significant capacity (one FTE, or 20% of overall staffing) to *TRDRP* (the *Tobacco Program)* team in response to a surge in funding for *TRDRP* after the passage of Proposition 56 and the vacancy of the *TRDRP* Director position, which has been covered by the *CBCRP* Director on an interim basis.

Funding for *CBCRP* is primarily drawn from a small surtax on cigarette sales. *CBCRP* also receives funding through a voluntary tax check-off, though this totaled less than 2% of its total allocation for FY19. Looking forward, *CBCRP* revenues are projected to continue to fall in both nominal and real terms, given the ongoing decline in cigarette sales as well as the fact that the *CBCRP* surtax on cigarettes is not adjusted for inflation. In the past, large and sustained drops in State allocations contributed to administrative expenses comprising larger shares of total program expenditures, at times surpassing the 5% statutory cap; this challenge will continue into the future.

History

There were two main historical events that led to the creation of the *CBCRP*: the passage of the California Breast Cancer Act (CBCA), and the creation of the California Breast Cancer Research Voluntary Tax Contribution Fund.

California Breast Cancer Act

CBCRP was created after the passage of the CBCA in 1993. The legislation derived from the efforts of breast cancer activists along with scientists, clinicians, state legislators, and UC officials, who collectively sought to push breast cancer research in creative directions. The Act increased the tax on cigarette packs by $0.02 per pack, of which *CBCRP* receives 45% - or approximately $0.009 per pack.

As with most other statewide funds that are administered by *RGPO*,[21] the funds themselves are managed by the California Department of Finance. As such, the exact budget authority the State allocates to

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[20] Joan Venticinque, Letter to President Napolitano, 26 March 2018.
[21] Other statewide funds include those derived from tobacco taxes (Proposition 99 and Proposition 56 funding for *TRDRP*), special allocations (*UC Valley Fever Research*), and tax check-offs (for *CRCC* and *type 1 diabetes*, in addition to the tax check-off for *CBCRP*).

CBCRP can be somewhat discretionary, depending upon shifting reserve policies as well as the State's interpretation of the legislation.

The California Department of Finance manages and allocates CBCA funds, as it does with other cigarette tax-funded programs that are administered by *RGPO*. As such, the exact budget authority the State allocates to *CBCRP* can be somewhat discretionary and variable. For example, in FY17 the State allocation dropped by 46%, before annual increases of 41% and 48% in the subsequent two years that restored the full allocation across all three years to expected levels.

Notably, the revenue for both *CBCRP* and *TRDRP* have varied despite overlap in their underlying taxable base. The CBCA revenue for any given year should equate to no more than 72% of the Proposition 99 allocation for *TRDRP*.[22] In fact, because the CBCA tax is limited to cigarettes, while Proposition 99 draws revenue from taxes on "equivalent products" (such as chewing tobacco, cigars, and e-cigarettes), one would expect that CBCA revenue would rarely approach that threshold and that both funds would move in concert with total cigarette sales. Instead, the annual changes to CBCA and Proposition 99 funds vary from year to year, and CBCA revenue has at times approached or even surpassed Proposition 99 revenue (though this in part reflects a diversion of Proposition 99 revenue by the State that is further detailed in the section on *TRDRP*). Consequently, the variable allocation decisions made by the State to *CBCRP* have made long-term planning for the program somewhat more difficult than might be expected.

The figure below highlights the funds available from Proposition 99 and CBCA compared to total cigarette sales in California. As noted, one would expect a correlation between the three metrics, but the variability complicates long-term planning for *CBCRP*.

FIGURE 13: VARIANCES IN *RGPO* TOBACCO TAX REVENUE, FY09-FY19
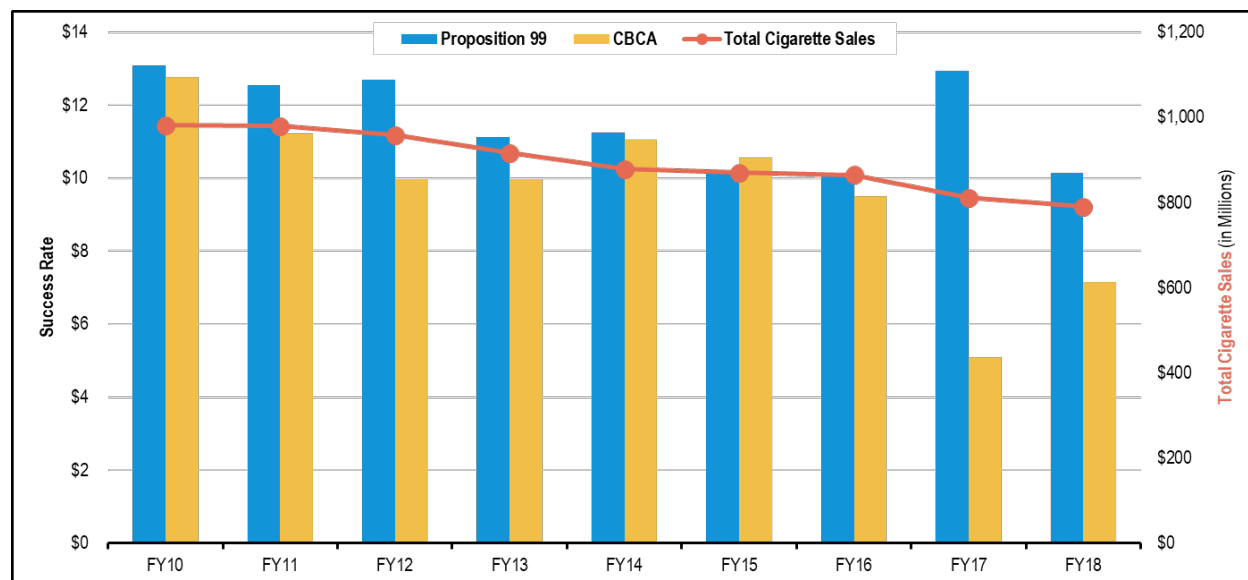
Gradually declining funds have made it increasingly difficult for *CBCRP* staff to fulfill all legislatively stipulated activities. Specifically, the CBCA (in addition to Propositions 99 and 56) contains specific

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[22] 72% is the equivalent of $0.009/$0.0125, with $0.0125 equating to *TRDRP*s legislatively mandated allocation of 5% of $0.25.

language that the University go beyond narrow grantmaking activities to include evaluation, research dissemination, and translation/commercialization. These requirements are unique to SRPs (with the exception of the *HIV/AIDS Program*) and help to drive somewhat higher rates of internal expenses.

Tax Check-Off

In addition, *CBCRP* has historically received funding from voluntary tax contributions on personal California income tax forms and individual donations. As with CBCA revenue, the tax check-off allocations to *CBCRP* are controlled by the Department of Finance. Total checkoff allocations have fallen in both nominal and real terms over the past decade and were just 1.6% of the program's total allocation for FY19, down from a high of 5.7% at the start of the decade. More broadly, nominal revenue to the State – though not necessarily to *CBCRP* – tends to increase when the economy is strong and is currently trending upward again.

In accordance with California law,[23] any check-off will be automatically repealed if it fails to meet the fund's "minimum contribution." Prior to 2018, the minimum contribution level increased each year, and the longevity of the Breast Cancer Checkoff resulted in the highest minimum contribution of any fund in the State – its initial target for 2018 was more than $384,000. *CBCRP*, though, has been cited by the Legislature as a model tax check-off program, and Director Kavanaugh-Lynch has testified in Sacramento about the program's best practices. In the past, when the program was in danger of automatic repeal, legislation was passed to temporarily freeze the minimum contribution requirement;[24] more recently, legislation was passed to reset these minimums at $250,000 upon renewal, which took effect for the Breast Cancer Checkoff in 2018.

As shown in the figure below, tax check-off allocations rarely equate to the total contributions received by the California Franchise Tax Board. Instead, the State seems to adjust projected distributions each year based on changes to its revenue projections, which are updated annually but are largely based on prior year returns. With a relatively large uptick in contributions thus far in calendar year 2018, it is reasonable to expect a subsequent increase in *CBCRP's* allocation in FY20. As such, some interviewees expressed hope that it could take on an increasingly important role for *CBCRP* over the coming years.

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[23] The minimum contribution requirement for tax check-offs was waived in 2017 (FY18 funds) by the Legislature.
[24] "Oral Testimony of Mhel Kavanaugh-Lynch to the California State Senate," *California Breast Cancer Research Program,* 9 December 2015, http://www.*CBCRP*.org/taxcheckoff/testimony-2015dec9.pdf.

FIGURE 14: BREAST CANCER TAX CHECK-OFF REVENUE, FY15-FY19
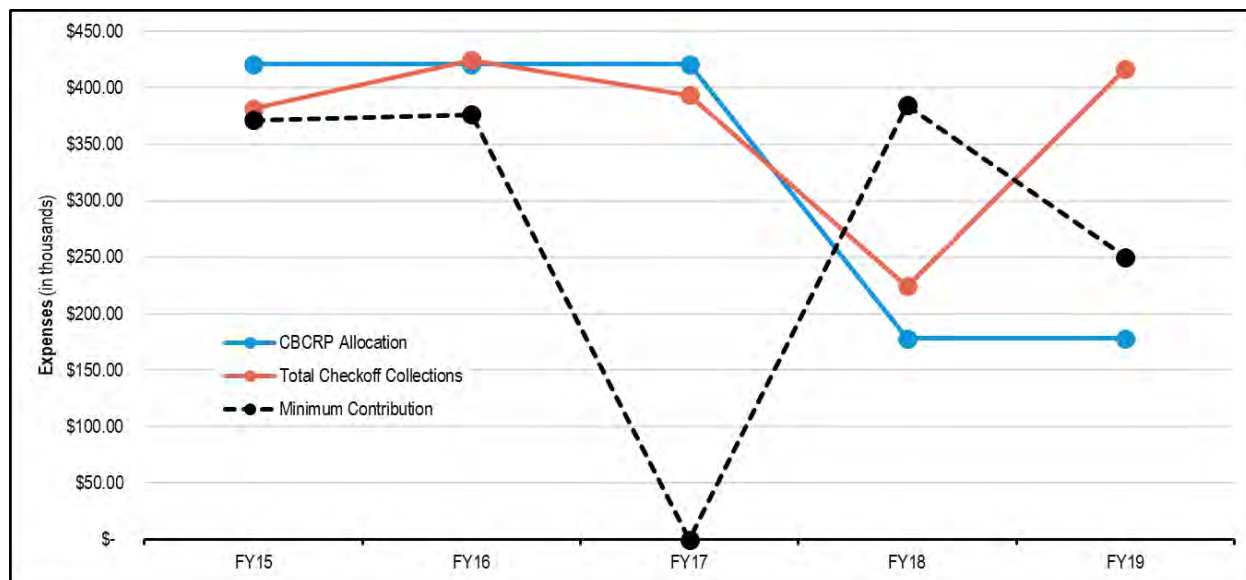
Structure

The specific and public nature of *CBCRP's* funding means that the program has both formal reporting lines within the University as well as ongoing oversight from the California Breast Cancer Research Council and general accountability to stakeholders across the State. These aspects of *CBCRP's* structure include:

- **Permanent staff,** including a staff of five reporting up to the *RGPO* Executive Director through the *CBCRP* Director;
- The **California Breast Cancer Research Council**, a legislatively mandated oversight committee provides strategic and programmatic advisement to the *CBCRP* team; and
- **Various other stakeholders**, including the community groups and advocates who helped to originally achieve the passage of the CBCA of 1993, as well as the State Legislature.

This structure is depicted in the figure below. Staff members who have been partially reallocated to support *TRDRP* are shaded accordingly.

FIGURE 15: CBCRP ORGANIZATIONAL CHART[25]

Key

- CBCRP Staff
- Other Program Staff
- Advisory Committees
- Leadership
- Vacant

Bart Aoki — *Executive Director*

Breast Cancer Research Council

CBCRP Steering Committee

Kathleen Erwin — *Director, UCRI*
- Christopher Spitzer — *Program Officer*
- Jessica Wu — *Program Officer*
- Leila Sievanen — *Program Officer*

Andrew Forsyth — *Director, CHRP*
- Lisa Loeb-Stanga — *Program Officer*
- Tyler Martz — *Program Officer*
- Laura Packel — *Program Officer*
- Vacant — *Program Specialist*

Vacant — *Director, TRDRP*
- Raymond Boyle — *Senior Program Officer*
- Vacant — *Senior Program Officer*
- Ginny Delaney — *Program Officer*
- Phillip Gardiner — *Program Officer*
- Uta Grieshammer — *Program Officer*
- Norval Hickman — *Program Officer*
- Tracy McKnight — *Program Officer*
- Jennifer Jackson — *Program Specialist*

Mhel Kavanaugh-Lynch — *Director, CBCRP*
- Nicholas Anthis — *Program Officer*
- Katherine McKenzie — *Program Officer*
- Senaida Poole — *Program Officer*
- Lisa Arneson-Minniefield — *Program Specialist*

California Breast Cancer Research Program (CBCRP)

NOTE: CBCRP employees with a partial tan shading indicate partial appointments supporting TRDRP.

Staffing

CBCRP has a staff of five. Marion "Mhel" Kavanaugh-Lynch has served as Program Director since 1995, when she was hired as the first Director. Other staff members include three Program Officers and one Program Specialist, all of whom report directly to the Director. Director Kavanaugh-Lynch and one Program Officer have been splitting time between *CBCRP* and *TRDRP* for the past year in order to support the latter's administration of new Proposition 56 funds.

CBCRP's Program Officers are experts in their fields, and each *CBCRP* Program Officer holds a Ph.D. or D.Phil. The three Program Officers are each positioned to lead management of specific subject areas, including:

- Clinical and Prevention Sciences;
- Community Initiatives & Public Health Sciences; and
- Environmental Health and Health Policy.

Some campus stakeholders suggested that some *RGPO* programs, including *CBCRP*, could benefit from operating on a campus because the campuses have a greater abundance of scientific experts. Given the prevalence of scientific experts in *CBCRP* and *RGPO* as a whole, though, internal staff did not feel this was an issue.

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[25] Andrew Forsyth's appointment as *CHRP* Director is not effective until Feb 1 2019.

The *CBCRP* team has had little attrition since FY14, when it had one additional Program Officer than it does now. As such, its total staffing today is nominally lower than in FY14; its nominal funding has also fallen by 7% over that same period.

The lack of attrition within *CBCRP* is at least in part a reflection of higher than usual job satisfaction among the team. In a survey of *RGPO* staff, respondents were asked four questions intended to assess their general satisfaction as well as three criteria – motivation, fulfillment, and growth – that are frequently correlated with productivity and retention. Across each of these four questions, *CBCRP* staff submitted the highest average ratings of any program team.

Governance

The initial enabling legislation stipulated that *CBCRP* include a research program office with a Director and other necessary staff, a Breast Cancer Research Council, and research review panels with a peer review process modeled on that of NIH. [26] The Breast Cancer Research Council consists of 13-15 representatives of "the people who are affected by breast cancer and the institutions that can contribute to the solution." It plays a critical advisory role and informs the program's strategy and direction, in addition to making funding recommendations.

Council members serve staggered, three-year terms, and are not compensated for their service beyond reimbursement for travel and other program-related expenses. All members are California residents, and represent constituencies as defined by the enabling legislation, [27] including at least:
- Four representatives of survivor and advocacy groups;
- Four representatives of the scientific/clinical community, at least one of whom must come from a private research university;
- Two members from nonprofit organizations that have a demonstrated commitment to breast cancer research and control;
- One practicing breast cancer medical specialist;
- Two representatives from private industry; and
- One ex-officio, nonvoting member from the Breast Cancer Early Detection Program.

Current Council members are listed in the table below. As intended, they represent both the communities who are impacted by breast cancer as well as the researchers positioned to contribute to its treatment and eradication. Chair Joan Venticinque, for example, is a two-time survivor and nationally renowned advocate, while Vice Chair Ana Navarro of UC San Diego leads the much-acclaimed Por La Vida health education program; her work has been cited in hundreds of research papers. During their term of service and for one cycle thereafter, members are ineligible to receive *CBCRP* funding.

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[26] *CBCRP Program Summary.* University of California Office of the President.
[27] California Code, Health and Safety Code - HSC § 104145, https://codes.findlaw.com/ca/health-and-safety-code/hsc-sect-104145.html.

TABLE 7: *CBCRP* COUNCIL

Name	Constituency	Affiliation
Joan Venticinque *(Chair)*	Advocate	Cancer Patient Advocacy Alliance
Ana Navarro *(Vice Chair)*	Scientist/Clinician	UC San Diego Cancer Center
Lisa Eli	Private Industry	Puma Biotechnology, Inc.
Francine Halberg	Medical Specialist	Marin Cancer Institute
Joann Loulan	Advocate	Breast Cancer Action
Ghecemy Lopez	Advocate	Celebrate Life Cancer Ministry
Sharon Lum	Scientist	Loma Linda University
Dolores Moorehead	Advocate	Women's Cancer Research Center
Robert Oshima	Scientist/Clinician	Sanford-Burnham Prebys. Medical Discovery Institute
Thu Quach	Nonprofit Organization	Asian Health Services
Stina Singel	Private Industry	Genentech
Tasha Stoiber	Private Industry	Environmental Working Group
Patricia Wu	Advocate	Dr. Susan Love Research Foundation
Veronica Vieira	Scientist	UC Irvine

In addition, *CBCRP* also draws support and advice from a nationally represented *CBCRP* Steering Committee, which provides strategic direction for Program-Directed Initiatives. As detailed further below, approximately half of *CBCRP* funding is reserved for off-cycle distribution through Program and Policy Initiatives, the priorities for which are determined in consultation with the Steering Committee and ultimately approved by the Council. Steering Committee members are listed below.

TABLE 8: *CBCRP* STEERING COMMITTEE

Name	Title	Affiliation
Marion H. E. Kavanaugh-Lynch *(Chair)*	Director	*CBCRP*
Susan Braun	Chief Executive Officer	The V Foundation
Ross Brownson	Bernard Becker Professor of Public Health	Washington University
Sarah Gehlert	Dean, College of Social Work	University of South Carolina
Jeanne Mandelblatt	Associate Director for Population Sciences, Lombardi Comprehensive Cancer Center	Georgetown University
Shyrea Thompson	Founder & Principal	The IRIS Collaborative
Lori Wilson	Chief of Surgical Oncology	Howard University Hospital
David Williams	Florence and Laura Norman Professor of Public Health and Professor of African and African American Studies	Harvard University
Julia Brody	Executive Director & Senior Scientist	Silent Spring Institute

Other Stakeholders

As shown in the breakdown of membership above, *CBCRP* is accountable to numerous constituencies across California, including patients, advocates, researchers, and industry partners. In addition, *CBCRP* is especially accountable to the State Legislature, as its enabling legislation was not passed by referendum – like those of *TRDRP* – but instead through the traditional state legislative process.

Research Priorities

To be responsive and eligible for funding, each applicant must explain how their proposed research addresses one or more of the program's priority issues for its annual call – which covers approximately half of *CBCRP* grant payments. These priorities are described in the table below.

TABLE 9: *CBCRP* PRIORITY ISSUES

Research Priority	Overview
The Community Impact of Breast Cancer: The Social Context	An exploration of health policy; health services; and sociocultural, behavioral, and psychological research that address disparities and the burden of breast cancer among California's diverse communities
Etiology & Prevention: Finding the Underlying Cause	California-based studies that seek an understanding of the environmental and lifestyle causes of breast cancer and how these factors increase risk and impact in different California communities
Biology of the Breast Cell: The Basic Science of the Disease	An exploration of the pre-neoplastic, causative events of breast cancer at the tissue level and the genetic changes in disease progression and tumor heterogeneity
Detection, Prognosis, & Treatment: Delivering Clinical Solutions	Research into less toxic and more individualized therapies, mechanisms of drug resistance, and studies to evaluate alternative medicines and natural products

Types of Grants

As with other SRPs, and in accordance with the enabling legislation, *CBCRP* funding is awarded to both UC campuses and to non-UC institutions. Full indirect costs are allowed to non-UC institutions, but indirect costs to UC campuses are capped at 25%. The historical breakdown of these grant payments is depicted in the figure below, and in part reflects different costing policies between internal and external grant recipients. Historically, UC principal investigators have received a minority of *CBCRP* grant funding, though the exact breakdown can fluctuate. Although some stakeholders suggested that this may derive in part from the necessity of perceived impartiality, *CBCRP's* peer review process is conducted without regard to institution.

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FIGURE 16: *CBCRP* GRANT PAYMENTS (FY10-FY18)
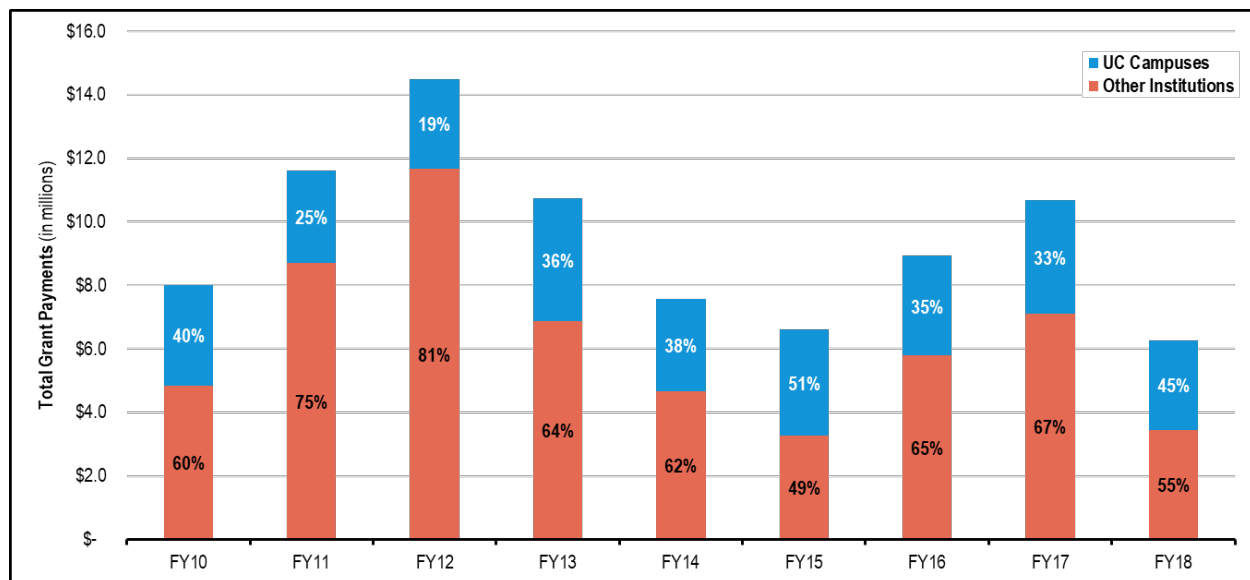
CBCRP funding is used to support four awards – one of which has two types – that are cornerstones of the program. These award types are detailed in the table below.

TABLE 10: *CBCRP* GRANTS, FY19 CALL FOR APPLICATIONS

Award	Purpose	Total 2018 Award Commitments	2019 Maximum Award (Direct Costs)	Years of Funding
Community Research Collaboration ("CRC") Pilot Awards	Support data collection and research dissemination partnerships between community organizations and research scientists. Pilot awards support the building of partnerships, research design, and initial data collection.	$582,100	$150,000	1.5
Community Research Collaboration ("CRC") Full Awards	Support data collection and research dissemination partnerships between community organizations and research scientists. Full awards fund projects with fully developed plans and supporting preliminary data.	$1,721,800	$600,000	3
Innovative, Developmental, & Exploratory ("IDEA") Awards	Support early-stage exploratory research projects that might otherwise struggle to attract funding. These funds are frequently utilized to leverage additional resources as the project progresses.	$1,293,900	$100,000 (or $150,000 for studies with animal or human participants)	1.5
Conference Awards	Used to support the dissemination of key research findings to other researchers and/or to local communities.	$25,000	$25,000	N/A
Translational Awards	Support projects with potentially major impact on a selection of priority areas.	Translational Awards are not being offered in the current funding cycle, and no applications were selected in 2018.		

In addition, *CBCRP* reserves approximately 50% of research funding to support Program Initiatives and Policy Initiatives, which are distributed off-cycle on a project-specific basis. These awards are used to support timely and priority research, as identified in consultation with the *CBCRP* Steering Committee.

Community Research Collaboration Awards

Since 1997, Community Research Collaboration (CRC) Awards have funded community organizations to work in teams with research scientists. Together, these teams decide which breast cancer questions are most important, determine how to study them, gather and interpret data, and communicate findings. Results from CRC Awards can be applied to other communities and help *CBCRP* realize its vision of funding innovative and important research that will reduce the suffering caused by breast cancer and impact public health outcomes.

There are two types of CRC funding mechanisms: Pilot Awards and Full Awards. *CBCRP* offers technical resources to help applicants find a partner, think through research ideas and partnership plans, and prepare applications via one-on-one assistance or webinars. The Modified Total Direct Cost base policy for both awards is the same, as UC researchers' claims on Modified Total Direct Cost are capped at 25%, whereas non-UC institutions are entitled to full F&A rate recovery.

As shown in the tables below, the CRC Awards have maintained success rates above 30% in each of the past four years, though this is largely due to the low number of applicants and awards each year. The full awards, including indirect costs, have grown slightly in size over the period as a function of larger numbers of external recipients, with higher indirect costs, receiving awards; direct costs for all recipients,

though, are capped at $600,000. The pilot awards have proven slightly more volatile, as overall interest has waxed and waned along with success rates, though direct cost maximums for these awards have similarly been kept consistent (at $150,000 in annual support).

The tables below highlight the changes in CRC Awards, including both Full and Pilot awards, over the last four years.

TABLE 11: CRC FULL AWARDS (FY15-FY18)

Award	FY15	FY16	FY17	FY18
Applications[28]	6	2	2	5
Awards	2	1	1	2
Success Rate	33%	50%	50%	40%
Total Award Commitments	$1,431,500	$755,000	$828,600	$1,721,800
Average Award Size (UC researchers)	$ 715,766	$755,008	$828,631	$744,073
Average Award Size (non-UC researchers)	N/A	N/A	N/A	$977,678

TABLE 12: CRC PILOT AWARDS (FY15-FY18)

Award	FY15	FY16	FY17	FY18
Applications[29]	7	9	6	10
Awards	4	3	4	3
Success Rate	57%	33%	67%	30%
Total Award Commitments	$858,700	$551,700	$765,200	$582,100
Average Award Size (non-UC researchers)	$214,668	$187,746	$191,301	$227,498
Average Award Size (UC researchers)	N/A	$176,250	N/A	$177,288

Innovative, Developmental, & Exploratory Awards (IDEA)

IDEA Awards support speculative, exploratory, high-risk/high-reward projects that challenge existing paradigms, represent a new direction for the Principal Investigator and encourage innovation by the incorporation of techniques and approaches not yet well-represented in mainstream breast cancer research. If successful, IDEA projects should have the potential to be leveraged into more substantial funding. Awards are open to both new and established investigators. All investigators are required to submit a Letter of Intent that:

- Provides brief background, rationale, or purpose for the project in lay terms;
- Describes a novel, innovative topic and/or approach that is linked to a *CBCRP* priority issue;
- Explains how the project is a key portion of the critical patch from basic knowledge and hypothesis-testing to a practical application at either the patient or community level; and
- Shows evidence of involvement of advocates.

IDEA projects are limited to 18 months in duration. Non-UC institutions are entitled to full F&A of Modified Total Direct Cost base, while UC institutional F&A is capped at 25%. As shown in the table below, IDEA's average award sizes have been held stable despite fluctuations in funding, leading to a success rate of just 7% in 2016. Subsequent decreased interest, along with restored funding, has pushed success rates back up to higher levels in 2017 (33%) and 2018 (35%).

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[28] Does not include withdrawn or pending applications.
[29] Does not include withdrawn or pending applications.

TABLE 13: INNOVATIVE, DEVELOPMENTAL, & EXPLORATORY AWARDS (FY15-FY18)

Award	FY15	FY16	FY17	FY18
Applications[30]	33	27	18	17
Awards	6	2	6	6
Success Rate	18%	7%	33%	35%
Total Award Commitments	$1,388,100	$447,600	$1,484,900	$1,293,900
Average Award Size (non-UC researchers)	$278,142	$236,599	$277,119	$271,934
Average Award Size (UC researchers)	$184,558	$211,049	$188,206	$187,500

Conference Awards

Conference Awards are designed to inform and stimulate ideas and foster research. *CBCRP* offers two types of Conference Awards—the Standard Award and the Community-Led Award. The Standard Award is open to all applicants who have the capacity to host an event that satisfies *CBCRP* criteria, and the Community-Led Award supports grassroots organizations that need more time or resources to develop and execute a successful event. Applicants for Community-Led Conference Awards must submit a Letter of Intent prior to a full application, and the *CBCRP* Council will provide feedback that the applicant may use to prepare for the application. In accordance with the stated goals of the Conference Awards, successful applications must entail events that:

- Highlight resources particular to California;
- Encourage new collaborations;
- Recruit high quality researchers;
- Examine and create solutions for disparities;
- Inspire paradigm-shifting research;
- Inform policy;
- Promote translational and/or outcome-driven research; or
- Create tools for educating members of the public about breast cancer.

Awards are capped at $25,000 in direct costs, and F&A costs are not allowed. Each year, *CBCRP* attempts to award one Standard Award and one Community-Led Award.

Translational Awards

Translational Awards are used to support research with the potential for major impact in the areas of:

- Prevention, detection, diagnosis, or treatment;
- Improved quality of life for survivors;
- Reduction in the community and social burden caused by the disease in California; or
- Advances in medical practices, health systems changes, health policies, or environmental modifications that will impact public health outcomes.

Applicants must provide a critical path that maps how the project fits along the defined research continuum leading to practical applications and explain how their proposed research addresses one or more *CBCRP* priority issues.

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[30] Does not include withdrawn or pending applications.

Notably, Translational Awards are not being offered in the 2018-2019 funding cycle due to a decline in funding. In the past, these awards were limited to just one to two recipients, with average awards of more than $1 million. As recently as the 2016 cycle, more than $2.1 million in grants were awarded.

Translational Award projects lasted for a maximum of three years, and total project direct costs were capped at $750,000. Non-UC institutions were entitled to full F&A cost recovery, while UC campuses were capped at 25%.

Program-Directed and Policy Initiatives

In addition to these annual programs, approximately 50% of *CBCRP*'s annual research funds are reserved for Program-Directed and Policy Initiatives, which support coordinated, directed, and collaborative research on the role of the environment and disparities in breast cancer and on primary prevention of the disease. These initiatives are designed to leverage California's unique and diverse geographic, population, and research resources, to support critical studies that significantly move these fields forward and create solutions. Three award mechanisms are utilized, which are described in the table below.

TABLE 14: PROGRAM-DIRECTED AND POLICY INITIATIVES AWARD SELECTION

Process	Project Focus	Purpose
Request for Qualifications (RFQs)	Determined by Steering Committee and *CBCRP* staff, in consultation with Council	To identify the most qualified researchers to conduct studies with specific and pre-determined research questions and plans
Program-Directed Awards (PDAs)	Determined out of cycle by Steering Committee, *CBCRP* Staff and Principal Investigator	To fund projects identified during the strategy development proposed by the Steering Committee
Requests for Proposals (RFPs)	Proposed by Principal Investigator	To solicit proposals to address a specific initiative or topic raised by the Steering Committee

To structure the Initiatives, the *CBCRP* team engages a Steering Committee and key stakeholders to define areas where it wants to invest funds for Program-Directed Initiatives, and the topics vary by year. The Steering Committee consists of seven members and is chaired by the *CBCRP* Director. Its recommendations are subject to approval by the *CBCRP* Council.

The projects brought forth through the Initiatives have a timely and marked impact on the fight against breast cancer in California. In 2017, for example, a Request for Qualifications was issued to identify researchers to examine the impact of Proposition 65, California's landmark 1986 legislation to require warnings about potential exposure to cancerous chemicals, on the State's incidence of breast cancer. Ultimately, a multi-institutional team led by Professor Megan Schwarzman of UC Berkeley was selected for an $800,000 award, with potentially international impact on how to more effectively use warnings as a public health strategy. [31]

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[31] Kendall Powell, "The Curious Case of Acrylamide: California's Prop. 65 Explained," *Knowable Magazine,* 24 May 2018, https://bit.ly/2RMCPlQ.

Program-Wide Financials
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CBCRP's revenue relies upon a nominally fixed surtax – $0.009 – on each pack of cigarettes sold in California, a product for which the market is shrinking. As such, funding for *CBCRP* has declined as a function of decreasing tobacco sales over the past decade and will continue to fall over the coming years. This situation is further exacerbated by inflation, and the fact that the surtax - $0.009 per pack – has not been increased since the passage of the CBCA in 1993. *CBCRP* must thus look elsewhere for new sources of funding to make up for this falling revenue, or its grantmaking ability will continue to diminish.

Internal Expenses

Since FY12, grant payments have declined from a peak of approximately $14.5 million to just $6.3 million in FY18. Like all multi-year programs at *RGPO*, changes in grant payments have a natural lag behind changes in funding, as awards are dispensed over a multi-year lifecycle.

As shown in the figure below, internal expenses at *CBCRP* – across Evaluation, Development & Dissemination, and Administration – are relatively fixed, and are not entirely driven by the total grant payments made in a given year. As numerous stakeholders emphasized in interviews and in the staff survey, each application and grant that is evaluated and processed comes with a variable cost that is independent of the size of the eventual award. For example, the costs of site visits, monitoring, and payment transactions are driven by the numbers of grants being administered, and not by the size of those grants. Moreover, each review cycle comes with substantial fixed costs, like the hosting of a peer review meeting, that do not change if fewer grants are awarded or smaller awards are made.

### FIGURE 17: *CBCRP* EXPENDITURES (FY10-FY18)
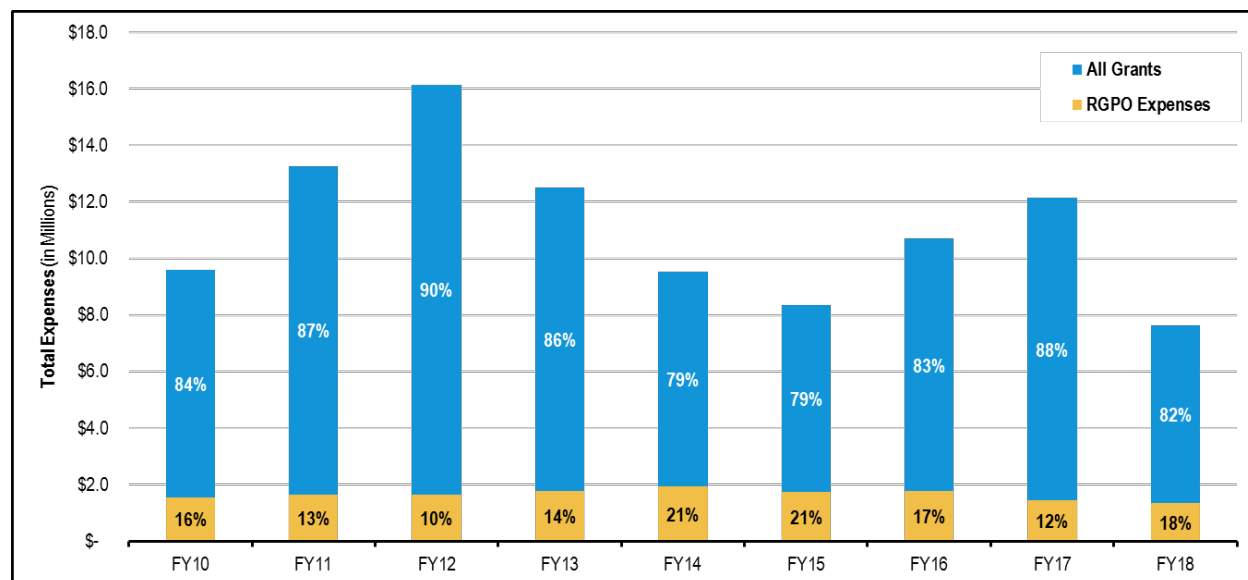
This relatively fixed nature is particularly true of administrative expenses, which is apparent in the figure below. Consequently, the percentage of expenses spent on administration has an inverse relationship with broader budgetary changes; when total payments go down, the share of expenses dedicated toward administration rises, and vice versa. The figure below shows total internal expenditures for *CBCRP*,

divided into the three categories used by *RGPO* to classify operating expenses, which are each also shown as a proportion of total *CBCRP* expenses:

- **Research Development & Dissemination**: Conducting outreach or dissemination, facilitating advisory councils/committees, evaluating programs, or taking other actions to plan and develop programming;
- **Research Evaluation**: Soliciting and reviewing applications, facilitating and conducting funding meetings, and monitoring grants; and
- **Administration**: Fundraising, general staff meetings, trainings, personnel mgt., office supplies, requisitions, travel reimbursements for staff administrative travel and other expenses not directly attributable to a programmatic activity (grant payments, research development & dissemination, and research evaluation).

FIGURE 18: *CBCRP* INTERNAL EXPENSES (FY10-FY18)
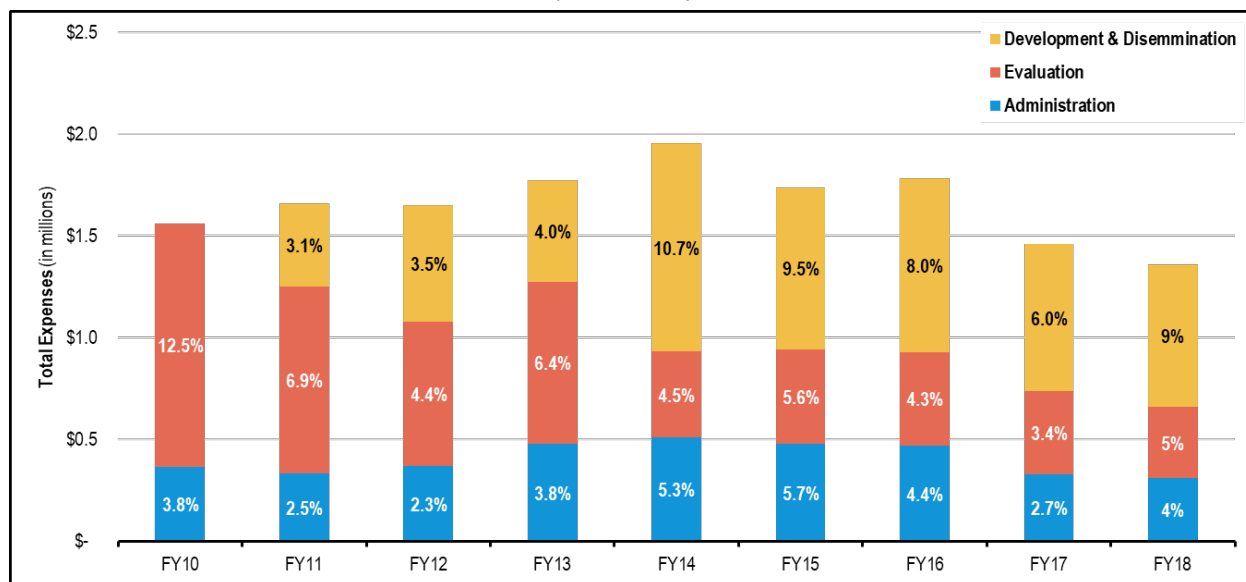
CBCRP remains a well-regarded and popular program among researchers around the State. The consequences of the relatively inelastic demand for grant opportunities among applicants can be somewhat obscured on a year-to-year basis, as the lagging grant payments from prior years' appropriations can lock in post-award expenses or (alternatively) make the direct impact of pre-award costs appear smaller as an overall percentage of expenditures. From FY12 through FY15, for example, total *CBCRP* grant payments fell by 54% in absolute terms, but administrative costs increased from FY12-FY14 by 38%. Although administrative costs then fell by 6% in FY15, the end result was that *CBCRP* surpassed the 5% statutory cap on administrative expenses for two consecutive years.[32]

Thus, **a sustained, multi-year decrease in funding, without a concurrent and equivalent decrease in applications, would put the program at risk of surpassing the 5% administrative cost threshold** in subsequent years.

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[32] At that time, the State agreed to use a five-year rolling average of administrative expenses to evaluate performance against the 5% cap.

Budget vs. Actuals

Difficulties aligning *RGPO's* multi-year grant programs with the annual budget cycles of the UC Office of the President have led to large variances between budgeted and actual expenses for *CBCRP* and other programs in the past. [33] These variances were an artifact of several factors, including budgeting and accounting practices within the UC Office of the President, timing of expenses, and multi-year budget appropriations for cigarette taxes.

One major driver of these variances was a prior practice of pegging budgets closely to anticipated state appropriations, as shown in the figure below. Beginning with FY18, *RGPO* has been instructed by the Budget & Finance department within the UC Office of the President to provide projected expenditures – including payments for active awards that were previously made – which could reduce these variances in the future. [34]

In FY13, for example, *CBCRP* ultimately expended 19% more than the UC Office of the President had budgeted; in FY17, on the other hand, it expended 63% less; and in FY18, it expended just 1% more. This effort remains a work in progress, though, as the timing of grant payments in 2018 led to a large variance from *RGPO's* FY19 budget in the first quarter – and indeed, that of the UC Office of the President as a whole. The figure below shows the close adherence between the UC Office the President budget and the state allocation of new funds (with the exception of FY17).

FIGURE 19: *CBCRP* BUDGET VS. ACTUALS (FY13-FY18)
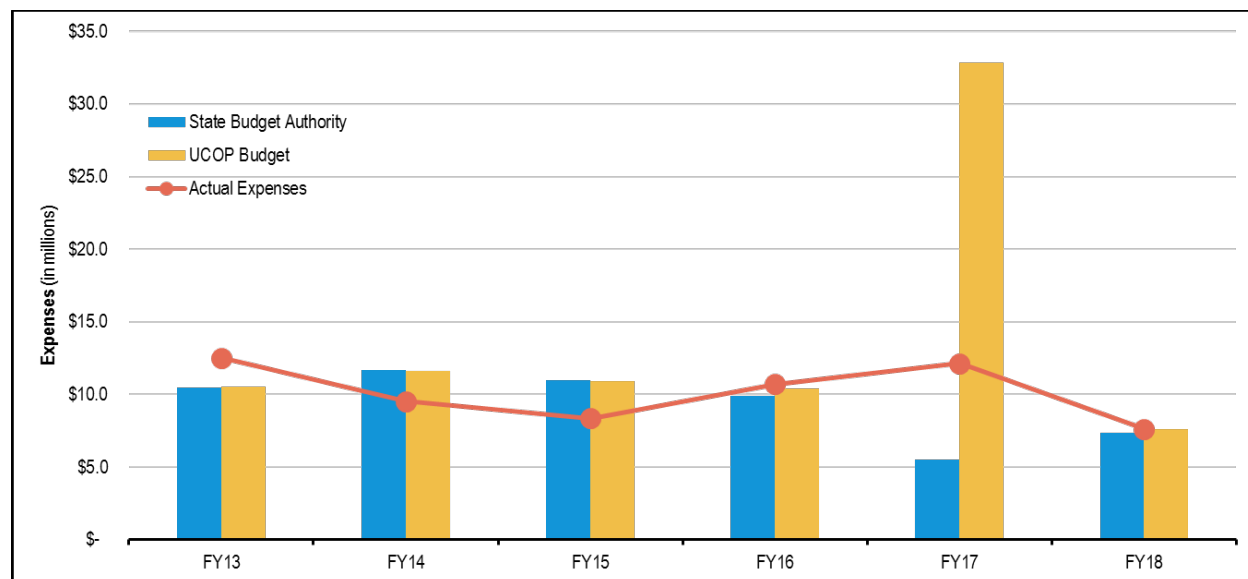
The table below identifies the program's budgeted and actual expenditures, and the variances between the two, over the past six years.

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[33] In FY17, for example, *CBCRP* and *TRDRP* staff were instructed to include all account balances from prior years' awards in their "Temporary Budget," leading to a large, one-time spike in the programs' overall budget.
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TABLE 15: *CBCRP* BUDGET VS. ACTUALS (FY13-FY18)

|	FY13	FY14	FY15	FY16	FY17	FY18
Budget	$10.5 M	$11.6 M	$10.9 M	$10.4 M	$32.9 M	$7.6 M
Actual Expenses	$12.5 M	$9.5 M	$8.3 M	$10.7 M	$12.1 M	$7.6 M
Variance ($)	$2.0 M	($2.1 M)	($2.6 M)	$0.3 M	($20.8 M)	$0.0 M
Variance (%)	19%	-18%	-24%	3%	-63%	1%

Key Performance Indicators

As outlined in the **Key Performance Indicators** section of this report, stakeholders identified two KPIs as being critical for effective management of grants programs:

- **Success Rates**: Defined as the percentage of applicants who ultimately receive funding, with an optimal range of 15%-30%; and
- **Award Size**: Defined as the total grant commitment over the full lifespan of the award, with a target of a minimum of $100,000-$125,000 for junior faculty and 2-3 times that for senior faculty.

As *CBCRP* funding has decreased, the average award size of some of its programs (CRC, IDEA, Conference, and Translational awards) has decreased as well, resulting in a relatively high success rate. At the same time, the total applications have fallen, perhaps in part due to the lower award sizes. For example, in FY17 the average award for program-directed and policy initiatives declined in value by 30% - reflecting a broader 44% decline in funding that year – and the number of applications received fell by only 27%.

FIGURE 20: *CBCRP* AWARD DATA, FY15-FY18
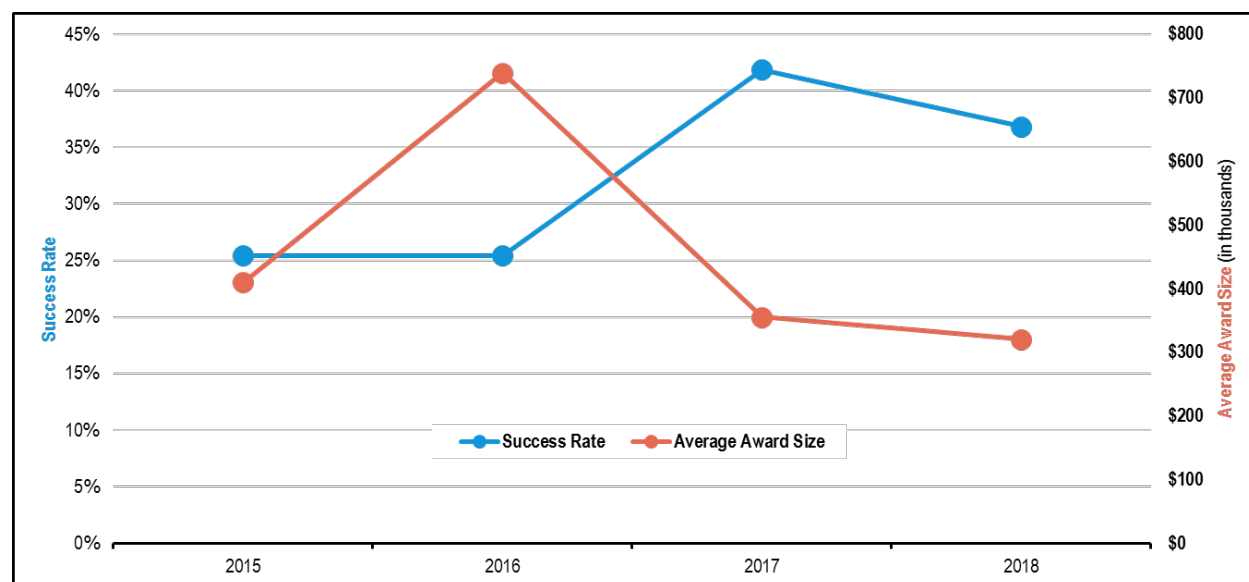
Future State Revenue Projection

To better understand the opportunities and challenges facing *CBCRP* in the future, it is useful to develop a 10-year projection of revenues based on historical data and external trends. By developing a regression model of the program's future funding environment, it becomes apparent that funding can be expected to continue declining moving forward, necessitating alternative forms of revenue to maintain current grantmaking activity. It is difficult to project *CBCRP's* future revenue streams for several reasons, which include:

- **Unpredictability of new revenue streams,** including AmazonSmile, private foundations, and bequests;
- **Uncertainty surrounding the potential to expand the base of taxable tobacco products,** as harmonization with other tobacco tax legislation would significantly increase revenue;
- **Historically shifting distribution policies** from the California Department of Finance, using methodology that seems to vary by year; and
- **Still unclear impact of Proposition 56 on cigarette consumption in the State**, which has resulted in relatively volatile projections from the State over the first two years of Proposition 56 funding. Proposition 56 contains provisions to backfill older tax-funded programs, in order to mitigate the downward impact of the increased tax on cigarette sales – which would otherwise diminish older funds' revenues. The exact calculation of these payments, though, is at the discretion of the State.

Nonetheless, there are clear trends that will impact funding in the future, specifically a long-term decline in per-capita cigarette sales that is not being offset by future projections of population growth in the State. Using CDC-sourced data on per-capita cigarette sales, as well as historic population data from the State, yields a relatively predictive trendline, which allows for projections of future funding allocations based upon continued trends in cigarette consumption.[35] While not a large enough sample size to be scientifically sound, and despite some noise in the data, there is a clear directional relationship between total cigarette sales and state distributions; fewer packs sold (on the x-axis below) correlates strongly with smaller CBCA allocations (on the y-axis below). Since this statistical relationship matches the intent of the underlying legislation, one can use this trend to create a baseline projection into the future despite year-to-year volatility of distributions from the Department of Finance.

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[35] The trendline results from a linear regression, with an R^2 of 0.54 and a variable p-value of .037, indicating directional accuracy of the regression as well as validation of cigarette consumption as a predictive variable.

FIGURE 21: HISTORIC CBCA FUNDING FOR *CBCRP* AND TOTAL PACKS SOLD
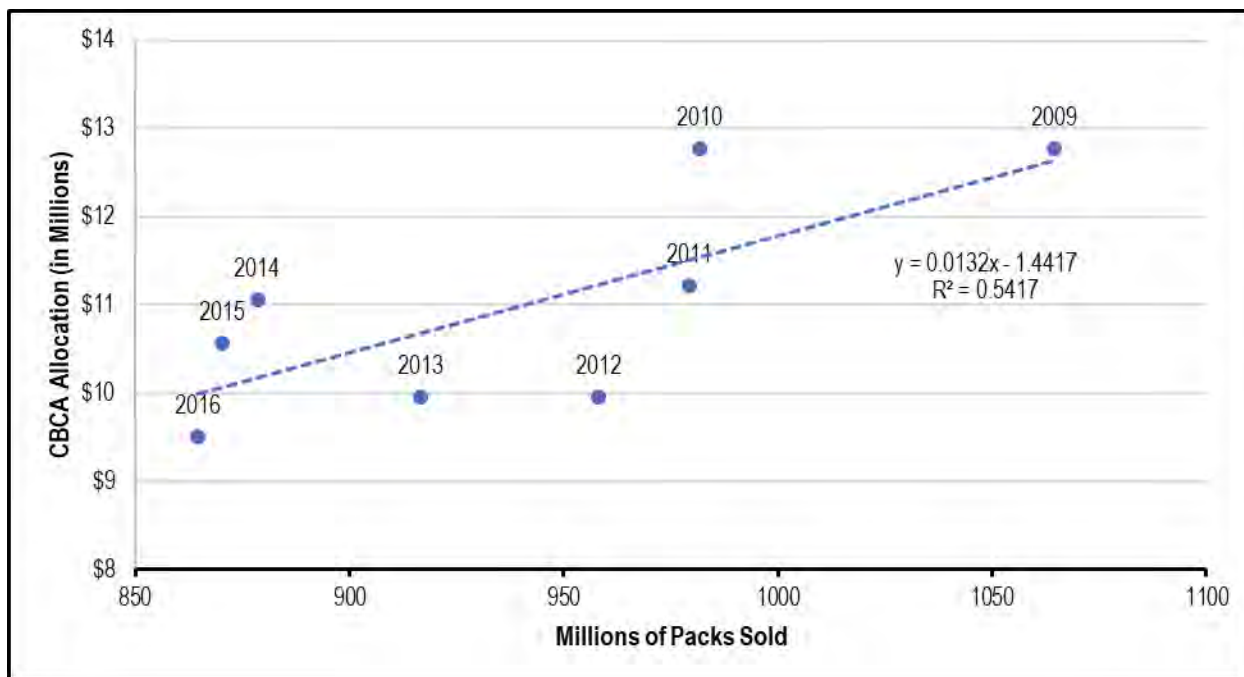
If the past decade's 3.31% annualized decline in per capita cigarette sales holds true for the next decade, and California's official projected population growth through 2030 (0.84%) is applied, then a reasonable projection of future cigarette sales can be projected. Coupled with the regression formula, one can reasonably project CBCA funding into the future. As shown in the figure below, this analysis projects steadily decreasing revenue for *CBCRP* over the coming decade.

FIGURE 22: PROJECTED CBCA (TOBACCO TAX) REVENUES, FY20-FY28
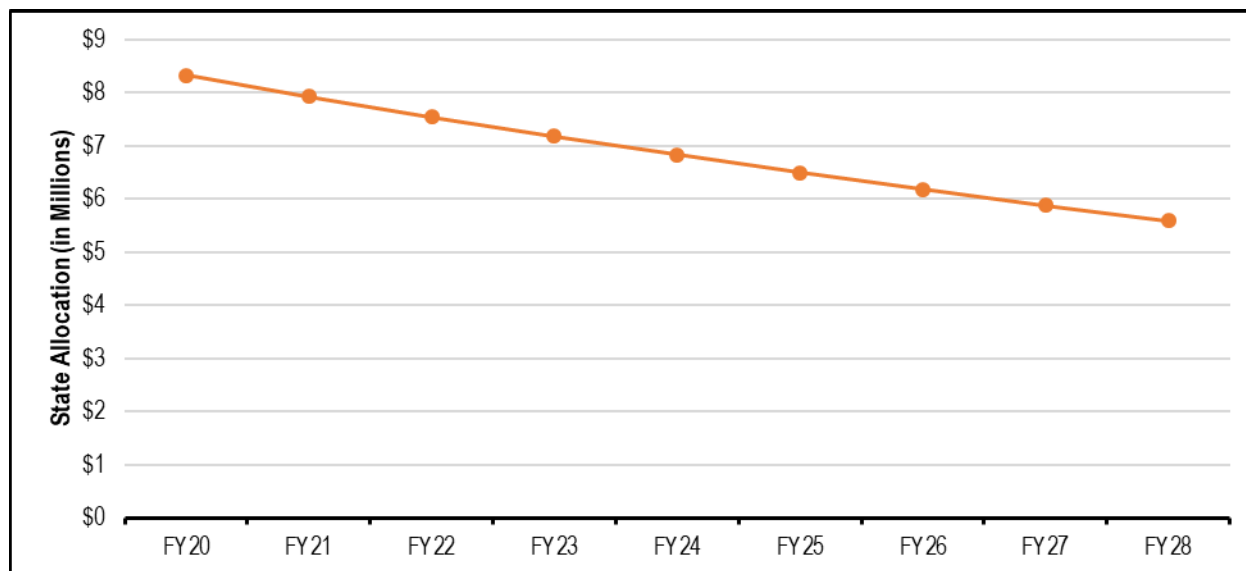
Based on this projection, one can expect *CBCRP* allocations to decline by approximately $3.95 million, or 37%, from FY19 levels. Given the relatively fixed nature of administrative costs, *CBCRP* may be hard-pressed to remain under the 5% statutory cap on administrative expenses – and to keep award sizes at desirable levels – unless applications and/or success rates drop accordingly, or alternative sources of revenue are uncovered.

Conservatively, this projection does not incorporate tax check-off or private donations and AmazonSmile revenue, as these collectively accounted for less than 3% of program revenues in FY19. With 0.5% of an Amazon customer's purchase price being redirected toward *CBCRP*, and the average Amazon Prime member spending approximately $1,300 annually,[36] *CBCRP* would need nearly 17,000 supporters on AmazonSmile in order to raise just 1% of its 2018 allocation.[37] By comparison, just 27,000 supporters have contributed to the tax check-off through the first 10 months of 2018 – including the peak tax filing season – even though inclusion of the checkoff on mandatory forms makes it far more prominently positioned to garner support.[38] These revenue streams may yet offset some of the tobacco tax declines, but it will be difficult for AmazonSmile to make a large impact; over the past four quarters, *CBCRP* has received just $529 through this source.

Otherwise, *CBCRP* would be facing continued and significant declines in funding, a matter further complicated by inflation. Since the state surtax on cigarettes is not inflation adjusted, real revenues would continue to decline even if cigarette consumption stayed flat. With market-expected inflation factored in, *CBCRP's* revenues in FY28 would equate to $5.6 million in 2018 dollars – or approximately 53% of its total CBCA allocation in FY19. **$5.6 million may be below the approximate level at which it becomes difficult to sustain an administrative expense ratio below 5%.** As stakeholders revealed during

[36] Don Reisinger, "Here's How Much Amazon Prime Customers Spend Per Year," *Fortune.com*, October 18, 2017, http://fortune.com/2017/10/18/amazon-prime-customer-spending/.
[37] In reality, the figure may be far greater, as non-prime customers spend significantly less per capita.
[38] "California Breast Cancer Research Voluntary Tax Contribution Fund – Status Report," State of California Franchise Tax Board, Accessed via web on 19 November 2018, https://www.ftb.ca.gov/individuals/vcfsr/reports/006.pdf.

interviews and in the staff survey, there are some fixed administrative costs that come with the operation of any grant program, before any actual grants are awarded.

As explained later in the ***Analysis of Findings*** section of this report, the minimum budget for an *RGPO* program to meet the 5% cap on administrative could be between $6.7 million to $7.8 million annually. With continued diminishing real value as a result of accelerating inflation, **CBCRP's state funding will fall within the upper end of this range as soon as FY22, at which point the program's continued ability to operate efficiently and sustainably could be in jeopardy.**

As *RGPO* **looks to take on more programs, it may have an opportunity to continue leveraging the existing Program Officers of** *CBCRP,* **who may have additional capacity over the coming decade.** Leveraging employees for other programs could help reduce operational expenses for CBCRP and stay within the 5% cap on administrative costs.

CALIFORNIA HIV/AIDS RESEARCH PROGRAM

Through its administration of the *California HIV/AIDS Research Program* (*CHRP* or the *HIV/AIDS Program*), the University of California plays a key role in the global fight against HIV and AIDS. Since its founding in 1983, *CHRP* has funded over 2,000 research projects and allocated more than $275 million in grants. Throughout its 35-year history, *CHRP has* supported innovative research to ascertain the most effective methods for care, treatment, and prevention of HIV/AIDS among California's most vulnerable populations. Among other milestones, *CHRP* funded the first clinical trials to evaluate the efficacy and toxicities of the first treatments for HIV infection in 1987 and drug therapies against AIDS-opportunistic infections from 1988 through 1996. Because *CHRP* was started earlier than many other research programs devoted to HIV/AIDS, it had a first-mover advantage in establishing research priorities and helped fund early-stage researchers who then were able to generate larger grants from the federal government and private sources.

CHRP defines its stakeholders as "any individual or group with an interest in the success of *CHRP* in delivering intended results and maintaining the viability of the organization's research products."[39] This intentionally broad definition includes:
- Scientists and researchers;
- Public health officials;
- State legislators;
- Community-based organizations;
- Consumers;
- Affected community members; and
- Patients and advocates.

CHRP determines its funding priorities and award types in consultation with the *CHRP* Advisory Council. It is supported by a team of five, including a Program Director and three Program Officers, but it has recently lent significant capacity (0.55 FTE, or 18% of Program Officer staffing) to *TRDRP* (the *Tobacco Program)* to support the surge in that program's funding after the passage of Proposition 56, as well as 0.4 FTE (13% of Program Officer staffing), to other one-time *RGPO* special initiatives.

CHRP receives its funding as part of the University's unrestricted general fund revenue from the State of California. Historically, the program was funded through a dedicated line-item in the State's appropriation for the University, but in 2011 the Legislature and Governor agreed to eliminate most line items in order to give UC greater flexibility. *CHRP* has since been funded as a systemwide set-aside, wherein its funding is "set aside" from the rest of the state's appropriation and directed to *RGPO*. Although the University has considered reducing funding or eliminating *CHRP* as a separate program in the years since, the program's many advocates around the State and in the Legislature have helped keep the program intact.

Consequently, the program's budget is now treated as "designated" funding, and the University continues to support it as a Legislative priority, although it no longer has a legal obligation to do so. Nonetheless, the program's budget has been frozen since 2012, leading to a gradual decline in real funding when adjusted for inflation, and the program's many stakeholders remain apprehensive about its future and concerned about the impact of this decline.

Unlike the other *RGPO* SRPs (the *Tobacco* and *Breast Cancer Programs*), *CHRP* has no statutory cap on administrative expenses. However, for the purposes of internal consistency, and as a demonstration of its

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[39] "Strategic Plan Continuation for FY2016 – 2018," *California HIV/AIDS Research Program,* p. 1.

cost-effective benefits for the people of California, the program operates with the same 5% cap on administrative expenses.

History

As noted above, *CHRP* is a highly visible program, with stakeholders and advocates across the State. Its visibility stems in part from its historical origins as a direct investment by the State Legislature during the early days of the HIV/AIDS epidemic, but its access to funding has consistently declined (in real terms) since its 2011 shift onto unrestricted, designated funding. As such, it is helpful to understand two distinct phases of the program's history: before and after the 2011 change in State funding.

Origin as a Special Allocation

CHRP is the oldest of the SRPs, and was founded by the California State Legislature in 1983 in the early days of the AIDS epidemic as the University-wide AIDS Research Program.[40] At the time, there was limited federal investment into studying the then-mysterious disease, and the Legislature responded to increasing need in communities around the State by creating a special line item appropriation to support basic research into its causes and effects. The University of California, as the research arm of the State of California, was chosen to manage this program.

CHRP has played an outsized role in the global fight against HIV and AIDS. In the early days of the epidemic, for example, *CHRP* funding supported Dr. Jay Levy's research team at UC San Francisco as it isolated and discovered HIV, a monumental breakthrough.[41] Although the program's initial focus was on basic science research, advocates across the State ultimately pushed *CHRP* to expand its focus to public health research, contributing to major breakthroughs in public policy to address the disease. *CHRP*'s former Director, George Lemp, was hired in 1995 to bring more of a public health focus to the program and led *CHRP* until his retirement in 2018.

First year funding for the program in 1983 was $3 million, all of which came from the State, and grew to an all-time high of $13 million annually by 1990. Adjusted for inflation, that equates to $25.8 million in 2018 dollars,[42] nearly three times the program's current size. After 1990, State funding fluctuated from year to year but generally trended downward.

Beginning in 1995, Director Lemp initiated agreements with other state partners to provide *CHRP* with supplemental funds that allowed the program to extend its research impact in California and regionally. These funds complemented the core *CHRP* funding and were restricted for use to the specific public health research activities identified in the agreements. As part of a prior effort to reduce the size and budget of the UC Office of the President, in 2009, Director Lemp was asked by then-Vice President of Research Steven Beckwith to eliminate these supplemental funding sources that had become a critical component of the *CHRP* budget.

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[40] The program was later renamed the California HIV/AIDS Research Program to reflect a more comprehensive understanding of the disease.
[41] Lisa Loeb Stanga, Anwer Mujeeb, Laura Packel, Tyler Martz, and George Lemp, "The California HIV/AIDS Research Program: History, Impact, and HIV Cure Initiative," *AIDS Research and Human Retroviruses*, Volume 33, Number S1, 2017.
[42] CPI Inflation Calculator, *Bureau of Labor Statistics*.

2011 Shift to a State Set-Aside

In 2011, Governor Brown moved *CHRP* funding – along with other special line item appropriations – onto the general State appropriation for UC. This shift reflected a strategic desire to provide UC with more budgetary flexibility but was accompanied by a handshake agreement that UC would continue to internally set aside funding for *CHRP* from the systemwide budget.

In practice, though, the program retains strong support in the California Legislature, and subsequent conversations about reducing program funding, or eliminating its set-aside, have met strong resistance from advocates in Sacramento and around the State. When the University considered eliminating the designated set-aside in FY12, senior members of both chambers of the Legislature intervened. In a compromise, the program's funding was cut by $461,000 to $8.75 million, where it has remained ever since. This long-term freeze has eroded funding in real terms due to naturally rising costs (both internally and for funded researchers). When factoring in inflation, the program's real spending power has declined by 12% over the seven years since FY12.[43]

The program's set-aside continues to be protected and treated as designated funding by the UC Office of the President. In recent years, it has shifted to a biennial competition for new proposals in order to keep success rates and award sizes at desirable levels.

Structure

CHRP's visibility and historic significance has ensured that the program remains accountable to stakeholders around the State, in addition to its internal reporting lines within the UC Office of the President. Key aspects of the program's structure include:

- **Permanent staff,** including three Program Officers reporting to the *CHRP* Director;
- The **CHRP Advisory Council**, which advises the University of California on the mission, goals and objectives, policies and priorities of the California HIV/AIDS Research Program; and
- **Various other stakeholders**, who represent and comprise the scientific areas and communities concerned with and impacted by HIV/AIDS.

This structure is depicted in the figure below. Staff members who have been partially reallocated to support *TRDRP* are shaded accordingly. Please note that the staff and positions on this chart are accurate as of the drafting of this report and have subsequently changed.

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[43] Ibid.

FIGURE 23: *CHRP* ORGANIZATIONAL CHART

NOTE: CHRP employees with a partial tan shading indicate partial appointments supporting TRDRP.
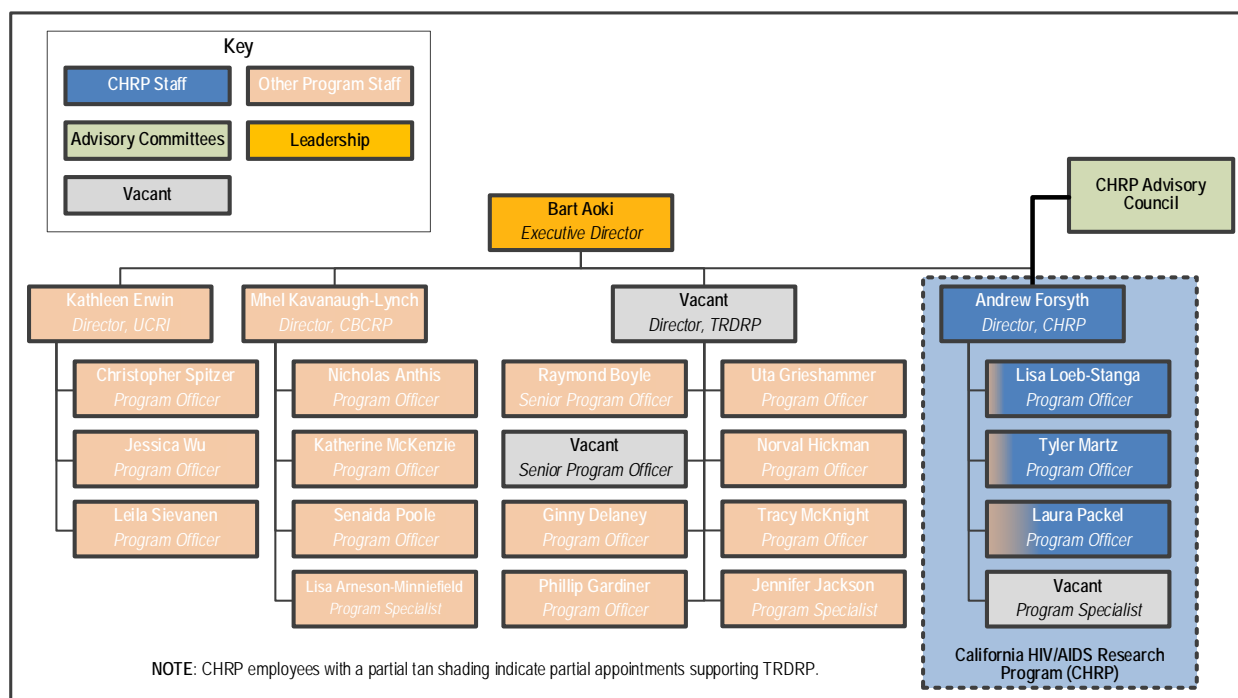
Staffing

CHRP has a staff of five, with one current vacancy. Following the retirement of Director Lemp in 2018, a nationwide search was conducted, leading to the appointment of Dr. Andrew Forsyth. Dr. Forsyth will begin his new role on February 1, 2019; until his start date, UCRI Director Kathleen Erwin will continue to serve as interim *CHRP* Director. Other staff members include three Program Officers and a vacant position for one Program Specialist (which is currently filled by a temporary employee that is shared with the matrixed C&G unit), all of whom report to the Director. All three Program Officers have been contributing capacity to *TRDRP* for the past year in order to support the latter's administration of new Proposition 56 funds, as well as to other short-term initiatives managed by *RGPO*.

CHRP's Program Officers are experts in their fields, and each *CHRP* Program Officer holds a doctorate. The three Program Officers are each positioned to manage certain subject areas, including:
- Health Policy and Health Services Research;
- Clinical Sciences; and
- Biomedical Sciences (including Basic and Clinical).

Some campus stakeholders suggested that some *RGPO* programs, including *CHRP*, could benefit from operating on a campus because the campuses have a greater abundance of scientific experts. Given the prevalence of scientific experts in *CHRP* and *RGPO* as a whole, though, internal staff did not feel this was an issue.

As a result of the recent change to a biennial funding cycle, *CHRP* Program Officers have more capacity to contribute effort to other *RGPO* programs and initiatives. For example, besides their support of

TRDRP, they have provided expertise in support of the legislatively-initiated *UC Valley Fever Research* funding opportunity, an extramurally-funded Open Access pilot study among all RGPO-funded grantees, and statewide cannabis-related research coordination. These opportunities to lend capacity to other teams, though, may not have fully replaced the demands of operating an annual grant cycle.

In a survey of all *RGPO* staff, respondents were asked to rate (on a one-to-seven scale) the extent to which they agreed with the following statements:
- "There are many periods over the course of the year when I have too little work to do," and
- "There are many periods over the course of the year when I have too much work to do."

The individual sample sizes for each responding team within *RGPO* was relatively small, though the variances between teams is nonetheless noteworthy. On the first of these two questions, equating to frequency of excess capacity over the course of the year, *CHRP* staff answered with an average of 4.0. No other program team had an average rating above 2.0. Similarly, on the second of these questions, which equates to the frequency of excess strain on staff, *CHRP* staff responded with an average of 2.67, whereas no other program team answered with an average below 4.25. Taken together, these results may indicate that *CHRP* Program Officers have been relatively less utilized than those of other program teams.

As noted above, after the passage of Proposition 56 dramatically increased funding for *TRDRP, CHRP* staff have recently lent significant effort to support that program. Each *CHRP* Program Officer has allocated capacity to *TRDRP* over the past year, totaling 0.55 FTE (or 18% of *CHRP*'s total capacity). The kinds of cross-program support provided by *CHRP* (and other) Program Officers to support *TRDRP* is precisely the sort of leveraged capacity that was initially envisioned for *RGPO* when it was created after the 2008 reorganization, but it had been rare for Program Officers until the passage of Proposition 56. Previously cross-program support primarily occurred with staff in *RGPO*'s central support teams (C&G and GBFA), and among the Program Officers who manage the various programs and initiatives housed by UCRI.

In interviews, both RGPO staff and some external stakeholders identified overall job satisfaction on the *CHRP* team as a potential risk over the coming months and beyond, reflecting:
- **Shifting job responsibilities:** There is a general acknowledgement and understanding that these Program Officers are not fully utilized in the HIV/AIDS research area and fields for which they were hired;
- **Stagnant wages**: Adjusted for local inflation, *CHRP* staff have not received a raise in several years; and
- **Diminishing grantmaking ability:** With a frozen nominal budget, *CHRP*'s real funding has continued to decline.

Since 2016, current *CHRP* staff have received annual salary increases of 3.1%.[44] During that same period from 2016-2018, local inflation in the San Francisco Bay Area has averaged 3.6%.[45] As a consequence, **CHRP staff have received a small decline in their real purchasing power over the past three years**, while being deployed to support other program teams as their own grantmaking resources have diminished.

CHRP staff also have considerably less longevity within *RGPO* than Program Officers in the two other SRPs, with an average tenure at *RGPO* of less than four years and a maximum tenure of six years.

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[44] Figure represents the average compound annual growth rate of each current staff member's salary, based on UC Office of the President HR data.
[45] "Consumer Price Index, San Francisco Area — October 2018," *Bureau of Labor Statistics,* 14 November 2018.

Based on a survey of all staff, Program Officers in *CBCRP* and *TRDRP* have been with *RGPO* for an average of more than seven years. As noted above, the team is also experiencing a change in leadership at present. Taken together, this data would seem to support stakeholders' concerns about the team's overall satisfaction and risk of attrition.

Governance

The *CHRP* **Advisory Council** advises the *CHRP* Director on the strategic and operational management of the program. Among the Advisory Council's responsibilities are to:
- Make recommendations on resource allocation and program directions;
- Advise on the review criteria for targeted opportunities, assess the relevance of meritorious grants, and recommend grants to be funded; and
- Evaluate the progress of selected research award programs.

Notably, the Advisory Council makes final recommendations on funding decisions, after the conclusion of the peer review process. It is rare for *CHRP* staff to modify the final recommendations of the Council, though final funding decisions are approved by the *RGPO* Executive Director.

The Advisory Council is comprised of a mix of representatives from the scientific areas and communities most concerned with HIV/AIDS research. By drawing upon the perspectives of numerous stakeholder groups, the Advisory Council helps to ensure the balanced approach to the program that was first envisioned when it intentionally expanded its public health focus in the 1990s. The Council consists of 14 members, with typical terms of three years. The 2018 Advisory Council membership is listed in the table below.

TABLE 16: 2018 *CHRP* ADVISORY COUNCIL

Name	Title	Institution
Terry L. Cunningham *(Chair)*	Chief, HIV, STD and Hepatitis Branch (retired)	County of San Diego Public Health Services
Xochitl M. Castaneda *(Vice Chair)*	Director	Health Initiative of the Americas, UC Berkeley
David Brinkman	Chief Executive Officer & President	Desert AIDS Project
Yvonne J. Bryson	Distinguished Professor & Chief	Global Pediatric Infectious Disease, David Geffen School of Medicine, UCLA
Kathleen Clanon	Medical Director & Assistant Clinical Professor	Health Care Services Agency of Alameda County / UC San Francisco
JoAnne Keatley	Director	Center of Excellence for Transgender Health, UC San Francisco
David J. Looney	Associate Professor	Department of Medicine, UC San Diego
Marisa Ramos	Interim Chief	State Office of AIDS, California Department of Public Health
Michael R. O. Martinez	Associate Director	State Government Affairs, Gilead Sciences, Inc.
Elise D. Riley	Associate Professor in Residence	School of Medicine, UC San Francisco
Barbara Shacklett	Professor	Department of Medical Microbiology & Immunology, UC Davis
Bill Stewart	Clinical Research Coordinator	Andrew Levitt Center for Social Emergency Medicine
Neeraj Sood	Professor of Public Policy & Vice Dean for Research	Sol Price School of Public Policy, University of Southern California
Amy Rock Wohl	Senior Staff Analyst	Office of Planning and Data Analytics, Los Angeles County Department of Health Services

Other Stakeholders

As noted above, *CHRP* is distinguished by its multitude of stakeholders around California who effectively advocate on its behalf. These stakeholders have successfully intervened on multiple occasions over the past decade to preserve *CHRP* funding, including at the highest levels of the State government. As such, *CHRP* remains particularly accountable to numerous constituencies around the State – including researchers, patients, community-based organizations, and legislators – whose perspectives are incorporated into any discussion of future strategy.

Research Priorities

CHRP priorities are developed in close coordination with the Advisory Council. As mentioned above, the Advisory Council is comprised of representatives from numerous stakeholder groups and seeks to strike a balance across the spectrum of research efforts to combat the epidemic – from molecular to societal.

Accordingly, *CHRP* focuses its work on four interrelated research priorities, intended to support a multidisciplinary strategy for facilitating the prevention, treatment, and cure of HIV infection and AIDS. Current strategic priorities are detailed in the table below.

TABLE 17: *CHRP* PRIORITIES

Research Priority	Overview
Basic Biomedical Science	Laboratory studies on the underlying mechanisms of HIV/AIDS and potential treatments at the molecular and cellular levels.
Policy Research	Collaborative research partnerships between academic institutions and local community-based organizations to inform local, state, and federal policy.
Biomedical Prevention Interventions	PrEP demonstration projects and studies focused on HIV testing and linkage to care as methods for reducing the epidemic.
HIV-Related Health Disparities	Efforts to explore and address underlying disparities in rates of HIV/AIDS infection and mortality across subsets of California's population.

More recent research has been largely in support of the "Getting to Zero" initiative of the California State Office of AIDS, which has the goal of zero HIV infections, zero deaths from HIV, and zero HIV stigma by the year 2030.[46]

Types of Grants

CHRP has seen a transition in the types and number of grant recipients, in part reflecting an ongoing shift to fewer, larger collaborative grants to enhance research impact. Over the past five years, the share of *CHRP* grant payments awarded UC campuses (as the lead institution) has grown from 45% to 78%.

FIGURE 24: *CHRP* GRANT PAYMENTS TO UC AND NON-UC INSTITUTIONS (FY10-FY18)

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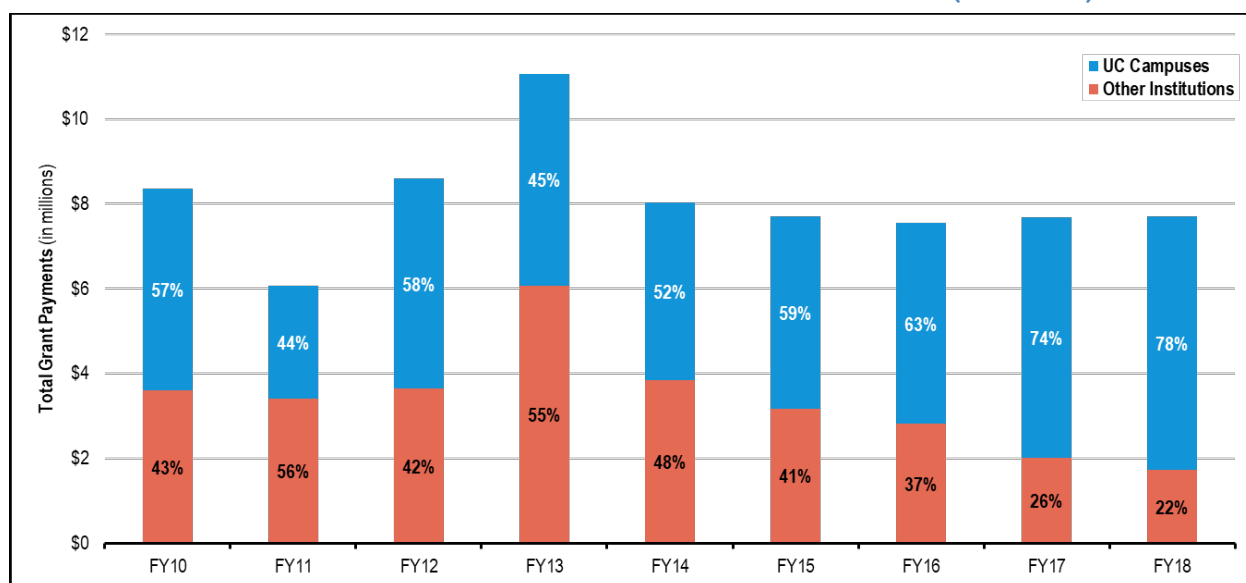
[46] "*CHRP* Program Summary," University of California Office of the President.

This trend continued in 2015 and 2017, as shown in the table below. As out-year payments for grants awarded over the 2015 and 2017 cycles are disbursed, the total share of *CHRP* payments directed to projects led by UC principal investigators may climb further. *CHRP*'s commitment to funding multi-institution and multi-sectoral research through collaborative projects continues, though, and non-UC partners receive significant portions of the UC-led awards as sub-awardees.

TABLE 18: *CHRP* APPLICATIONS AND GRANT COMMITMENTS BY INSTITUTIONS, 2015 & 2017 CYCLES

Institution Type	Share of Proposed Funding, 2015	Share of Awarded Funding, 2015	Share of Proposed Funding, 2017	Share of Awarded Funding, 2017
UC Campus *In the Lead Role*	84%	83%	84%	100%
Other Institutions *In the Lead Role*	16%	17%	16%	0%

In concert with new costing policies for all the *RGPO* SRPs, *CHRP* allows both UC and non-UC institutions to claim a maximum of 25% indirect cost recovery. As such, it is different than *RGPO*'s other SRPs, which have different indirect cost maximums for internal and external Principal Investigators.

For each cycle, the *CHRP* Advisory Council works with the Program Director and Program Officers to develop funding priorities and strategies. Since 2015, *CHRP* has made awards in five strategic areas, totaling $34.8 million in funding commitments, as shown in the table below.

TABLE 19: *CHRP* AWARD TYPES, 2015 & 2017 CYCLES

Award	Description	Cycle Offered	Award Length	Awards (#)	Average Award	Total Commitment
Basic Biomedical Sciences IDEA Award	Pilot awards designed to support new/innovative avenues of research with high potential to leverage additional funding at future stages.	2015	2 Years	9	$ 193,800	$1,744,500
CFAR HIV Disparities Initiative	Support the creation of Disparities Cores at UC's three NIH-funded Centers for AIDS Research.	2015	4 Years	3	$2,919,300	$8,758,000
Collaborative HIV/AIDS Policy Research Center	Support multi-disciplinary, multi-institutional collaborations at UC's two HIV/AIDS Policy Research Centers (UCLA and UC San Francisco).	2015	4 Years	2	$2,346,900	$4,693,800
Prevention and Linkage to Care	Support the exploration of pre-exposure prophylaxis (PrEP) as effective prevention intervention in high-risk populations; 2015 investments were primarily directed to projects for Transgendered Persons.	2015	4 Years	36	$1,953,700	$11,722,200
One Step Ahead Initiative	An open, cross-disciplinary call for highly innovative, early stage research with potential to shift paradigms in the field.	2017	3-4 Years	44	$1,968,200	$7,872,923

Notably, three campuses – UCLA, UC San Diego, and UC San Francisco – have received an outsized share of *CHRP* funding over the past two cycles. As noted below, each of these campuses hosts a globally renowned Center for AIDS Research (CFAR), which together have created disproportionate concentrations of leading researchers at each location. Principal Investigators at these three campuses submitted 66% of all proposals and received 88% of all new awards over these cycles; they similarly submitted 73% (22 out of 30) of proposals for the 2017 One Step Ahead Initiative and the projects they lead received 100% of the awards. By comparison, researchers from the rest of UC's campuses submitted just six proposals in total during these cycles, all of which were submitted by UC Davis, UC Irvine, and UC Santa Cruz. Just one of these proposals – for a Basic Biomedical Sciences IDEA application of $200,000 at UC Davis – received funding.

Basic Biomedical Sciences Award

CHRP's Basic Biomedical Sciences Awards are used to support laboratory-based inquiry into HIV/AIDS at the molecular and cellular level. In the 2013 and 2015 cycles, *CHRP* released separate Calls for Applications for Basic Biomedical Sciences Awards; in the latter cycle, the program ultimately selected nine proposals from across the State for Innovative, Developmental, Exploratory Awards (IDEAs). As with other SRPs at *RGPO*, *CHRP* periodically awards IDEAs to ensure support of early-stage research or early-career researchers with highly innovative approaches.

In 2015, the nine winning applications were selected from a total of 32 submissions, equating to a success rate of 28%. Awards are capped at $160,000 in direct costs. UC campuses may claim up to 25% in indirect costs, while other institutions may claim only the lesser of 25% or their negotiated rate with the federal Department of Health and Human Services.

Centers for AIDS Research HIV Disparities Initiative

UCLA, UC San Diego, and UC San Francisco operate NIH-funded Centers for AIDS Research (CFARs), which conduct and evaluate innovative research for HIV/AIDS prevention and treatment. There are 19 of these Centers around the country, but only four west of the Mississippi River (including the three UC centers). [47]

At UCLA, UC San Diego, and UC San Francisco, the CFARs serve as both symbols and active catalysts for the preeminent global roles these campuses play in combating the epidemic. Each CFAR comprises service areas, or "Cores," which provide access to shared equipment and services that are impractical or impossible to maintain in individual laboratories. Notably, two Cores at each center – the Developmental and International Cores – provide small grants to researchers through their federal funding. The Developmental Grants also share several goals with *CHRP's* Basic Biomedical IDEAs, as they are designed to support early career academics.

In consultation with the Advisory Council, *CHRP* staff identified a major challenge and related opportunity for the CFARs during the lead-in to the 2015 grant cycle:
- **Diminishing federal funding**, which threatened the solvency of these three centers; and
- **No existing Core on HIV-related disparities**, specifically in terms of access and outcomes experienced by vulnerable communities.

To address both, *CHRP* directed $8.76 million to support the creation of Disparities Cores at each CFAR, as well as two affiliated projects for each (totaling six projects across California); funding for each CFAR

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[47] "Centers for AIDS Research Sites," National Institutes of Health, https://www.niaid.nih.gov/research/cfar-research-sites.

continues through FY20. The CFAR proposals were peer reviewed and endorsed by the Advisory Council, which felt that these awards aligned with *CHRP's* priorities and that the awardees had unique capabilities for advancing these priorities, but the grants were not awarded on a competitive basis.

Collaborative HIV/AIDS Policy Research Centers

In the 2015 cycle, *CHRP* also awarded $4.69 million to support two Collaborative HIV/AIDS Policy Research Centers at UCLA and UC San Francisco, each of which incorporates a partnership with local community-based organizations. The Centers have been supported by *CHRP* since the 2009 grant cycle, and this support was previously renewed in 2012. Current commitments for these Policy Centers will expire in 2020.

Using *CHRP's* funding, the Centers conduct a series of "rapid response" inquiries, which are "short-term research projects designed to quickly address questions that emerge in a dynamic health policy environment." For example, one project sought to model potential savings for the State's AIDS Drug Assistance Program through the support of HIV patients' enrollment in federal Pre-Existing Conditions Insurance Pools. As with the CFAR grants, the Policy Research Center renewal applications were peer reviewed and endorsed by the Advisory Council, which felt that these awards aligned with *CHRP's* priorities and that the awardees had unique capabilities for advancing these priorities, but the grants were not awarded on a competitive basis.

Prevention and Linkage to Care

CHRP issues targeted grants focused on Prevention and Linkage to care, in support of its Biomedical Prevention Intervention research priority. In 2015 (for grants beginning in 2016), *CHRP* awarded three collaborative grants totaling $9.62 million to Principal Investigators at UC San Diego and UC San Francisco, as well as at community partners SFDPH and Public Health Foundation Enterprises (since renamed Heluna Health). Each grant focused specifically on the use of pre-exposure prophylaxis (PrEP) to reduce risk of infection among transgender persons. In addition, *CHRP* awarded $2.1 million for PrEP projects aimed at reducing the risk of infection among women.

The PrEP for Transgender Persons Awards averaged $3.2 million each. In 2015, this award type had a success rate of 75%, with just one applicant being denied funding. Current awards extend until 2020. As with all *CHRP* grants, indirect cost recovery for all grantees is capped at 25%.

One Step Ahead Initiative

In 2017, *CHRP* solicited proposals for just one new initiative, called One Step Ahead. One Step Ahead was an open call for investigator-initiated projects with the potential to "innovatively advance the field a leap beyond our current knowledge and practices." Goals for the awards included:
- The facilitation of visionary research in HIV science; and
- The funding of innovative projects with "the potential to shift the current paradigm."

The open call for the One Step Ahead Initiative specifically invited proposals from investigators spanning all areas of HIV research. In the most recent cycle, plans were made to invite no more than 50 applications beyond the Letter of Intent stage. Of the 75 LOIs submitted, 39 were accepted and 30 full proposals submitted. Thus, the use of this screening mechanism helped to keep success rates for those who did work on full proposals at relatively higher levels.

Ultimately, $7.87 million was awarded to four projects, all of whom are located within the system: two at UCLA, and one each at UC San Diego and UC San Francisco. Although the success rate totaled just 13%, most (73%) applications came from the same three campuses: UCLA, UC San Diego, and UC San Francisco. Among the two applicants at other UC campuses and the six from external organizations, none received funding.

Program-Wide Financials

Unless it can successfully identify and realize new revenue streams, *CHRP's* grantmaking ability will continue to diminish moving forward. The program's funding, through a set-aside in the University's general State appropriations, has been frozen at $8.75 million for eight consecutive years, beginning in FY12. During this period, its real spending power has declined by 12%, considering inflation. [48] With inflation projected to accelerate over the coming decade, *CHRP* must look elsewhere for new sources of funding, identify additional cost controls, or expand its research scope to include topics aligned with its core expertise and mission that offer a new base of funding. Such expansion could include, for example, new funding streams to support research in other STDs, viral diseases (HPV; HepC), other immune-related diseases, public health interventions for other communicable diseases and health disparities. These shifts also align with State and national shifts to explore the intersections and interrelationships affecting community and public health.

Internal Expenses

CHRP's grant payments and internal expenses have been relatively stable since FY15. Like all multi-year programs at *RGPO*, the overall portfolio of grant payments lags behind changes in funding, as awards are dispensed over a multi-year lifecycle; as such, it took several years after funding was frozen in FY12 for the program's proportional expenditures on internal expenses and grant payments to stabilize. In each of the past four years, *CHRP* distributed between $7.6 million and $7.7 million in grant payments. As shown in the figure below, internal expenses at *CHRP* – across Evaluation, Development & Dissemination, and Administration – have appeared comparatively fixed at approximately 17% of total expenditures over the past several years.

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[48] Ibid.

FIGURE 25: *CHRP* EXPENDITURES (FY10-FY18)
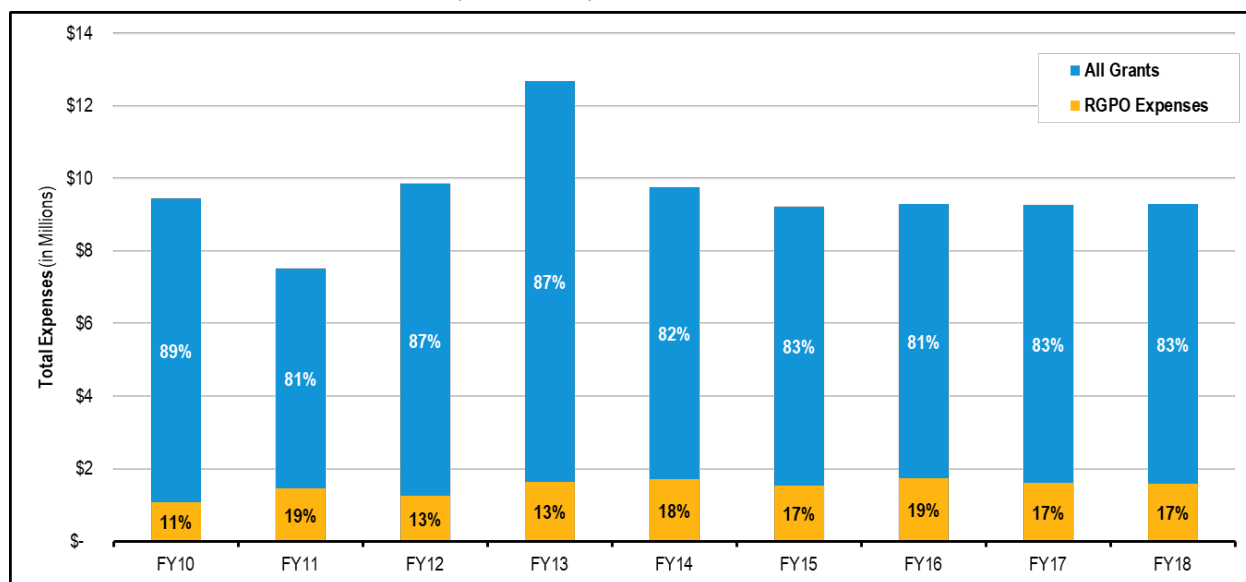
As shown in the figure below, the allocation of *CHRP*'s internal expenses – across Development & Dissemination, Evaluation, and Administration – has been somewhat less fixed over the past several years. These figures vary in part due to increasing efforts by the program to support collaboration across grantees, and disseminate the results of the research, as well as the shift to a biennial funding cycle.

FIGURE 26: *CHRP* INTERNAL EXPENSES (FY10-FY18)
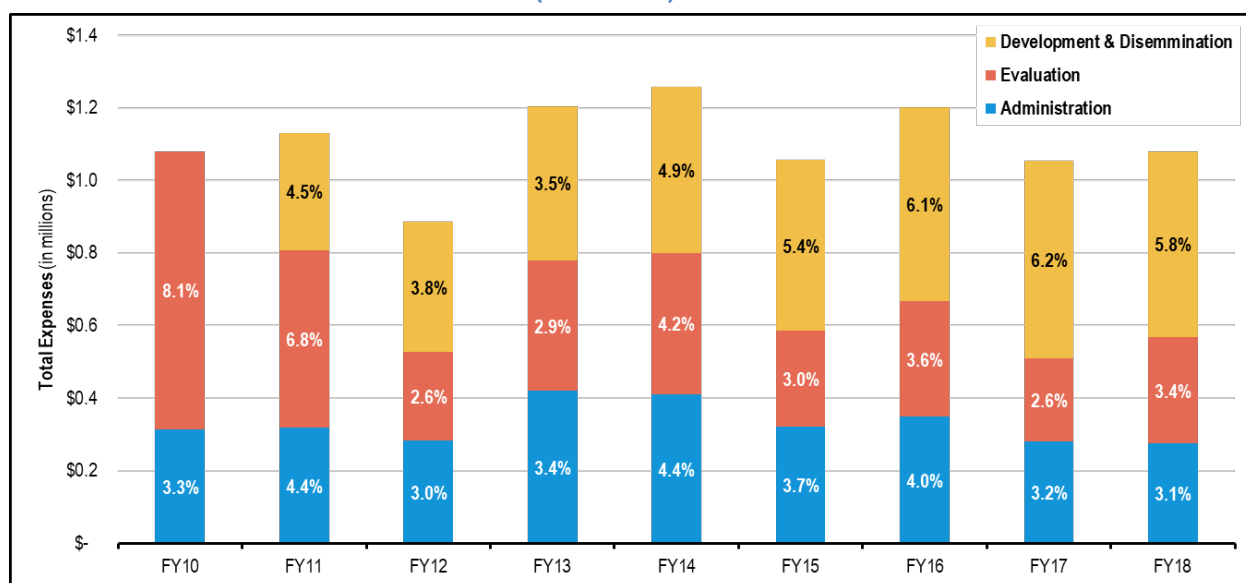
It may well be that internal expenditures are less fixed than they initially appear. As shown in the figure below, which summarizes the program's internal expenses into "personnel" and the broad categorization

"supplies and expenses," the program's internal costs are in fact naturally increasing, but this has been obscured by two events – which may have also helped drive internal expense volatility in recent years:

- In FY17, "supplies and expenses" expenses dropped by 37% - a one-time reduction that may have resulted from the shift toward significantly fewer new grants (four) awarded in that year's One Step Ahead Initiative. In the prior and following years, though, expenses increased by 11% and 24%, respectively.
- In FY18, personnel expenses dropped by 16% after previous annual increases of 24% and 12%. This reduction resulted from the reassignment of personnel to support *TRDRP* and other RGPO special initiatives (such as Open Access and *UC Valley Fever Research*); at present, more than 18% of *CHRP* FTE costs are covered by other programs the staff support.

FIGURE 27: *CHRP* INTERNAL EXPENSES (FY15-FY18)
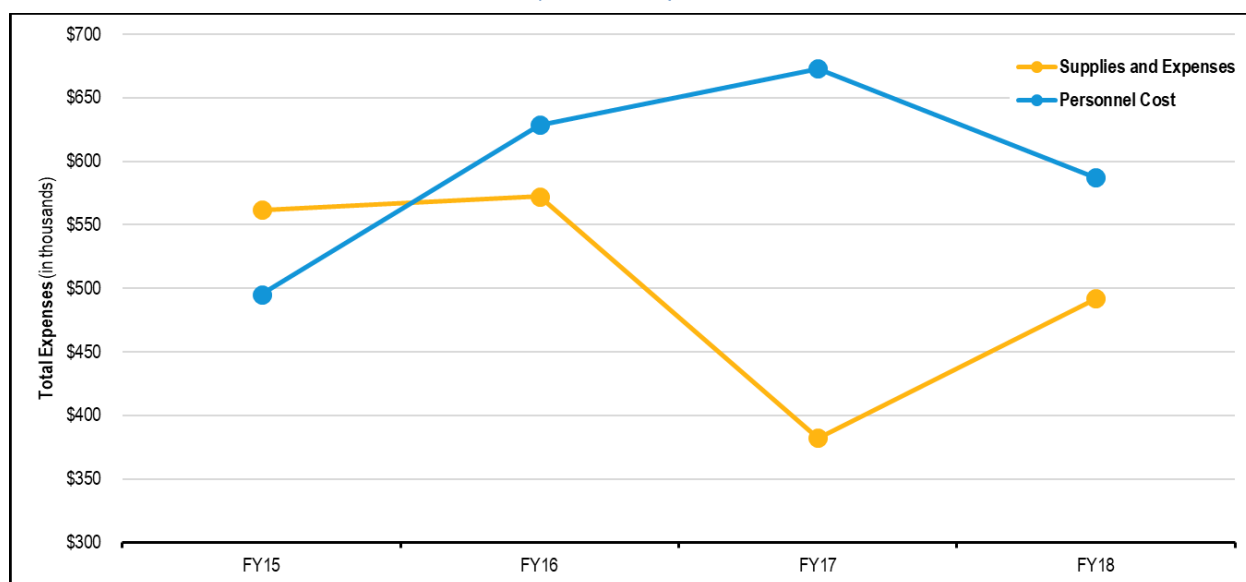
While it is possible that similar events may complicate these trend lines going forward, the long-term impact of inflation will likely result in rising absolute operational costs over time.

Budget vs. Actuals

Difficulties aligning *RGPO's* multi-year grant programs with the annual budget cycles of the UC Office of the President have led to large variances between budgeted and actual expenses for *CHRP* and other programs in the past. As with other SRPs, *CHRP's* variances were in part driven by a prior practice of pegging budgets closely to anticipated state appropriations, rather than anticipated payments of grants; prior to the stabilization of *CHRP's* funding, this led to variances between payments for those previously awarded projects and that year's budgeted amount.

Beginning with FY18, *RGPO* has been instructed by the UC Office of the President Budget & Finance department to provide projected expenditures – including payments for active awards that were announced in prior fiscal years – which has continued to minimize these variances. In FY13, for example, *CHRP* expended 40% more in grant payments and internal expenses than appeared in the UC Office of the President budget, a particularly anomalous variance driven by the transition from the State line item

allocation to State general funds. [49] Since FY15, though, these variances have been consistently below 1%. The table below details the program's budgeted and actual expenditures over the past six years.

TABLE 20: *CHRP* BUDGET VS. ACTUALS (FY13-FY18)

	FY13	FY14	FY15	FY16	FY17	FY18
Budget	$8.8 M	$8.7 M	$8.7 M	$8.8 M	$8.8 M	$8.8M
Actual Expenses	$12.3 M	$9.3 M	$8.8 M	$8.8 M	$8.7 M	$8.8 M
Variance ($)	$3.5 M	$0.6 M	$0.1 M	<$0.1 M	<$0.1 M	<$0.1 M
Variance (%)	40%	7%	1%	<1%	<1%	<1%

Key Performance Indicators

As outlined in the **Key Performance Indicators** section of this report, stakeholders identified two KPIs as being critical for effective management of grants programs:

- **Success Rates**: Defined as the percentage of applicants who ultimately receive funding, with an optimal range of 15%-30%; and
- **Award Size**: Defined as the total grant commitment over the full lifespan of the award, with a target of a minimum of $100,000-$125,000 for junior faculty and 2-3 times that for senior faculty.

In 2017, *CHRP*'s utilization of a single, open call for proposals (i.e., the One Step Ahead initiative), as well as the concentration of larger awards to fewer grantees, led to a much lower overall success rate among applicants, as shown in the table below.

TABLE 21: HIV/AIDS RESEARCH PROGRAM KEY PERFORMANCE INDICATORS (2015 & 2017 CYCLES)

	2015	2017
Applications [50]	41	30
Awards	17	4
Success Rate	41%	13%
Total New Award Commitments	$26,056,800	$7,872,9923
Average Award Size	$1,532,800	$1,968,200
Average Annual Award Size	$408,800	$714,900

Due to declines in program funding, *CHRP* has taken the approach of intentionally funding fewer, larger collaborations in order to reduce operational costs while retaining multi-institutional research engagement. Over past two cycles, the average annual value of *CHRP* awards increased from $408,800 to $714,900, easily surpassing the levels at which campus stakeholders believe a program is providing effective value to senior researchers. At the same time, the relatively larger grants seem to have attracted more proposals for each available award, demonstrating an appetite for *CHRP* funding opportunities, but resulting in a significant drop in success rates in the 2017 cycle.

Notably, at least one VCR – when discussing a separate program within *RGPO* – shared a perspective that campuses are less concerned with the amount of each award their campus earns, provided the award is large enough to justify pursuit to begin with. As this VCR stated, "In an alternative world where we'd split the same funding for twice as many faculty members, we'd be just as happy." *CHRP's* low

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[49] The variance in FY13 is likely an offset from the lower expenditure in FY11 due to this transition.
[50] Does not include withdrawn or pending applications.

success rate in 2017 fell below the levels at which VCRs would target for *RGPO* programs. This same campus leader, in addition to others, also shared a desire to see *RGPO* programs' success rates at least as high as those of the NIH and the NSF, which had success rates of 24% and 19% in the most recent years for which data is available.[51]

At the same time, *CHRP* supports a field – HIV/AIDS research – that is particularly oversubscribed on the federal level; NIH success rates in this area are sometimes as low as 6%. Moreover, *CHRP's* strategy of supporting multi-institutional collaborations may offset some VCR concerns, as these investments help to support multiple investigators.

Future State Revenue Projection

To better understand *CHRP's* opportunities and challenges in the future, it is useful to consider a 10-year projection of revenues in real terms based on historical data and external trends. Although *CHRP's* funding levels are, for the time being, nominally frozen, the real purchasing power of the program's $8.75 million set-aside will continue to diminish at an accelerating rate, especially as inflation is projected to increase over the coming decade.

By adjusting for future inflation, it becomes apparent that alternative forms of revenue will be required to maintain current grant-making activity. Over the next decade, as financial markets expect inflation to accelerate slightly over the preceding years, *CHRP* will face a real decline in funding of approximately 18%, as shown in the figure below. **Without additional revenue streams, its total real funding in FY28 will be approximately $7.2 million (in 2018 dollars).**

FIGURE 28: NOMINAL & REAL VALUE OF *CHRP* STATE APPROPRIATIONS (FY09-FY28)
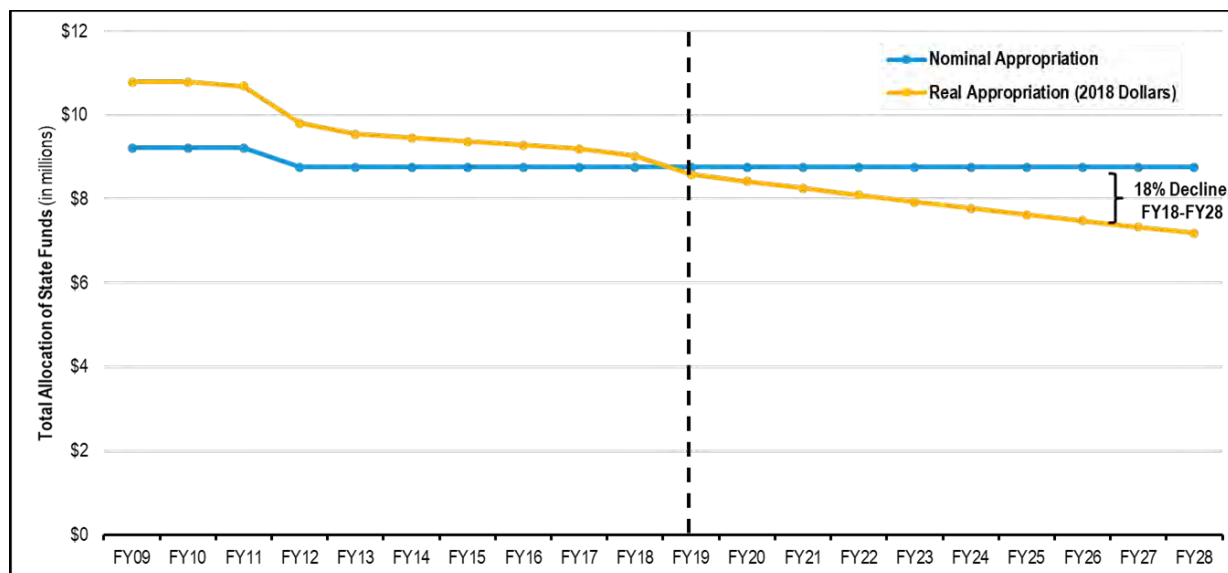
$7.2 million may also be below the approximate level at which it becomes difficult to sustain an administrative expense ratio below 5%. As stakeholders revealed during interviews and in the staff

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[51] "Research Project Success Rates by NIH Institute for 2017," National Institutes of Health, https://bit.ly/1PhdEWv.

survey, there are some fixed administrative costs that come with the operation of any grant program, before any actual grants are awarded.

As explained later in the ***Analysis of Findings*** section of this report, the minimum budget for an *RGPO* program to meet the 5% cap on administrative could be between $6.7 million to $7.8 million annually. With continued diminishing real value as a result of accelerating inflation, **CHRP's state funding will fall within the upper end of this range as soon as FY24, at which point the program's continued ability to operate efficiently and sustainably could be in jeopardy.**

This conservative projection does not incorporate any potential changes to *CHRP's* funding composition. Some program stakeholders retain hope, based on informal conversations with policymakers in Sacramento, that *CHRP* could eventually receive special tax revenue – similar to *CBCRP* and *TRDRP* – that would substantially boost its annual budget. Others are hopeful that *CHRP* can be empowered to pursue inter-agency funding partnerships with the State Office of AIDS as well as external, private funding, as it did in its earlier years.

Otherwise, *CHRP* will face continued and significant declines in funding when the impact of inflation is factored in. **As *RGPO* responds to the State and University's need to manage new research programs, there may be an opportunity to continue leveraging the existing Program Officers of *CHRP,* who may have additional capacity over the coming decade.**

TOBACCO-RELATED DISEASE RESEARCH PROGRAM

The *Tobacco-Related Disease Research Program* (*TRDRP* or the *Tobacco Program*) makes grants for California scientists and community researchers to enhance understanding of tobacco use, prevention, and cessation; the social, economic, and policy-related aspects of tobacco use; and tobacco-related diseases in California. Since its inception, *TRDRP* has funded more than 1,500 research grants on tobacco-related studies; research into cancer, heart, and lung diseases; and research on the effectiveness of school tobacco use prevention reduction programs.[52]

TRDRP funds 10 different types of grants, and is supported by a staff of nine, including seven Program Officers.[53] Despite a surge in funding after the passage of Proposition 56 in 2016, the program's ability to hire additional Program Officers has been hampered by constraints on hiring within the UC Office of the President. As a result, it has formally drawn upon Program Officer capacity from other teams within *RGPO*. Beginning in FY18, *TRDRP* moved to two application cycles each year, in part to accommodate a surge in applications and reviews that followed the Proposition 56 funding.

Funding for *TRDRP* is drawn through two funds that are supported by taxes on the sale of cigarette packs and other tobacco products, including e-cigarettes. Both funds were created after the passage of public referendums by California voters, as described in the table below.

TABLE 22: TAXES SUPPORTING *TRDRP*

Fund	Year of Passage	Total Incremental Tax per Cigarette Pack[54]	UC Share
Proposition 99 Research Fund	1988	$0.25	5% ($0.0125/pack)
Proposition 56 Medical Research Program Fund	2016	$2.00	5% of remaining funds after a 4-step distribution process

The passage of Proposition 56 represented a significant reversal in trend for *TRDRP* and *RGPO* as a whole. After many years of diminishing funding, driven in large part by the falling per-capita use of cigarettes and other tobacco products among Californians, the new tax represented an eight-fold increase in funding for the program.

History

There were two main historical events that led to the creation of *TRDRP*, both of which centered on voters' approval of referendums that raised taxes on the sale of cigarettes and other tobacco products and provided the primary funding for the program.[55] The first of these was Proposition 99 in 1988, and the second was Proposition 56 in 2016. Both laws contained language that requires *TRDRP* to coordinate closely with other state agencies, such as the California Department of Public Health, to support evaluation and research dissemination, in addition to the grantmaking activity for which the program is well known.

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[52] Michael Ong, *Letter to Regent Kieffer*, 12 February 2018.
[53] Figure includes 2 vacancies.
[54] Equivalent taxes are also assessed on other tobacco products.
[55] *TRDRP* revenues have also historically been slightly augmented by individual contributions.

Proposition 99

TRDRP was established in 1988, upon California voters' approval of Proposition 99, the Tobacco Tax and Health Protection Act. Proposition 99 instituted a $0.25 per pack cigarette surtax and earmarked 5% of revenues ($0.0125 per pack) to support critical tobacco-related research.

As with most other statewide funds that are administered by *RGPO*,[56] the funds themselves are managed by the California Department of Finance. As such, the exact budget authority the State allocates to *TRDRP* can be somewhat discretionary, depending upon shifting reserve policies as well as the State's interpretation of the legislation.

Stakeholders have long sought to ensure that Proposition 99's Research Fund is used entirely to support *TRDRP*. In the early years of the tax, some of the same health advocacy organizations that had campaigned for the passage of the referendum sued the State of California in court in response to the siphoning of Proposition 99 funds to other State programs and won a favorable ruling from the California Superior Court. To further clarify the intent of the underlying legislation, the Legislature passed a subsequent amendment stating "It is the intent of the Legislature to provide for the continuation of the Cigarette and Tobacco Products Surtax Research Program to support research into tobacco-related disease. It is the intent of the Legislature that this program be administered by the University of California."[57]

Nonetheless, a significant portion of the Proposition 99 Research Fund has been diverted to support the California Cancer Registry, a project of the California Department of Public Health, over the past two decades. While this diversion was relatively small at the start, the diminishing size of the Fund in both nominal and real terms – resulting from the decrease in smoking among Californians as well as the fact that the surtax does not adjust with inflation – has made the diversion relatively larger. For the past five years, it has hovered at or above 30% of funds.

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[56] Other Statewide funds administered by *RGPO* include cigarette taxes, tax check-offs, and special appropriations.
[57] "Cigarette and Tobacco Products Surtax Medical Research Program," California Health and Safety Code Section 104500.

FIGURE 29: DIVERSION OF PROP 99 RESEARCH FUNDS TO THE CALIFORNIA CANCER REGISTRY
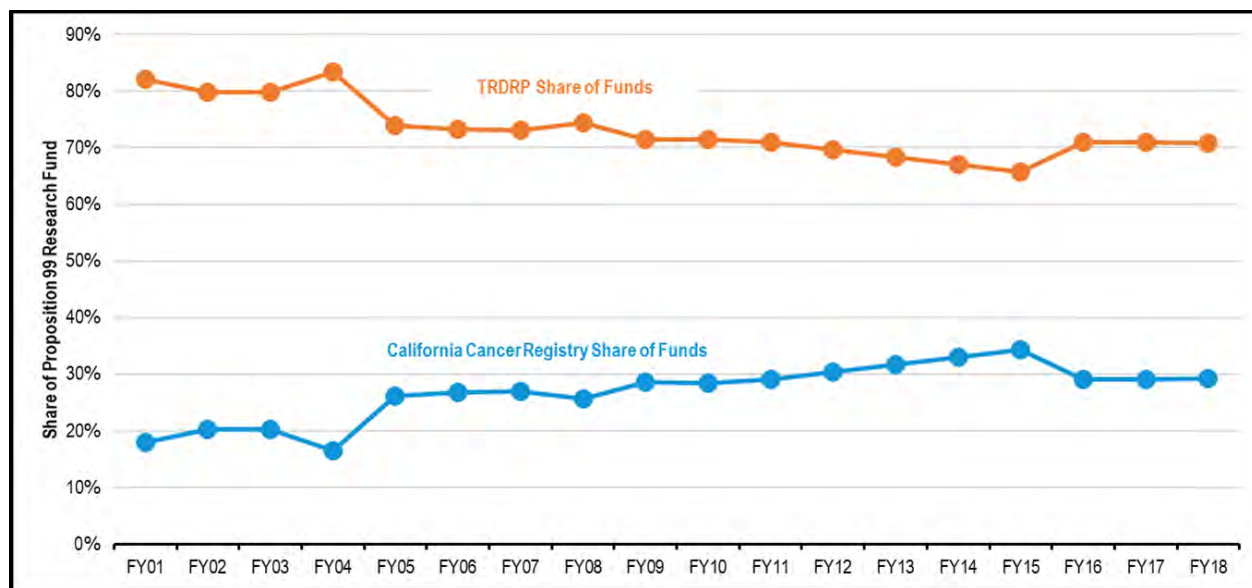
Proposition 56

Funding for *TRDRP* has dramatically increased in recent years after California voters' approval of Proposition 56, The Tobacco Tax Increase Initiative, in 2016. Prior to the passage of Proposition 56, California's tax on packs of cigarettes stood at $0.87, which was the 35th highest in the country. [58] Cigarette taxes hadn't been increased since Proposition 10 (the Children and Families Act) in 1998; that legislation earmarked tax revenues to support early childhood education, and notably established a protocol for ensuring that the programs previously receiving funding through cigarette taxes – including *TRDRP* and *CBCRP* (the *Breast Cancer Program)* – were not negatively affected by the diminished sales that would result from a steeper surtax.

Proposition 56 increased the cigarette tax to $2.87, making California's the 9th highest in the country. [59] Immediately prior to its passage, the California Department of Finance had transitioned the lifespan of state spending authority granted to the program from five years to three years. At the same time, *RGPO* adjusted its master calendar of funding cycles, leading to a delay of new awards for *TRDRP*. Coming after this delay of new grants in FY16, the new Proposition 56 funding thus represented a significant reversal in the program's expenses.

Proposition 56 allocated funds to UC through a four-step formula, as shown in the figure below. First, the State Board of Equalization calculates the amounts needed to keep preexisting cigarette tax funds – including the Proposition 99 Research Fund and *CBCRP* – operating at the levels they otherwise would have been had the tax not suppressed cigarette sales. Second, the Board of Equalization retains up to 5% of the remaining funds to support the administration of the tax. Third, $118.4 million is directed to specific programs; the Board of Equalization can revise this figure biannually in response to falling

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[58] Melody Gutierrez and Sam Whiting, "Prop. 56: Voters Approve Cigarette Tax," *The San Francisco Chronicle,* 9 November 2016.
[59] Gutierrez and Whiting.

revenue. [60] Finally, the remaining funds are allocated proportionally in accordance with the legislation; of this final tranche, *TRDRP* receives 5%.

FIGURE 30: PROPOSITION 56 FUNDS FLOW
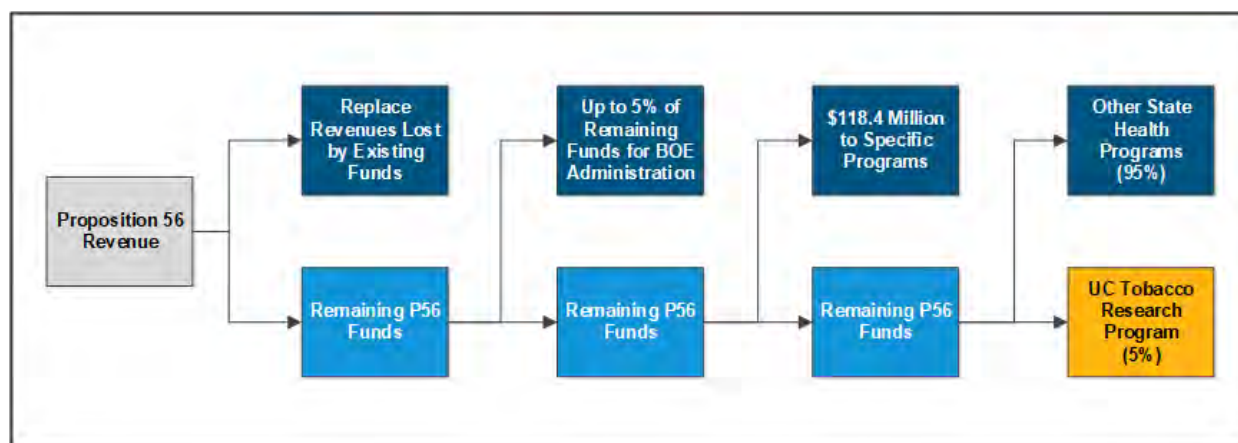
Structure

The specific and public nature of *TRDRP's* funding means that the program has both formal reporting lines within the University as well as formal and informal advisement from two Committees and an array of stakeholders around the State. These aspects of *TRDRP's* structure include:

- **Permanent staff,** including a staff of seven reporting up to the *RGPO* Executive Director through *TRDRP* Director;
- **Loaned capacity** from other program teams within *RGPO*;
- *TRDRP* **Scientific Advisory Committee**, which advises the University directly on the direction and priorities of the program;
- The **Tobacco Education and Research Oversight Committee (TEROC)**, a legislatively mandated advisory committee which oversees the use of Proposition 99 and Proposition 56 revenues that are distributed for education and research; and
- **Various other stakeholders**, including those community groups and advocates who helped to originally achieve the passage of Proposition 99 and Proposition 56.

This structure is depicted in the figure below, which shows existing capacity for *TRDRP* in blue. Those other Program Officers who are partially allocated to *TRDRP* are partially shaded, according to the degree of allocation (ranging from 10% to 50%).

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[60] Notably, Proposition 56 also allocates $40 million in Step 3 funds to the University of California to support the training of new physicians.

FIGURE 31: *TRDRP* ORGANIZATIONAL CHART[61]
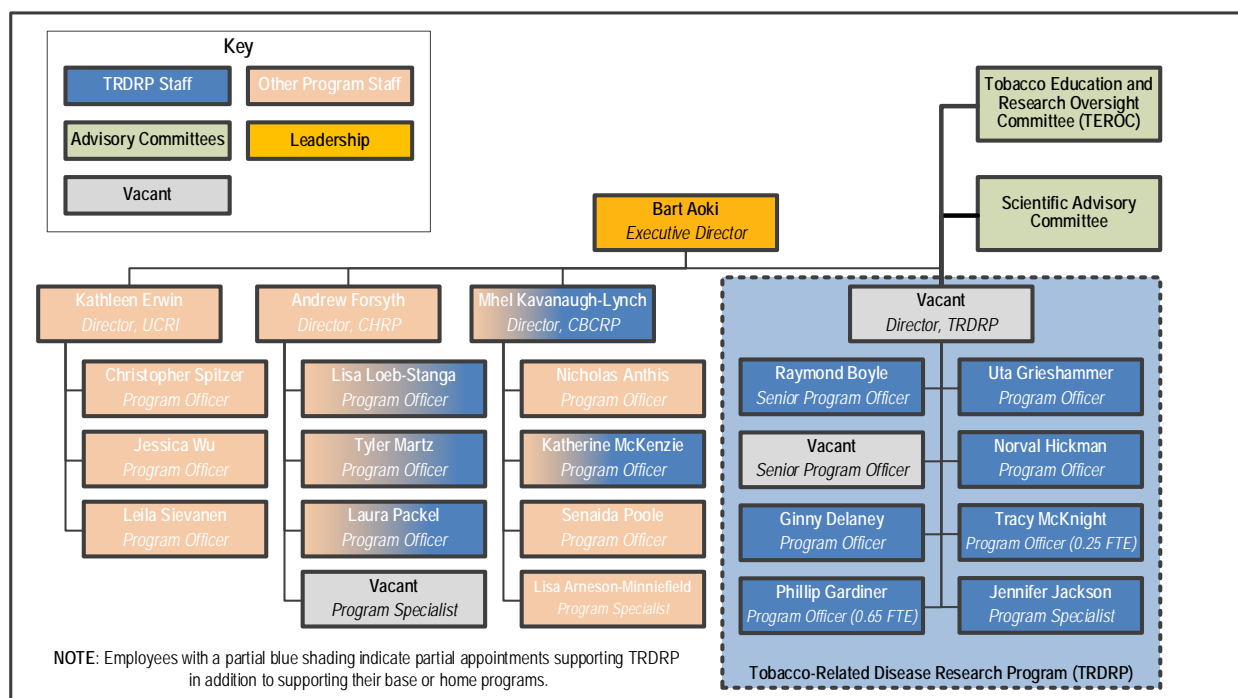
Staffing

TRDRP has a staff of seven, though a full-time equivalency of less than six. As of this writing, there are two additional vacancies on the team, including the Directorship. In addition to the Director position, and including the other vacancy, there are seven permanent Program Officer positions on the team, as well as one Program Specialist.

TRDRP's Program Officers are experts in their fields, and each Program Officer holds a Ph.D. in either biological sciences or public health. The Program Officers are each positioned to provide scientific leadership in certain subject areas, including:

- Health Policy Research;
- Health Economics;
- Behavioral Sciences and Public Health;
- Cancer and Neuroscience;
- Cancer Prevention, Treatment, and Biology; and
- Other Biomedical Sciences, including Basic and Clinical Research.

Some campus stakeholders suggested that some *RGPO* programs, including *TRDRP*, could benefit from operating on a campus because the campuses have a greater abundance of scientific experts. Given the prevalence of scientific experts in *TRDRP* and *RGPO* as a whole, though, internal staff did not feel this was an issue.

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[61] As of November, 2018. *CHRP* Director Andrew Forsyth begins role in February of 2019.

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Despite receiving substantial increases in funding after the passage of Proposition 56, constraints on hiring at the UC Office of the President have slowed the growth of the team during that time. *TRDRP* has added relatively few FTE over the past five years when compared with both the other program teams at *RGPO* as well as the non-program teams (C&G, GBFA, and the *RGPO* Immediate Office). This is shown in the figure below, in which staffing and budget levels for each of the past 6 years are indexed against their FY14 values to show the relative change for each; for example, a cumulative 20% increase in budget over the period for one program would result in an indexed value of 1.2. While other programs' budgets have stayed relatively flat over this period, they have added nearly as many staff as *TRDRP*, whose budget increased rapidly after the passage of Proposition 56.

FIGURE 32: RELATIVE CHANGES IN BUDGET & STAFFING (FY14-FY19)
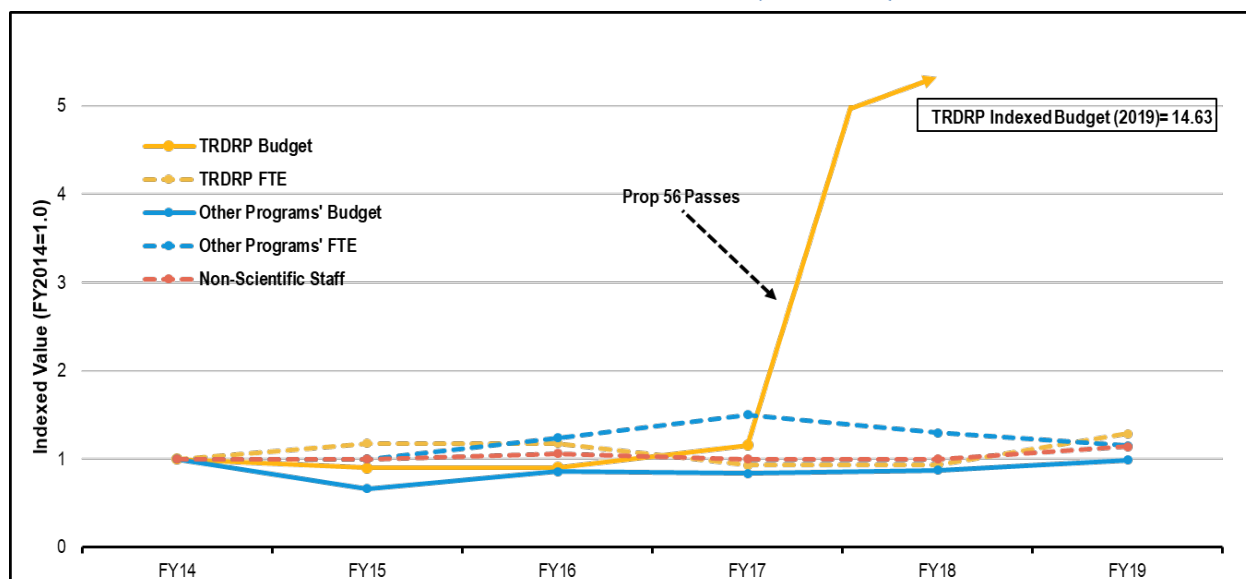
To administer the surge in grant funding that was received in FY18, *RGPO* has relied upon the sharing of capacity across program teams. In FY18, six Program Officers from the UCRI, *CHRP* and *CBCRP* teams were partially split between their primary programs and *TRDRP*, and contributed a collective 1.6 FTE to the latter, including one *CBCRP* Program Officer who was 65% allocated toward *TRDRP*. Through the first four months of FY19, five Program Officers allocated an annualized 1.0 FTE toward *TRDRP*.

This finding was also confirmed in a survey of all Program Officers and Directors. Survey recipients were asked to estimate the approximate percentage of time spent on each program, and responses were weighted proportionally to estimate implied FTEs for each program. When compared to current reporting lines, this analysis confirmed that *TRDRP* has been able to expand operations in part by drawing upon the capacity of other Program Officers. It is worth noting that reassigning these staff was not an easy process, as they are experts in their fields who were hired explicitly for their programs; for some, this has led to lower job satisfaction overall. Although this kind of cross-matrixing was part of the rationale for originally forming *RGPO* in 2008, before Proposition 56 it had primarily been implemented through the centralized shared service teams (C&G and GBFA).

Nevertheless, it is clear that *TRDRP* has benefitted from the existing working relationships across teams as well as the ability to share resources, allowing it to scale up operations to manage and administer the new Proposition 56 funds despite the difficulty in quickly hiring the requisite staff. As one Program Officer from a different team stated, "*RGPO* is a highly matrixed organization, with great synergy between the four research programs and the two administrative units…New programs benefit from coming to *RGPO* because of this grantmaking expertise."

Nonetheless, it is clear that *TRDRP* staff are stretched as they await the addition of new colleagues to help manage the Proposition 56 funds. In the staff survey, respondents were asked to weight, on a one-to-seven scale, the extent to which they would agree with four statements intended to measure elements of overall job satisfaction, including:

- Likelihood to recommend working at *RGPO* to others;
- Belief that they have a sense of purpose in their daily role;
- Belief that their role leverages their full abilities; and
- Belief that they are growing and advancing in their career.

Across all program and central service teams, *TRDRP* reported the second-lowest scores in these measures of overall job satisfaction, as well as the highest average and median scores on questions assessing overall workload across calendar months. **Retaining and building upon the program's existing capacity will be a key priority for the new Program Director upon their start**.

Governance

As required by Proposition 99, *TRDRP* relies upon a Scientific Advisory Committee for advice on programmatic direction and priorities. The 15 Committee members are drawn from an array of organizations and institutions that are focused on the prevention, cure, and treatment of tobacco-related diseases, including state agencies, national nonprofit health voluntary organizations, local community-based organizations, and issue-specific research institutes; each serves a three-year term, and can be reappointed for a second such term. Terms are staggered to ensure continuity of knowledge among the Committee as a whole. The Committee meets on a quarterly basis, sometimes via teleconference, and members serve as unpaid volunteers. Current members are listed in the table below.

TABLE 23: *TRDRP* SCIENTIFIC ADVISORY COMMITTEE

Name	Constituency	Job Title	Institution
Edith Balbach *(Chair)*	Policy Researchers	Professor Emerita (retired) of Public Health and Family Medicine	Tufts University
Jesse Nodora *(Vice Chair)*	American Cancer Society	Assistant Professor	UC San Diego
Denise Adams-Simms	Community-Based Provider	Executive Director	San Diego Black Health Associates
Ricky N. Bluthenthal	Private Research Institute	Professor	University of Southern California
Matthew Brenner	Biomedical Research	Professor	UC Irvine
Benjamin Chaffee	Dentistry and Oral Health	Assistant Professor	UC San Francisco
Robin Corelli	Clinical Pharmacy	Professor	UC San Francisco
Jerold A. Last	Environmental Sciences	Professor	UC Davis
John Maa	American Heart Association	M.D. / President / Board of Directors	Marin General Hospital / Northern California Chapter of the American College of Surgeons / American Heart Association, San Francisco Division
Vanessa M. Marvin	American Lung Association in California	Senior Director, Grassroots Advocacy and Field Strategy	American Lung Association
Sarah A. Planche	California Department of Education	School Health Education Consultant	Tobacco Use Prevention and Education Program
Dan J. Raz	Lung Cancer Alliance	Assistant Professor & Surgical Director (Lung Cancer and Thoracic Oncology)	City of Hope National Medical Center, Duarte
Stephen C. Welter	Tobacco-Related Disease Research Institute	Vice President, Research and Graduate Dean	San Diego State University
Rebecca Williams	California Department of Public Health	Chief, Evaluation and Surveillance Section	California Tobacco Control Program (California Department of Public Health)
Mimi C. Yu	American Cancer Society & Cancer Action Network	Professor (retired)	University of Southern California

In addition to the Scientific Advisory Committee, *TRDRP* also reports on a quarterly basis in writing and in person to the Tobacco Education and Research Oversight Committee (TEROC). TEROC oversees the use of all Proposition 99 and Proposition 56 research and education funds, including those at the Department of Public Health and the State Department of Education in addition to *TRDRP*. It is composed of 13 members, including:

- Eight members appointed by the Governor;
- Two members appointed by the Speaker of the Assembly;
- Two members appointed by the Senate Rules Committee; and
- One member appointed by the Superintendent of Public Instruction.

Members serve two-year, repeatable terms. Three of the 13 members are UC professors, including the Chair (Michael Ong of UCLA Medical School). A key responsibility of the group is the updating of the State's Master Plan for tobacco control and tobacco-related research, which in turn shapes the Advisory Committee's recommendations on research priorities.

Other Stakeholders

Like the other SRPs, *TRDRP* has an array of additional stakeholders around the State who initially lobbied for its Proposition 99 and Proposition 56 funding, continue to be highly engaged in its initiatives and funding, and support and disseminate its research today. Some of these have statutory positions on the Advisory Council, including:

- The American Cancer Society;
- The American Heart Association;
- The American Lung Association; and
- The Lung Cancer Alliance.

Around the State, numerous community-based organizations engage with *TRDRP* either directly or indirectly as recipients of its grants or as partners on *TRDRP*-supported research studies, including in the dissemination of findings.

Research Priorities

To be eligible for funding, applicants must explain how their proposed research addresses one or more of *TRDRP*'s priority issues, which are developed in consultation with TEROC and the Scientific Advisory Committee and periodically refreshed. Current research priorities are described in the table below.

TABLE 24: TOBACCO PROGRAM RESEARCH PRIORITIES (FY 2018-19)

Research Priority	Purpose
Social and Behavioral Prevention and Treatment	Advance innovative research and collaborations that prevent or reduce tobacco use and the impact of tobacco-related diseases among California's priority groups
Cancer Prevention, Treatment, and Biology	Advance the development and dissemination of effective cancer prevention strategies to California populations that are disproportionately impacted by cancer, foster and implement evidence-based health care policies and practices that show promise for reducing cancer-related deaths and cancer health disparities in California, promote high-impact translational research aimed at bringing new therapies and patient care strategies to community clinical settings, and provide continuous support for basic research into the molecular genetic mechanisms in tobacco-related cancer pathophysiology
Cardiovascular and Cerebrovascular Diseases	Support innovative, timely, and high-impact research to better understand basic, translational, or clinical sciences or disorders of the heart, blood vessels, and cardiac and brain vasculature
Environmental Exposure and Toxicology	Support innovative and high-impact research that advances policies to reduce environmental exposure to the toxic effects of tobacco smoke and its residue; assess and eliminate the environmental impact of cigarette waste; examine toxicology and the exposure science of new and emerging tobacco products

Research Priority	Purpose
Neuroscience of Nicotine Addiction and Treatment	Advance innovative research that addresses the biology of nicotine addiction and treatment, with a goal of understanding and reducing tobacco use in populations that consistently have the highest smoking rates
Oral Diseases and Dental Health	Support innovative and high-impact research that advances the understanding of tobacco impacts on dental health and develops approaches to detect and prevent tobacco-related oral disease
Pulmonary Biology and Lung Diseases	Support innovative, timely, and high-impact research addressing basic, translational or clinical aspects of tobacco-related pulmonary biology and lung diseases
State and Local Tobacco Control Policy Research	Advance the ability of state agencies, legislative, and regulatory bodies and local communities throughout California to evaluate, understand, and implement science-informed tobacco control policies

Types of Grants

As with other SRPs, *TRDRP* funding is awarded to both UC campuses and to non-UC institutions. The historical breakdown of these grant payments is depicted in the figure below. Historically, UC principal investigators have actually received a minority of *TRDRP* grant funding, as shown in the figure below. In interviews, several stakeholders suggested that the need for perceived neutrality could limit the ability to select UC researchers' application for grants, but *TRDRP's* funding decisions are made through the peer review process described above and are based on scientific and programmatic merit. In addition, the distribution of funding reflects in part the higher indirect costs that external researchers are allowed to claim, whereas UC campuses cannot claim more than a 25% F&A rate for *TRDRP* grants.

FIGURE 33: *TRDRP* GRANT PAYMENTS, FY10-FY18
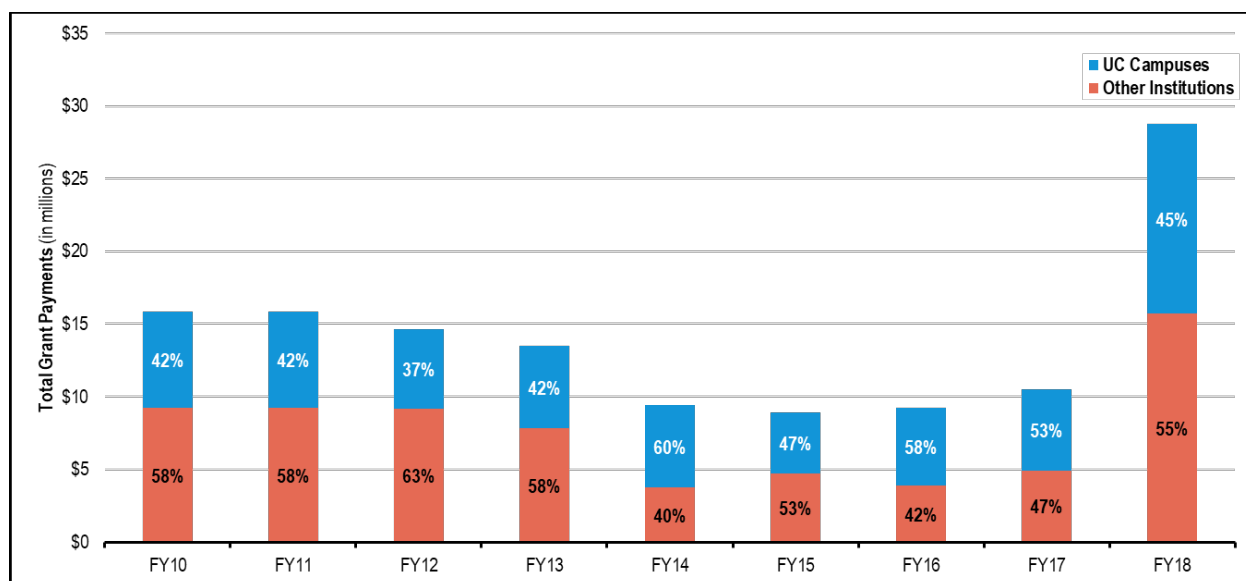
In 2019, *TRDRP* is offering 10 award types, as described in the table below. With some exceptions for grants on rolling deadlines, each is offered during at least one of two structured 2018-2019 application cycles ("2019A" and "2019B")

TABLE 25: *TRDRP* AWARD TYPES

Award	Purpose	Total 2018 Award Commitments	2019 Maximum Award	Years of Funding
High Impact Research Project Awards	Support research on tobacco-related health disparities and new/emerging tobacco products	$52,757,800	Up to $250,000 annually	3
Mackay California-Pacific Rim Tobacco Policy Scholar Awards [62]	Support mid-career researchers studying tobacco control policies with particular relevance to the Pacific Rim (including California).	Not Offered in 2018	Up to $250,000 annually	3
High Impact Pilot Research Awards	Support early-stage data collection and/or proof-of-principle for high-potential research projects	$15,703,400	Up to $200,000 annually	2
Postdoctoral Fellowship Awards	Support postdoctoral research training under a designated mentor.	$2,975,400	Stipend/Salary commensurate with NIH postdoctoral experience scale [63]	3
New Investigator Awards	Support new investigators seeking to initiate an independent research program	$5,980,900	Up to $200,000 annually	3
Scientific Conference Awards [64]	Support in-person scientific conferences that disseminate *TRDRP*-funded research	$100,000	Up to $50,000 annually	2
Predoctoral Fellowship Awards	Support doctoral student research training under a designated mentor.	$1,502,500	Up to $46,000 annually [65]	3
Cornelius Hopper Diversity Award Supplements	Train promising individuals from underserved communities, or those who wish to pursue research careers serving similarly underserved communities.	Not Offered in 2018	Up to $20,000 annually	2
Student Research Supplements	Support undergraduate and master's degree students seeking to train under the recipient of a *TRDRP*-funded principal investigator	Not Offered in 2018	Up to $20,000	1
Dissemination Awards [66]	Support one-time conferences and similar dissemination activities.	Not Offered in 2018	Up to $5,000	1

Of the various awards offered by *TRDRP,* three have accounted for over 84% of total grant payments over the past four years:
- High Impact Pilot Research Awards;

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[62] Offered on a rolling deadline.
[63] The National Institutes of Health provides a scale that caps postdoctoral stipends and salaries as allowable direct costs on funded grants; this same benchmark is used by *TRDRP*.
[64] Offered on a rolling deadline.
[65] Combining stipend and up to $16,000 tuition reimbursement.
[66] Offered on a rolling deadline.

- High Impact Research Project Awards; and
- Postdoctoral Fellowship Awards.

High Impact Pilot Research Awards

High Impact Pilot Research Awards are intended to support innovative, early-stage research. Ideally, *TRDRP* funds would be used to gather the requisite early data necessary to demonstrate proof-of-principle and leverage additional funding for later-stage research. As with most SRP awards, full indirect costs are allowed to non-UC institutions, but indirect costs to UC campuses are capped at 25%.

As shown in the table below, the large increase in tobacco research funding that resulted from Proposition 56 has resulted in a substantially larger cap on awards, which the Scientific Advisory Committee raised based on NIH levels and data on the real and escalating cost of research. When combined with researchers' indirect costs, this resulted in an increased average award size from $326,000 in FY17 to more than $541,000 in FY18.

TABLE 26: HIGH IMPACT PILOT RESEARCH AWARDS (FY15-FY18)

Award	FY15	FY16[67]	FY17	FY18
Applications[68]	45	-	61	219
Awards	12	-	19	29
Success Rate	27%	-	31%	13%
Total Award Commitments	$4,180,500	-	$6,196,000	$15,703,400
Average Award Size	$348,400	-	$326,100	$541,500

The increase in award size, along with the notoriety surrounding the passage of Proposition 56, may have led to a surge in applications, which contributed to a lower-than-expected success rate of 13% in FY18. This was down from 31% a year earlier, despite an increase in total award commitments of more than 150%.

High Impact Research Project Awards

High Impact Research Project Awards are intended to fund next phase or fully developed research based on promising preliminary data gathered through prior pilot research. Full indirect costs are allowed to non-UC institutions, while indirect costs to UC campuses are capped at 25%.

Projects must focus on research on new and emerging tobacco products or on tobacco-related health disparities among priority groups that include:
- Current members of the military and veterans;
- Individuals employed in blue-collar jobs, agriculture, and the service industry;
- School-aged youth and young adults;
- Incarcerated and formerly incarcerated individuals;
- Individuals with mental illness or substance use disorders;
- Individuals of low socioeconomic status;
- Individuals with disabilities;
- Individuals with limited education;
- Pregnant and breastfeeding women;

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[67] No awards were initiated in FY16 as *TRDRP* responded to a change in State rules surrounding grant lifespan.
[68] Does not include withdrawn or pending applications.

- Racial/ethnic minorities;
- Rural residents; and
- Sexual/gender minorities.

For example, Professor Burton Cowgill of UCLA is currently leading a multi-institutional team of researchers seeking to adapt a middle school intervention program to an after-school setting, with a particular focus on African American and Latinx youth and special attention paid to new e-cigarette products. Professor Cowgill's project is testing this approach at two sites in South Los Angeles in partnership with local community organizations, with potentially major impact on the delivery of preventative education moving forward. Professor Cowgill's work builds upon an earlier Pilot Research Award.

As shown in the table below, the High Impact Research Project Awards saw a similar increase in average award amounts after the influx of new Proposition 56 funding as the High Impact Pilot Research Awards, reflecting both higher caps on direct costs as well as the multiplicative impact of indirect costs. The increased funding brought a surge of applications, though, and success rates for applicants fell to 23% in FY18, after reaching as high as 42% a year earlier. Thus, success rates declined dramatically, even though total funding for the awards increased more than five-fold.

TABLE 27: HIGH IMPACT RESEARCH PROJECT AWARDS (FY15-FY18)

Award	FY15	FY16[69]	FY17	FY18
Applications[70]	35	-	57	231
Awards	9	-	24	52
Success Rate	26%	-	42%	23%
Total Award Commitments	$3,793,900	-	$10,148,800	$52,757,800
Average Award Size	$421,500	-	$422,900	$1,014,600

Postdoctoral Fellowship Awards

Postdoctoral Fellowship Awards support early-career researchers by sponsoring their participation in high impact, program-aligned research under the guidance of a designated mentor. Stipends and salaries are commensurate with the NIH postdoctoral experience scale, with a maximum support of $60,000 annually. Indirect costs are not allowable.

As with both types of High Impact awards, the increased funding and award sizes may have attracted a spike of interest among applicants in FY18. Although the 21% success rate was slightly higher than in FY17, it was significantly below the 36% success rate in prior years.

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[69] No awards were initiated in FY16 as *TRDRP* responded to a change in State rules surrounding grant lifespan.
[70] Does not include withdrawn or pending applications.

TABLE 28: POSTDOCTORAL FELLOWSHIP AWARDS (FY15-FY18)

Award	FY15	FY16[71]	FY17	FY18
Applications[72]	22	-	16	77
Awards	8	-	3	16
Success Rate	36%	-	19%	21%
Total Award Commitments	$942,100	-	$356,400	$2,975,400
Average Award Size	$117,800	-	$118,800	$186,000

Program-Wide Financials

The recent, significant increase in *TRDRP* funding that resulted from the passage of Proposition 56 distinguishes the program from the rest of *RGPO*. As a result, and because post-award administrative costs lag behind initial award commitments, total administrative overhead for *TRDRP* fell as low as 1.9% in FY18.[73] Looking forward, the administrative share of expenses for *TRDRP* is likely to rise as the cumulative workload for managing multi-year grant awards increases and tobacco tax revenues decrease.

Internal Expenses

With the passage of Proposition 56, funding for *TRDRP* has rapidly grown over the past two years, after previously declining earlier in the decade as a function of diminishing tobacco sales. As with other grant programs, grant payments lag behind changes in state appropriations and allocations. For example, as shown in the figure below, the increase in program expenditures to approximately $32 million in FY18 was just a portion of the post-Proposition 56 increase in funding to $92 million.

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[71] No awards were initiated in FY16 as *TRDRP* responded to a change in State rules surrounding grant lifespan.

[72] Does not include withdrawn or pending applications.

[73] This figure notably excludes the cost of administrative services currently provided by the UC Office of the President, such as Human Resources, Information Technology Services, the Building and Administrative Service Center, and other services provided by UC Office of the President Operations.

FIGURE 34: *TRDRP* EXPENSES (FY10-FY18)
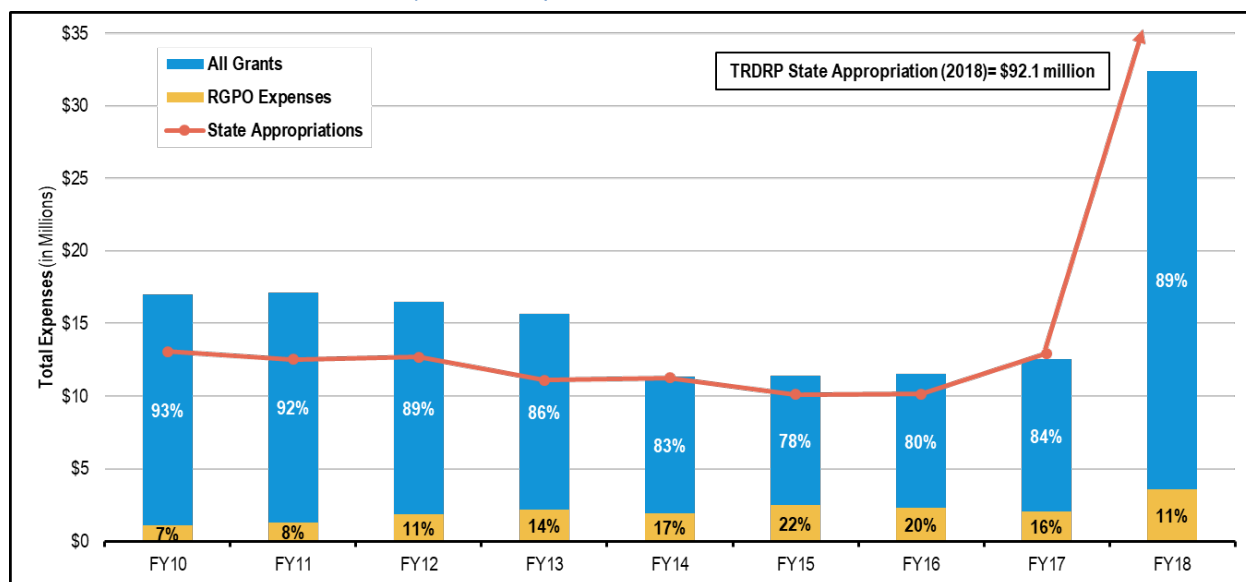
Internal *TRDRP* expenses at *RGPO* rose substantially in FY18. Not surprisingly, as shown in the figure below, this increase was primarily driven by Research Evaluation expenses, which doubled from FY17 in response to a quadrupling of applications, though Research Development & Dissemination and Administrative costs also increased by 71% and 41%, respectively. These increases were dramatically lower than overall program expenditures, suggesting that the program was able to realize certain economies of scale as its funding increased, and that some element of internal expenses remains fixed. At the same time, the surge in funding taxed the team dramatically, potentially leading to lower overall job satisfaction. As such, the drop in internal expenses as a share of overall expenditures to just 11% may not represent a sustainable figure in any funding environment.

FIGURE 35: *TRDRP* INTERNAL EXPENSES (FY10-FY18)
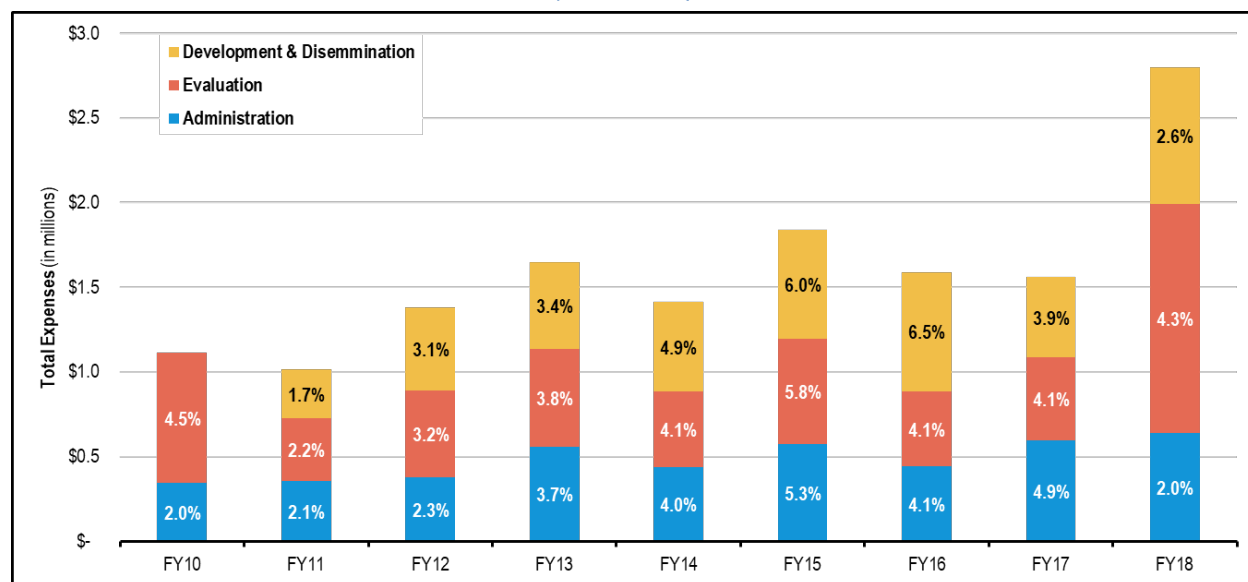
The changes to administrative costs' share of *TRDRP's* expenditures in FY18 highlighted an important challenge for all SRPs in the future. As administrative costs tend to increase along with overall funding, they tend to decrease as a percentage of overall expenditures. For example, a 41% increase in *TRDRP* administrative costs resulted in a decline in this percentage of the budget from 5% to 2%, as the amount of grant payments grew much larger.

The same inverse relationship holds true in the other direction, as a substantial decrease in funding could still result in a relatively larger administrative share of expenses. This situation arises in part because of the cost of continuing to service and monitor active awards that have not yet closed, and actually played out for *TRDRP* earlier in the decade. Proposition 99 funds fell from an annual average of $12.8 million from FY09-FY12 to an average of $10.8 million from FY13-FY15. Administrative costs as a share of total expenses rose from 2.1% in FY11 to 5.3% in FY15, before beginning to fall again as the earlier grants continued to expire.

Budget vs. Actuals

As with other SRPs, *TRDRP* has had large variances between budgeted and actual expenses in the past, which at times have been key drivers of the variances within the UC Office of the President's budget as a whole. In FY13, for example, *TRDRP* ultimately expended 36% more than the UC Office of the President had budgeted for; in FY18, on the other hand, it expended 66% less. These variances were an artifact of several factors, including budgeting and accounting practices within the UC Office of the President, timing of expenses, and multi-year budget appropriations for cigarette taxes.

One major driver of these variances was a prior practice of pegging budgets closely to anticipated state appropriations, as shown in the figure below. Beginning with FY18, *RGPO* has been instructed by the Budget & Finance department within the UC Office of the President to provide projected expenditures – including payments for active awards that were previously made – which could reduce these variances in

the future.[74] This effort remains a work in progress, though, as the timing of grant payments in 2018 led to a large variance from *RGPO's* FY19 budget in the first quarter – and indeed, that of the UC Office of the President as a whole.

FIGURE 36: *TRDRP* BUDGET VS. ACTUALS (FY10-FY18)
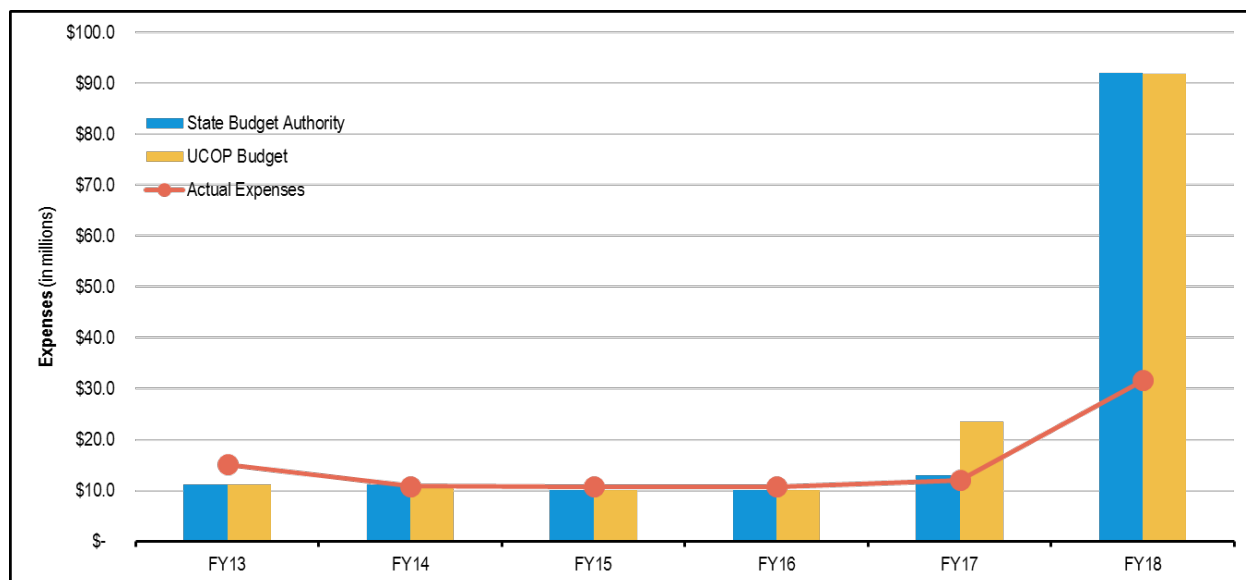
The table below identifies the program's budgeted and actual expenditures, and the variances between the two, over the past six years.

TABLE 29: *TRDRP* BUDGET VS. ACTUALS (FY13-FY18)

	FY13[75]	FY14	FY15	FY16	FY17	FY18[76]
Budget	$11.1 M	$11.2 M	$10.1 M	$10.1 M	$23.6 M	$91.9 M
Actual Expenses	$15.2 M	$10.8 M	$10.8 M	$10.8 M	$12.1 M	$31.7 M
Variance ($)	$4.0 M	($0.4 M)	$0.7 M	$0.7 M	($11.5 M)	($60.3 M)
Variance (%)	36%	-3%	7%	7%	-49%	-66%

Key Performance Indicators

As outlined in the **Key Performance Indicators** section of this report, stakeholders identified two KPIs as being critical for effective management of grants programs:

- **Success Rates**: Defined as the percentage of applicants who ultimately receive funding, with an optimal range of 15%-30%; and
- **Award Size**: Defined as the total grant commitment over the full lifespan of the award, with a target of a minimum of $100,000-$125,000 for junior faculty and 2-3 times that for senior faculty.

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[74] In FY17, *CBCRP* and *TRDRP* staff were instructed to include all account balances from prior years' awards in their "Temporary Budget," leading to a large, one-time spike in the programs' overall budget.
[75] For FY13, payments of prior year grant awards were not incorporated into the budget, leading to a larger variance than normal.
[76] For FY18, the budget was based on anticipated grant encumbrances/commitments and not forecasted payments, leading to a larger variance than normal.

These two KPIs are important to understand in relation to each other, as an increase in expected award size tends to attract more applicants, which in turn lowers success rates. Thus, despite a large increase in *TRDRP* funding in FY18, the collective success rate for the program fell to 19%.

FIGURE 37: *TRDRP* SUCCESS RATES & AVERAGE AWARDS, FY15-FY18
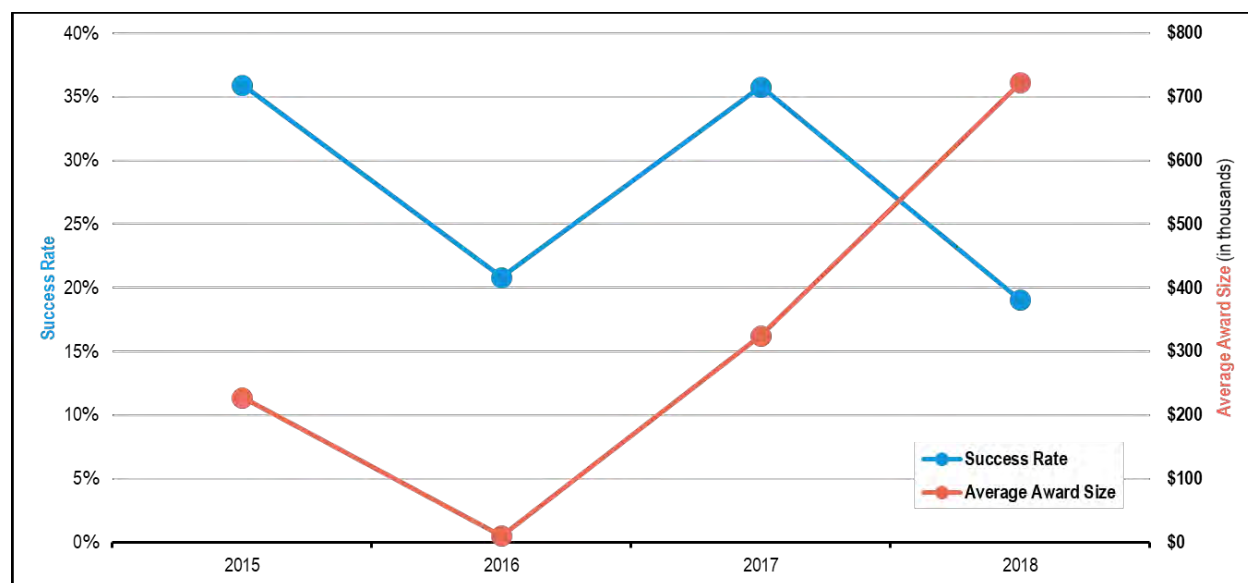
Future State Revenue Projection

To better understand the opportunities and challenges facing *TRDRP* in the future, it is useful to develop a 10-year projection of revenues based on historical data and external trends. By developing a regression model of the program's future funding environment, it becomes apparent that the surge of funding from Proposition 56 will diminish moving forward, necessitating alternative forms of revenue to maintain current grantmaking activity.

It is difficult to project *TRDRP's* future revenue streams, for several reasons. These include:

- **The long-term diversion of Proposition 99 research funds to support the California Cancer Registry**, using a methodology that varies by year and is not disclosed to the University;
- **Uncertain impact of new regulations** on e-cigarette and cannabis consumption, as well as lack of clarity on the future of research revenues raised from taxes on cannabis sales;
- **Historically shifting reserves policies** from the Department of Finance, again using methodology that seems to vary by year; and
- **As-yet unclear impact of Proposition 56 on tobacco consumption in the State**, which has resulted in relatively volatile projections from the State over the first two years of Proposition 56 funding.

Nonetheless, there are clear trends that will impact funding in the future, specifically a long-term decline in per-capita cigarette sales that is not being offset by future projections of population growth in the State. Using CDC-sourced data on per-capita cigarette sales, as well as historic population data from the State, yields a relatively predictive trendline, which allows for projections of future funding allocations based

upon continued trends in cigarette consumption.[77] While not a large enough sample size to be scientifically sound, and despite some noise in the data, there is a clear-cut relationship between total cigarette sales in the State and Proposition 99 funding for *TRDRP*; fewer packs sold (on the x-axis below) correlates strongly with smaller Proposition 99 allocations (on the y-axis below). This matches the intent of the underlying legislation and allows for a baseline projection into the future.

FIGURE 38: HISTORIC PROPOSITION 99 FUNDING FOR *TRDRP* AND TOTAL PACKS SOLD
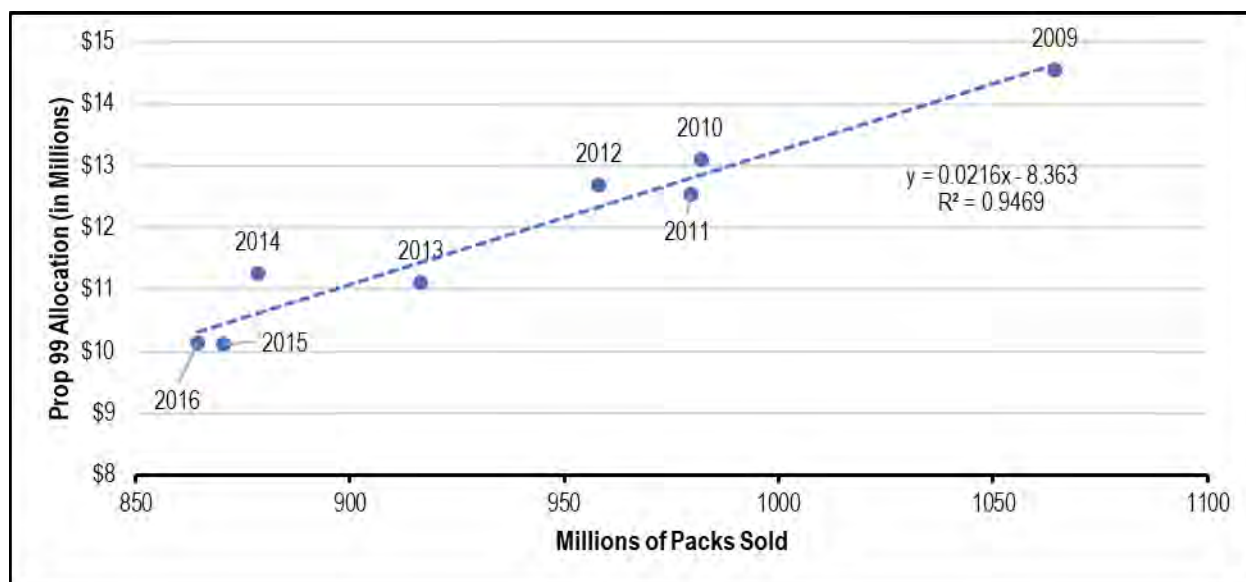
For FY18 and FY19, *TRDRP's* funding allocation from Proposition 56 was 7.08 times as large as its allocation for Proposition 99 funds.[78] Assuming similar distribution policies from the California Department of Finance for the former as the latter has historically received allows the use of a simple multiple of Proposition 99 funds to project future revenue.

If the past decade's 3.31% annualized decline in per capita cigarette sales holds true for the following decade, and California's official projected population growth through 2030 (0.84%) is applied, then a reasonable projection of future cigarette sales can be projected. Such an assumption assumes that this analysis can also form a baseline for an extension to the usage of other tobacco products. Coupled with the regression formula for Proposition 99 funding as well a constant multiple for Proposition 56 funds, one can reasonably project total *TRDRP* funding into the future based on cigarette sales. While the taxation of e-cigarettes also contributes to Proposition 99 and 56 revenues, e-cigarette sales and their associated tax revenue is harder to predict based on historical data. It is possible that e-cigarette sales will increase in the future and could offset some of the sales decreases in cigarettes.

As shown in the figure below, this analysis projects steadily decreasing revenue for *TRDRP* over the coming decade.

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[77] The trendline results from a linear regression, with an R^2 of 0.95 and a variable p-value of less than .01, indicating directional accuracy of the regression as well as validation of cigarette consumption as a predictive variable.
[78] Proposition 56 took effect in the final quarter of State fiscal year 2017. Consequently, *TRDRP's* FY18 allocation consisted of five quarters of revenue. For the purposes of this analysis, that figure has been annualized.

FIGURE 39: PROJECTED *TRDRP* REVENUES, FY20-FY28
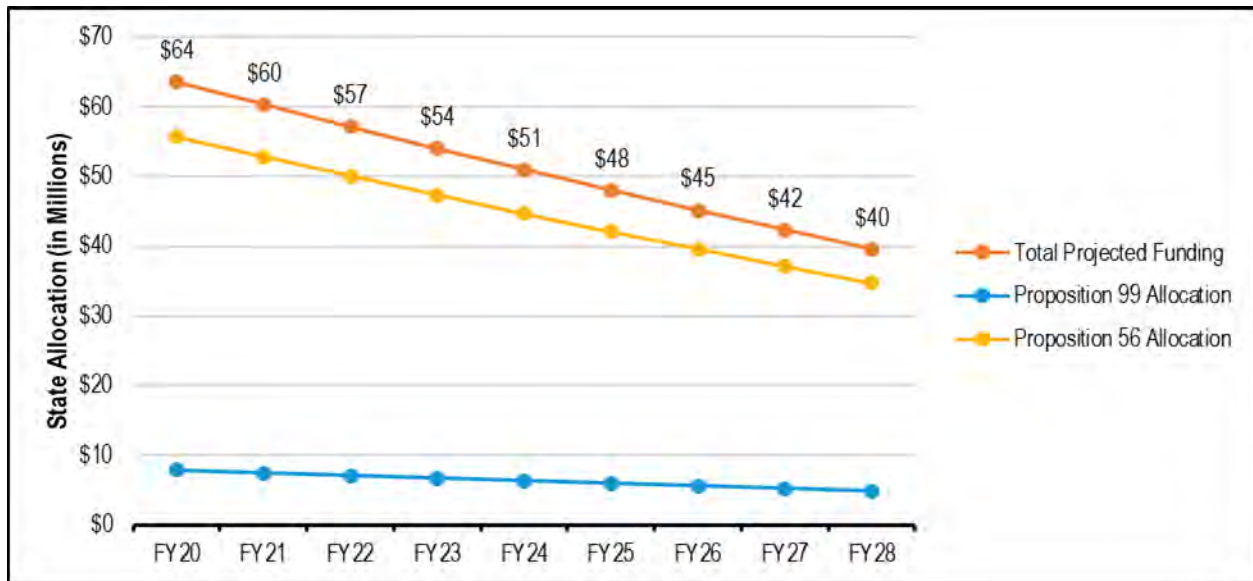
Complicating matters further, the state surtax on cigarettes is not adjusted for inflation. Thus, even if consumption were to stay flat moving forward, *TRDRP* revenues would continue to decline in real terms. With market-expected inflation factored in, *TRDRP's* revenues in FY28 would equate to $33.17 million in 2018 dollars – or approximately 52% of its total allocation in FY19. **As *RGPO* adds additional staffing to manage the influx of Proposition 56 funds, it will be important to do so with an eye toward the program's steadily declining revenues.**

UC RESEARCH INITIATIVES

In addition to the three SRPs (the *Breast Cancer*, *Tobacco*, and *HIV/AIDS Programs*) that the University operates on behalf of the State, *RGPO* also administers several internal research programs. Collectively, these programs and the team that manages them are known as UC Research Initiatives (UCRI). Although they each have separate sources of funding and programmatic priorities, they collectively seek to advance the University's research mission, seed innovative research, and catalyze multicampus collaborations across the University's academic disciplines.

UCRI currently operates three primary programs:
- The ***UC National Laboratory Fees Research Program (LFRP* or *Lab Fees Program)***, which leverages the net income derived from UC's participation in the LLCs that manage Lawrence Livermore National Laboratory (LLNL) and Los Alamos National Laboratory (LANL) to support collaborations between campus and national laboratory researchers;
- ***Multicampus Research Programs & Initiatives* (*MRPI*)**, which uses unrestricted State General Funds to support multicampus, collaborative research; and
- The ***Cancer Research Coordinating Committee (CRCC* or *Cancer Research Program),*** which uses proceeds from longstanding endowments and a dedicated voluntary State tax check-off fund, to provide faculty seed grants in support of breakthroughs in any aspect of cancer research.

In addition, UCRI frequently manages special initiatives and one-time opportunities made possible by new State or University funding as it arises. In recent years, these have included (but not been limited to):
- The ***Type 1 Diabetes Research Fund***, which was initiated in FY18 with $250,000 from a new voluntary State tax check-off;
- ***UC Valley Fever Research***, which is funded by a $3 million special allocation in the FY19 State budget and for which the inaugural Request for Proposals was released in December of 2018; and
- The ***President's Research Catalyst Awards***, a three-year initiative launched by President Napolitano in 2014 that provided $10 million in funding to multicampus research endeavors in areas of strategic importance to the University and the State.

UCRI staff also play an important role in coordinating the annual and five-year reporting of Multicampus Research Units (MRUs). MRUs are housed at UC campuses and provide infrastructure for interdisciplinary research in thematic areas. Policies and procedures for the establishment, leadership, and review of MRUs are outlined in a comprehensive UC manual called the Compendium.[79] In accordance with the Compendium, the systemwide Academic Senate reviews each MRU on an in-depth basis every five years; the Vice President for Research and Graduate Studies makes the final decisions on all renewal recommendations resulting from MRU reviews. Thus, although UCRI does not allocate or oversee MRU funding, its staff play an important role in the coordination and management of MRU reporting and review.

UCRI staff regularly support each other across each of the program areas and funding streams, with one team member taking primary (lead) responsibility for each program. Thus, each Program Officer serves as a primary lead, while also providing complementary expertise and effort to support other programs, which operate on a staggered calendar. This flexible staffing model is widely cited as a key strength of UCRI and a model for *RGPO's* efforts to increase cross-program staffing.

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[79] University of California, "*Compendium: Universitywide Review Processes for Academic Programs, Academic Units, & Research Units*," https://www.ucop.edu/institutional-research-academic-planning/_files/compendium_sept2014.pdf.

History

Although each UCRI program has a distinct history unto itself, the portfolio as a whole is largely defined by the 2008 reorganization that created *RGPO*. As such, there are three distinct phases of UCRI's history: before, during, and after that reorganization.

Origins in the Office of Research

UCRI grew out of the legacy programs that were housed in the Office of Research prior to the 2008 reorganization of the UC Office of the President. Prior to 2008, the Office of Research – which existed within Academic Affairs and reported to the Provost – administered several systemwide or multicampus research grants and programs. Besides the MRUs, these included the Welfare Policy Research Program (WPRP) and the *UC Discovery Grant*, which was directly overseen by the IUCRP.[80] Although each of these programs ultimately reported to Vice Provost of Research Larry Coleman (and their budgets were part of the Office of Research portfolio), they operated independently of each other.

The MRU portfolio included many longstanding programs, with high visibility across campuses. They functioned – and continue to function – as the multicampus equivalent of campus-based "Organized Research Units," and are formal academic research programs established to coordinate inquiry in thematic areas that cross traditional disciplinary or departmental boundaries. Most MRUs were formally established in the 1970s and 1980s in response to the University's physical expansion to (at the time) nine campuses, in order to fully leverage the scale of the system, and most in turn pursued extramural funding to support them beyond what the University provided on an ongoing basis. By the 1990s, substantial cuts in State support for the University limited opportunities for new cross-campus research collaborations to receive systemwide support and led to growing concerns that ongoing annual commitments to existing MRUs further served to constrain new initiatives. These concerns led to a strong recommendation from both the Academic Senate and university administrative leadership to convert MRU funding to an open competitive process, featuring a peer review, in order to ensure that funding was allocated to the most innovative, meritorious collaborations.

Launching UCRI

The Monitor Group's 2008 assessment of the UC Office of the President strongly endorsed the earlier Senate recommendation to allocate MRU funding through a competitive opportunity open to both existing MRUs and new collaborations.[81] As such, a key feature of the 2008 reorganization was the introduction of a competitive grantmaking process for multicampus research collaborations. The new funding opportunity was named *Multicampus Research Programs and Initiatives (MRPI)*, a name intended to highlight that proposals from both new multicampus collaborations and existing MRUs would be accepted. While some MRUs continued to receive funding through the *MRPI* competition – or through extramural sources – others did not, and many ultimately disestablished.

Immediately before this transition, the University entered into new joint venture partnerships for the management contracts for Lawrence Livermore National Laboratory and Los Alamos National Laboratory, in accordance with the model solicited by the Department of Energy. The administrative change meant a transition in how the University received income from these operations compared to prior contracts. Specifically, the University would now receive its share of the net fee earned by the LLC, after all costs

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[80] IUCRP was physically located at UC Berkeley, but reported to the Vice Provost of Research at the UC Office of the President.
[81] Several MRUs continued to receive designated, noncompetitive systemwide funding because of special funding sources or contractual obligations with external parties.

are covered, as a new source of income; the UC Regents determined that this income would be used to advance the shared research and training missions of UC and the National Labs, and in particular, collaborative research between them. This funding program was named the *UC National Laboratory Fees Research Program (LFRP* or the *Lab Fees Program)* and relies on a competitive peer review process to make awards.

During the 2008 reorganization, the University thus found itself with two large, multicampus, peer-reviewed research grant competitions: *LFRP* and *MRPI*. As part of the reorganization, IUCRP was disestablished, and its grantmaking activities – including its signature *UC Discovery Grant* program – were moved along with *LFRP* and *MRPI* into the new *Research Grants Program Office*.[82] At this same time, the WPRP was discontinued.

RGPO embarked on an internal reorganization within two years of its launch to better leverage the scale of its portfolio of programs. As part of this effort, which is detailed in the **Background** section of this report, Executive Director Croughan created the UCRI team to administer the University's major internal research competitions (*LFRP, MRPI,* and the *UC Discovery Grant*). Kathleen Erwin, who had previously served as a Program Officer in the *California HIV/AIDS Research Program (CHRP*) and the Director of the interim PARC unit, was hired to lead the new UCRI team as its first Program Director – a role that she remains in today.

Ongoing Evolution

At the time of its launch, UCRI was intended to provide strategic management and leveraged capacity for additional grant programs that might emerge over time, but early budgetary challenges threatened its ability to do so. In FY12, the State's fiscal crisis led to a 20% reduction ($500 million) in its appropriation to UC, and the UC Office of the President was asked to cut $50 million from its program budgets in FY12 to help reduce the impact on campuses and students. As a consequence, the $16 million *UC Discovery Grant* program was discontinued, although UCRI continued to manage open awards for three additional years. *MRPI* funding was also significantly reduced from a peak of $15 million and had to draw upon *LFRP* funding to meet commitments to its then-current awardees. Moreover, the structure of the National Labs contracts had provided for higher fees in the start-up period, and net fee income for *LFRP* also declined during this same period. As a result of these challenges, UCRI was not fully staffed at originally intended levels.

More recently, UCRI has regained core program stability while taking on additional programs on behalf of the University, though it remains significantly smaller than it was prior to the FY12 reductions in State funding.[83] In 2016, the administration of the *UC Cancer Research Coordinating Committee (CRCC)* faculty seed grant program (which had previously been housed at UC Davis) was moved to *RGPO*, and became the third core program in the UCRI portfolio. In addition, UCRI has played an important role by positioning the University to respond to emergent opportunities in research areas like type 1 diabetes, Valley Fever, and the various priorities identified as part of the *President's Research Catalyst Awards*.

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[82] IUCRP's tech transfer facilitation components were folded into the Industry Alliances and Services (IAS) unit within Research and Graduate Studies, and were later moved to the Division of Innovation & Entrepreneurship within the UC Office of the President. In 2018, many of the legacy IAS functions were reconstituted as the Knowledge Transfer Office, or KTO, within RGS.
[83] Ongoing budget constraints within the UC Office of the President, though, continue to exert downward pressure on *MRPI* funding.

Structure

Three hallmarks of UCRI are the flexibility and disciplinary breadth of its staff, who cover a range of programs; the array of advisory committees and stakeholders with whom those staff work on a regular basis; and the diversity and complexity of its funding sources. Key aspects of UCRI's structure include:

- **Permanent staff,** consisting of three Program Officers and the UCRI Director, who in turn reports to the *RGPO* Executive Director, as well as a part-time temporary administrative analyst;
- **Formal Advisory and Oversight Groups,** including the *Cancer Research Coordinating Committee (CRCC),* the Council of Vice Chancellors for Research (COVCR), the Academic Senate (specifically the Senate's University Committee on Research Policy and the Academic Council Special Committee on Lab Issues), and various MRU Advisory Councils;
- **National Laboratory Leadership,** who play a critical role in informing program priorities and award mechanisms, and who ultimately provide the source of *LFRP* funding.
- **Campus-based stakeholders**, who regularly interact with UCRI and *RGPO* staff in support of faculty research applications and awards and MRU reporting; and
- **Other stakeholders across the State**, including the Legislature and private donors, who allocate specific resources to the programs housed within UCRI.

This structure is depicted in the organizational chart below.

FIGURE 40: UCRI ORGANIZATIONAL CHART
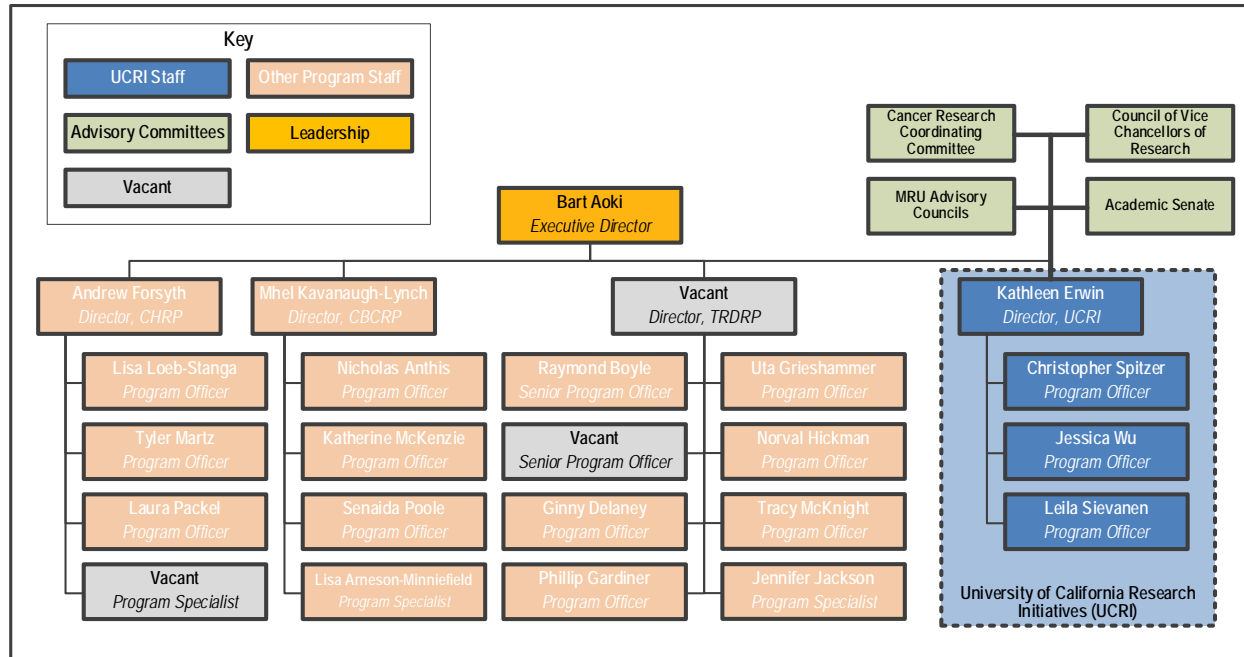
Staffing

UCRI has a full-time staff of four. Program Director Kathleen Erwin has served in her role since the launch of UCRI in 2008, after previously serving as a Program Officer within the *HIV/AIDS Program.* In addition to overseeing UCRI's primary programs, she also leads special research initiatives (such as *the*

President's Research Catalyst Awards and *UC Valley Fever Research*). Other staff members include three Program Officers, as well as a part-time, temporary Administrative Analyst. While two Program Officers split time between UCRI and the *Tobacco Program* in 2017 to support the latter's administration of new Proposition 56 funds, that diversion of capacity concluded in June of 2018. Conversely, one *HIV/AIDS* Program Officer has dedicated time starting in July 2018 to support UCRI in FY19, in particular *UC Valley Fever Research*.

UCRI's Program Officers are experts in their respective fields, and each holds a Ph.D. degree. All three have worked in various other research institutions prior to joining *RGPO*. Each Program Officer is positioned to lead a specific UCRI program, while also supporting each other as primary points of contact for applications and awards related to their academic disciplines. In this way, the Program Officers have built-in flexibility to support new programs as they arise and to support each other during peak work demands of any particular funding competition. **The ability of UCRI to deploy Program Officer capacity across programs and subject areas is widely cited as a key strength of the program and is particularly important as the programs' funding streams often rise and fall independently of each other.**

Additional Program Officer positions were approved in 2014, resulting in a growth from 2 FTE in FY14 to 4 FTE in FY16. In FY17, the team leveraged a graduate intern from UC Berkeley's School of Public Health for additional, and affordable, capacity to support portfolio evaluation activities, while also providing the student with a valuable and unique experiential learning opportunity. UCRI did not hire new student interns after FY17, however, despite having the funds to support these positions**; since 2018, it has not been possible to hire new interns in *RGPO* because of budget and FTE constraints within the UC Office of the President.**

Governance

UCRI is accountable to numerous advisory groups across its constituent programs. These key constituencies are highlighted in the table below.

TABLE 30: UCRI PRIMARY PROGRAM GOVERNANCE

Entity	Size	Programs	Role
Council of Vice Chancellors for Research	13	*LFRP MRPI*	Advises on Calls for Applications, program strategy, and priorities; individually, members oversee campus-based post-award administration.
Cancer Research Coordinating Committee	34	*CRCC*	Directly oversees program priorities and advises UCRI staff on program administration. Reviews proposals and makes final decisions on funding.
University Committee on Research Policy (UCORP)	14	*MRPI LFRP*	Fosters, formulates, coordinates, revises general research policies and procedures for the UC system, and advises on MRPI priorities
Academic Council Special Committee on Lab Issues (ACSCOLI)	6	*LFRP*	Provides regular and broadly-based Senate oversight of UC's relationship with the National Labs, including advising on the Laboratory Fees Research Program.

The UCRI team coordinates closely with two Academic Senate committees: the University Committee on Research Policy (UCORP) and Academic Council Special Committee on Laboratory Issues (ACSCOLI). Both of these Committees play a key role in the governance and oversight of *LFRP*, and the former does for *MRPI* as well. Two additional Senate committees, University Committee on Planning and Budget (UCPB) and Coordinating Council on Graduate Affairs (CCGA), along with UCORP, also interface with UCRI staff during MRU reviews.

Other Stakeholders

The array of programs and funding sources within UCRI make the program accountable to many other stakeholders across the State. At a recent webinar on the new *UC Valley Fever Research* funding opportunity, for example, guests included representatives from the California Department of Public Health, State Assemblymember Rudy Salas (whose efforts spurred the creation of the *UC Valley Fever Research* line item in the state budget), representatives from the Office of the U.S. Representative (and then-House Majority Leader) Kevin McCarthy, and the Centers for Disease Control and Prevention (CDC). [84]

Similarly, *CRCC* stakeholders include cancer researchers throughout UC, tax-payer donors to the voluntary tax check-off fund, and the families of the original donors whose endowments that support the program. The Vice President for National Laboratories, serves as a key stakeholder and source of advice for *LFRP*, and provides guidance on the development of Calls for Applications and program strategy as well as the facilitation of national lab collaboration.

UC National Laboratory Fees Research Program

The *UC National Laboratory Fees Research Program* (*LFRP* or the *Lab Fees Program*) promotes partnerships and collaborations between UC researchers and laboratory scientists at Lawrence Livermore National Laboratory (LLNL) and Los Alamos National Laboratory (LANL)[85] and promotes the development of projects and collaborations that advance the missions of the UC campuses and the UC-affiliated national laboratories.

LFRP was established in 2008 after the change in management contracts for LLNL and LANL and was created as a competitive program within the newly established *RGPO.* Funding for the *LFRP* is generated from the net income UC receives for managing LLNL and LANL on behalf of the US Department of Energy.[86] This funding is relatively volatile, as it is a function of the total fees received (which is in turn a function of several performance metrics), as well as operating costs at those two National Laboratories; as such, it can vary significantly from cycle to cycle.

Initially, *LFRP* competitions were run once every three-years. The first cycle awarded more than $56 million in grants for FY09-FY11, and a second competition of similar size was run in 2012, committing funds through FY15. UC did not receive any net income from LANL and LLNL in 2015, so the next round of *LFRP* awards was not made until FY17. Beginning that year, *LFRP* restructured its award mechanisms to encourage larger multicampus-national lab collaborations, solicit proposals in targeted thematic areas, and add an In-Residence Graduate Fellowship opportunity for UC students at LANL or LLNL. In the most recent cycle (FY18), more than $25 million in new funding was committed to seven proposals through a competitive, peer-reviewed process; moving forward, the bulk of *LFRP* funding (not including graduate fellowships) will be awarded in biennial competitions.

LFRP funding is unique within *RGPO* because of the accounting challenges it entails as well as its lack of restrictions on fund balances. The national laboratories are funded by the US Department of Energy, which operates according to the federal fiscal year that ends on September 30. Net fee income is then reconciled

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[84] Representative McCarthy, who represents the southern San Joaquin Valley (where Valley Fever is endemic) in Congress, has cosponsored bipartisan legislation aimed at increasing research into the disease.

[85] Researchers at Lawrence Berkeley National Laboratory are also eligible to participate in *LFRP* collaborations, but funding is derived from the contracts for LLNL and LANL, and participation from at least one of these two National Laboratories is required.

[86] At present, all funds derived from the management of the Lawrence Berkeley National Laboratory are used for the ongoing management of that facility.

against actual expenses by the following January and only available for expenditure by the LFRP. Since the University fiscal year begins on July 1, *RGPO* must budget for *LFRP* well before gaining clarity on actual available funding for awards; as such, there have frequently been mid-year adjustments to *LFRP* spending authority in past years. To mitigate this impact, *LFRP* award funds are not expensed in the year that they are received, but instead are committed out over subsequent years. As such, *LFRP* funds are received, awarded, and expended across multiple University fiscal years. In addition, the UC Office of the President adjusted its accounting mechanisms in recent years to better reflect transfers of *LFRP* funding from *RGPO* to campus-based principal investigators; as such, expenditure data from FY10-FY15, when *LFRP* awarded more than $100 million in grants, is incomplete.

Research Priorities

LFRP is intended to leverage the net income from the University's national laboratory contracts to facilitate greater synergies across the research enterprises at all UC campuses and laboratories. Broadly, the program seeks to support:

- **Collaborative research**, between UC faculty and laboratory scientists;
- **Unique opportunities for UC graduate students**, through programs that promote interaction between laboratory scientists and UC graduate programs;
- **Access to unique laboratory facilities** for UC research endeavors, especially those that involve students; and
- **Research aligned with the shared missions of UC and the national laboratories** in a variety of fields and topics.

During each application cycle, UCRI determines specific priorities in close collaboration with the Vice President for National Laboratories, the COVCR, and the systemwide Academic Senate. The Vice President for National Laboratories first obtains input from LANL and LLNL leadership, and then identifies key priorities based on federal government research priorities. She then consults with the Vice President of Research and Graduate Studies and UCRI staff on the proposed topics; the UCRI Director and both Vice Presidents then bring these topics to two Academic Senate committees – ACSCOLI and UCORP – for input. Based on this consultative process, the Vice Presidents finalize the targeted themes, and UCRI develops the Request for Proposals. The 2018 RFP targeted areas that included:

- Climate science;
- Cybersecurity; and
- National security through social sciences.

It is important to note the close collaboration of the staff of the Office of National Laboratories within the UC Office of the President in supporting *LFRP*. These staff help to facilitate coordination and collaboration with the national labs for smooth program administration. While the effort from the Office of National Laboratories was not quantified during this assessment, one stakeholder estimated that there are an additional three staff members within this office that provide substantial in-kind support to the *LFRP*.

Application Process

Funding decisions for *LFRP* are made based on scholarly merit and programmatic responsiveness. All applications are reviewed for scientific and programmatic relevance in multiple steps:

- **Letter of Intent Review**: Applicants are required to submit Letters of Intent (LOIs), which are reviewed for alignment with the stated priorities of the program as well as the targeted areas of

research. UCRI staff review each LOI and must grant approval before applicants are invited to submit a full proposal. LOIs do not receive feedback beyond the approval to move forward.

- **Peer Review**: UCRI staff manage and facilitate a competitive peer review process, in which proposals are evaluated, scored, and ranked on the basis of their scientific merit and alignment with the program goals and targeted research areas. Reviewers are drawn from outside the University and are selected based on their expertise in the proposed research areas. Conflicts of interest are carefully vetted in accordance with the *RGPO* policy. It is worth noting that, because these targeted areas change from year to year, UCRI staff must invest significantly more effort toward identifying, inviting, and facilitating peer reviewers' participation than the SRPs within *RGPO* need to.
- **Proposal Selection**: The Vice President of Research and Graduate Studies, in consultation with the Vice President for National Laboratories, has discretion over the final funding decisions.
- **Award Notification and Start**: UCRI staff send award notifications nine months after the initial release of the request for proposals, and award terms begin approximately three months after UCRI staff notify grantees of their award nominations.

Types of Grants

LFRP sponsors two primary award types:
- The UC-National Laboratory In-Residence **Graduate Fellowships**; and
- The Multicampus-National Laboratory **Collaborative Research and Training (CRT)** awards.

The UC-National Laboratory In-Residence Graduate Fellowship provides support to UC graduate students in the form of an annual award of $60,000 for a minimum of two years, which can be extended for a third year, along with an additional $5,200 (for the full fellowship period) to support project-related travel; and campus reimbursement of indirect costs up to 8% of total direct costs. Fellows are afforded the unique opportunity to utilize National Laboratory facilities for their research and participate in training and professional development opportunities at the national labs that position them to successfully launch their scholarly careers. Although it accounts for just 1% of total *LFRP* funds, the fellowship can thus simultaneously serve as an important conduit to address the research pipeline needs at the national labs, and to attract particularly promising scholars into the University's graduate programs.

The table below provides summary data on the graduate fellowship awards over the past two years (which were the first two years in which the Fellowships were offered). The total award commitments and average award sizes include indirect costs, which are paid in full to all recipients on UC campuses, and the difference reflects varying lengths of funding (ranging from two to three years). An additional four fellows will begin their Fellowships in April of 2019.

TABLE 31: *LFRP* GRADUATE FELLOWSHIPS (FY17-FY18)

Award	FY17	FY18
Applications[87]	17	15
Awards	4	2
Success Rate	24%	13%
Total Award Commitments	$735,264	$270,432
Average Award Size	$183,816	$135,216

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[87] Does not include withdrawn or pending applications.

The Multicampus-National Laboratory **Collaborative Research and Training (CRT)** awards provide up to $4 million in funding over three years, including all indirect costs. To be eligible for a CRT award in 2017 or 2018, a proposal had to include participation and collaboration by at least four UC campuses (including the campus of the Principal Investigator) and either LLNL and/or LANL. This award amount does not include the substantial in-kind value of space, equipment, and data that are contributed by the National Laboratories. Despite the high bar of required collaboration, the large awards involved – as well as the opportunities to collaborate with and access national laboratory equipment, space and expertise – attract significant numbers of proposals each year. CRT awards comprised 99% of total *LFRP* grant commitments in the 2018 cycle and are the primary focus of attention among campus stakeholders.

The table below provides summary data on the CRT awards over the past two cycles (during which the current CRT mechanism has been in effect). The total award commitments and average award sizes include indirect costs, which are paid in full to all recipients at the UC campuses and the three UC national labs.

TABLE 32: *LFRP* COLLABORATIVE RESEARCH AND TRAINING AWARDS (FY17-FY18)

Award	FY17	FY18
Applications[88]	33	30
Awards	4	7
Success Rate	12%	23%
Total Award Commitments	$13,278,068	$25,273,496
Average Award Size	$3,319,517	$3,610,500

The shift to a biennial competition cycle allows the program to combine funds from multiple years to make more substantial investments in the targeted research areas, as well as offer a higher success rate to applicants. This approach allows for successful leveraging of program funds and an attractive opportunity for applicants – a strategy that has been utilized for several other programs across *RGPO*.

Cancer Research Coordinating Committee

The *Cancer Research Coordinating Committee (CRCC* or the *Cancer Research Program)* is a systemwide, faculty-directed cancer research program that provides competitive intramural faculty seed grants on an annual basis for topics that address any aspect of cancer. The research supported by the *CRCC* grants, like many of those at *RGPO*, is intended to be at the cutting edge of inquiry in its field. UC Merced Assistant Professor Nestor Oviedo, for example, received a *CRCC*-supported award for a project exploring the role of resident stem cells in cancerous tissue renewal, with the hope of identifying important molecular markers of cancer initiation.

Historically, the program operated as an MRU. It was housed at UCLA and then at UC Davis, to align with the campus affiliation of the faculty member serving as Executive Secretary of the Committee. In 2015, the members of the *CRCC* agreed to move the program's administration to the UC Office of the President to establish greater neutrality and to leverage the existing capacity and resources of *RGPO*; at that time, *CRCC* then disestablished as a formal MRU and the Executive Secretary role was eliminated. *CRCC* grants are now administered by UCRI, and the academic direction is provided by the members of the *CRCC*, and in particular its Steering Committee.

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[88] Does not include withdrawn or pending applications.

At present, the Committee consists of 34 UC faculty members from every campus of the University, who serve staggered 4-year terms. The 2018 membership roster is provided in the table below.

TABLE 33: *CRCC* MEMBERSHIP (FY18)

Name	Affiliation
Rachel Martin (*Chair*)	UC Irvine
Karen Oegema (*Vice Chair*)	UC San Diego
Sunil Advani	UC San Diego
Hinrich Boeger	UC Santa Cruz
Nancy J. Burke	UC Merced/UC San Francisco
June Chan	UC San Francisco
Catherine Crespi	UC Los Angeles
Camilla Forsberg	UC Santa Cruz
Frank Furnari	UC San Diego
Neil K. Garg	UC Los Angeles
Scarlett Gomez	UC San Francisco
Yvonne Kapila	UC San Francisco
Peder Larson	UC San Francisco
Xuan Liu	UC Riverside
Jennifer Manilay	UC Merced
Ernest Martinez	UC Riverside
Kara E. McCloskey	UC Merced
John McPherson	UC Davis
Denise Montell	UC Santa Barbara
Ashok Mulchandani	UC Riverside
Nestor Oviedo	UC Merced
Michael Prados	UC San Francisco
Dinesh Rao	UC Los Angeles
Javier Read de Alaniz	UC Santa Barbara
Amy Rowat	UC Los Angeles
Seth Rubin	UC Santa Cruz
Suzanne Sandmeyer	UC Irvine
Noriko Satake	UC Davis
Catherine Smith	UC San Francisco
Christopher D. Vanderwal	UC Irvine
Matthew Welch	UC Berkeley
Fred Wolf	UC Merced
Lily Wu	UC Los Angeles
Raphael Zidovetzki	UC Riverside

Funding for this program is primarily provided through endowment returns on bequests made to UC for cancer research, the first of which was given in 1947. With the passage of Proposition 56 in 2016 – which shortly followed the transition of *CRCC* administration to UCRI from UC Davis – the University (with the concurrence of the Legislature) redirected the proceeds of the California Cancer Research Fund (a voluntary tax check-off) to be administered by the *CRCC*; historically, that funding had been administered

as part of *TRDRP*. The figure below shows these funding sources over time; while the state allocation from the tax check-off fund is relatively stable, the endowment returns have fluctuated over time. For purposes of consistency, California Cancer Research Fund allocations are included below, though these did not support *CRCC* until FY17.

FIGURE 41: *CRCC* FUNDING SOURCES (FY13-FY18)[89]
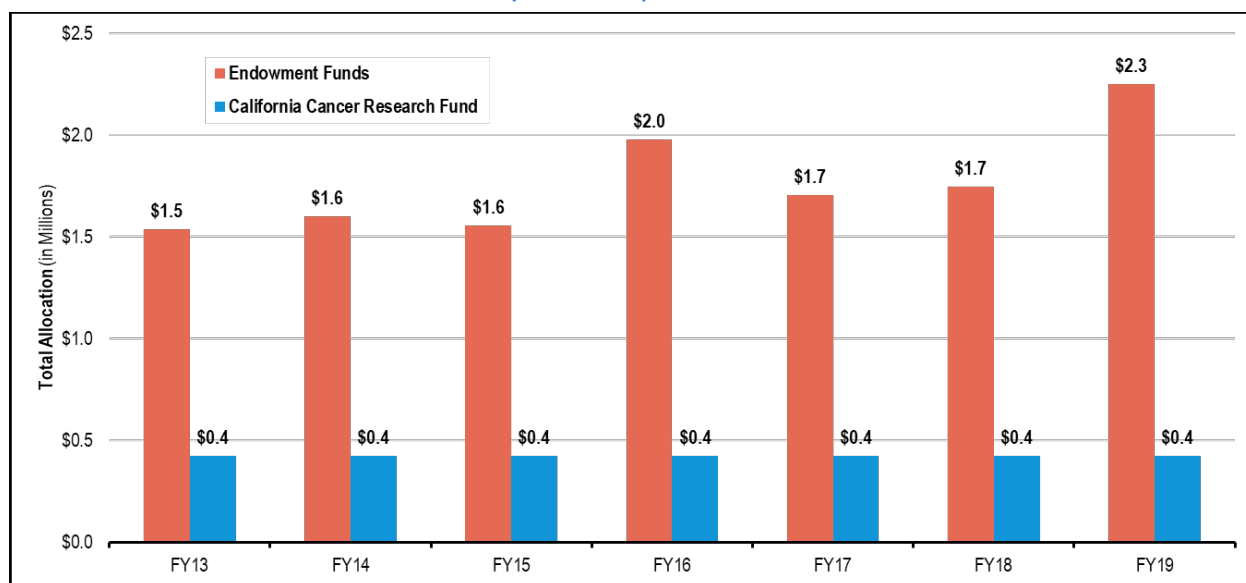
It is important to note that the *CRCC* endowments are relatively static and have been fixed at approximately $40 million since 1970; with the significant cumulative inflation over that period, the real value of the endowment has declined by approximately 84% over the past 50 years.[90] Thus, the long-term grantmaking ability of the *CRCC* endowments has been diminishing for several decades. The *CRCC* endowments are managed through the UCLA Foundation, and several stakeholders noted that this arrangement should be reviewed, in part because the endowments' principal should be growing over time as excess investment returns (above the payout amount) are reinvested. Instead, it seems that the endowments are not realizing excess return above their payouts, or that these excess returns are not being reinvested into the endowments themselves; such an analysis was outside the scope of this review, so it is difficult to draw conclusions on this arrangement.

The static size of these endowments is also due in large part to a decision made in the 1970s to cease solicitation of any new bequests. This decision was made in order to avoid competing with campus-based cancer research centers. Some program stakeholders suggested that additional solicitations could be beneficial to the program, but campus cancer center and development stakeholders would need to be consulted before such an action would be considered.

The large number of different funds creates relatively high complexity for *CRCC*. Of the 17 endowments, several have specific restrictions related to which campus may receive funding. Moreover, six of the 17 endowment funds are not housed on the local ledger for the UC Office of the President ("Location M") but are instead located at UC Berkeley and UC San Francisco. An 18th fund is designated for the tax check-

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off funding. This large number of funds contributes to an unusual degree of complexity in the management of the program award budget given the relatively small size of the program.

Research Priorities

CRCC provides one-year seed grants to UC Academic Senate faculty members, with a goal of helping the most promising early-stage research and researchers to attract additional extramural funding from federal and other sources. Grants are available to:
- **New faculty** to initiate cancer research projects;
- **Established investigators** in other research areas to initiate cancer research projects; and
- **Established cancer investigators** to initiate cancer studies in new areas.

The faculty Committee maintains responsibility for the direction and strategy of the program priorities even as it is now administered within UCRI. In addition to the faculty seed grants, the *CRCC* awards three to five dissertation fellowships each year to graduate students at the UC Berkeley campus. These awards are made from endowment funds designated specifically for UC Berkeley, and campus faculty manage their own internal nomination process. While the majority of the work associated with these fellowships is managed at UC Berkeley, the fellowships are an important component of the overall *CRCC* portfolio.

Application Process

The Committee makes funding decisions for the faculty awards based on scientific merit, with special attention to the proposal's degree of innovation and significance of questions/problems to be solved. The full review process entails the following steps:
- **Letter of Intent Review**: Applicants are required to submit letters of intent, which UCRI staff review for eligibility. UCRI staff do not provide feedback to the applicants other than notifying them of whether they are approved to submit a full proposal.
- **Committee Review**: Members of the *CRCC* evaluate, score, and rank-order all proposals. In addition to other scoring criteria, members also consider the extent to which it does or does not represent a continuation of existing research, and whether or not their extramural funding exceeds the cap for obtaining a *CRCC* award. The *CRCC* does not fund proposals found to overlap with concurrent extramurally funded research. Final selection of proposals is at the discretion of the *CRCC* and is not subject to appeal, but eligible applications may revise and resubmit a declined proposal.
- **Award Notification and Start**: Award recipients receive notification from UCRI staff approximately nine months after the release of the initial request for proposals, and awards start at the beginning of the following calendar year.

Types of Grants

CRCC makes awards in two distinct categories:
- **New Assistant Professor Awards**, for which new tenure-track faculty hired within the last four years are eligible; and
- **Regular Awards**, available to Associate and Full professors whose research aligns with the *CRCC* funding priorities.

Regular Award applicants are required to propose research that is in an entirely new line of inquiry, but those in the New Assistant Professors category do not need to meet this requirement. In FY 2019, award sizes for both categories were increased from $55,000 to $75,000 to address increasing costs of research and graduate student support covered by many of the grants, an increase that was supported by the

addition of tax-checkoff funding as well as higher endowment returns. The following table provides key details on the past three *CRCC* award cycles.

TABLE 34: *CRCC* AWARDS (FY17-FY19)

Award	FY17	FY18	FY19
Applications[91]	89	77	92
Awards	29	32	34
Success Rate	32%	42%	37%
Total Award Commitments	$1,594,900	$1,747,000	$2,441,828
Average Award Size	$55,000	$54,600	$71,818

Multicampus Research Programs and Initiatives

Multicampus Research Programs and Initiatives (MRPI) funds innovative multicampus research collaborations that leverage expertise and resources across the system and strengthen UC's position as a leading public research university. *MRPI* is one of the most visible and well-known of *RGPO*'s programs among campus stakeholders, and many of those stakeholders expressed a strong interest in its continued success during interviews.[92]

Funding for *MRPI* was originally redirected from Multicampus Research Unit (MRU) funding during the 2008 reorganization. During this time, *MRPI* was created as a competitive, peer-reviewed research grant program based on an initial five-year award cycle. The 2009 competition committed a full five years of funding through 2014 (over $70 million).

With its reliance upon unrestricted State General Funds to the UC Office of the President (and previously campus assessment funds), *MRPI* is particularly vulnerable to reductions. Due to drastic funding cuts in 2011, for example, UCRI was unable to fully fund its commitments from the 2009 competition, and a decision was made by University leadership to fulfill those commitments with *LFRP* funds. Widespread support to retain the *MRPI* opportunity has led to its continuation, with the frequency of calls accelerated to every other year to provide more frequent opportunities. Its funding has continued to be scaled back, however, and many campus stakeholders expressed concern that the success rate has become too low to be sustainable. The figure below shows *MPRI*'s expenditures over time; as with other grant programs, there is generally a lag behind changes in budgetary allocations, as prior out-year award commitments are met.

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[91] Does not include withdrawn or pending applications.
[92] In interviews on *RGPO* with Vice Chancellors for Research or their designees at all 10 UC campuses, *MRPI* was raised more frequently than any other *RGPO* grant program as a topic of importance.

FIGURE 42: *MRPI* EXPENSES, FY10-FY18
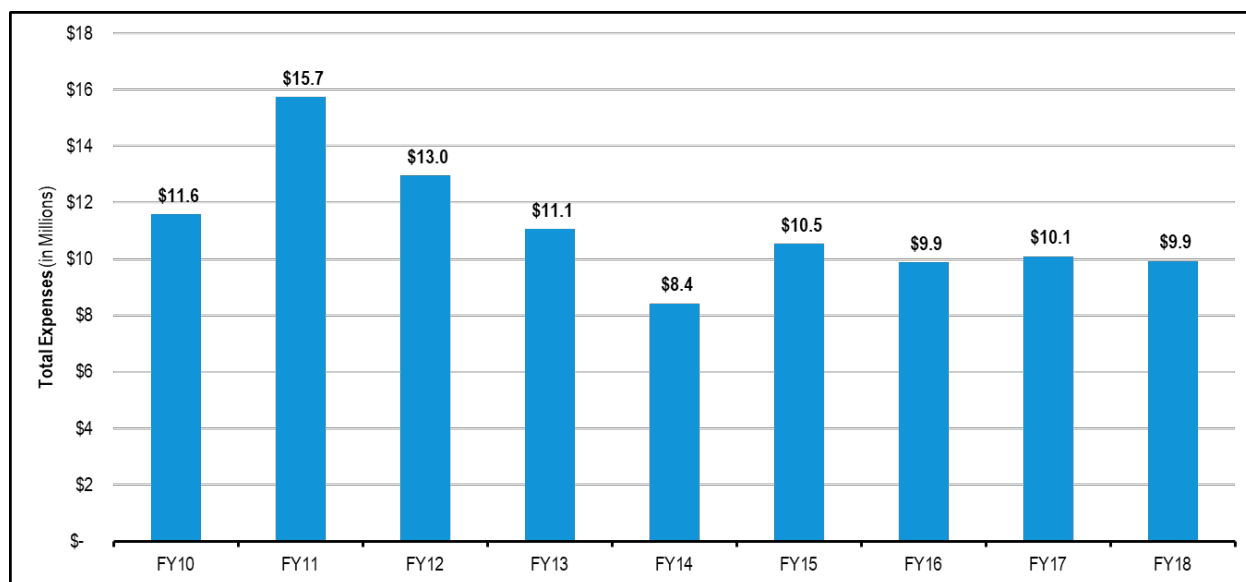
For many campus stakeholders, *MRPI* is the "face" of *RGPO*. Many VCRs spoke effusively about the collaborative nature of the UCRI staff. Notably, these stakeholders commented on the ways in which their teams' already strong relationships with UCRI staff have improved in recent years, as the UCRI staff responded positively to feedback on RFP development, research priorities, and post-award administration.

Research Priorities

Broadly, *MRPI* seeks to facilitate cross-campus collaborations that leverage and strengthen the unique scale and stature of the University. Research priorities include efforts to:
- **Advance research** in areas important to the University, the State of California, its people, environment and economy;
- **Increase UC's competitiveness** in attracting faculty, graduate students, awards and honors, and extramural funding; and
- **Support innovative undergraduate and graduate student research**.

To be eligible for funding, proposals must include the participation of at least three campuses. Additional collaborators from other UC sites, including the five medical centers, three national laboratories, the Hastings School of Law, and UC Agriculture & Natural Resources, are also encouraged, but do not count toward the minimum campus requirement.

MPRI grants are open to all academic disciplines. Several campus stakeholders commented that these awards are particularly valuable for faculty in the arts, humanities and social sciences, for whom access to federal and private sector grants is limited. As one VCR said, "I do think the institution has a responsibility to humanities, for instance, where there are limited opportunities for extramural funding."

Application Process

Final funding decisions for *MRPI* awards are made by the Vice President of Research and Graduate Studies and are informed by peer reviewers' evaluation of proposals' scholarly merit, and the second tier portfolio panel. Special attention is paid to the proposal's degree of innovation and significance of questions/problems to be solved. The full review process entails the following steps:

- **Letter of Intent Review**: Applicants are required to submit Letters of Intent, which UCRI staff review for alignment with the stated priorities of the program as well as eligibility. UCRI staff do not provide feedback to the applicants other than notifying them of whether they are approved to submit a full proposal.
- **Content Area Peer Review**: UCRI staff manage a competitive, multi-tiered peer review process. In the first tier, multidisciplinary content area review panels are convened, comprised of both experts drawn from outside the University, as well as UC faculty. Steps are taken to protect against conflicts of interest. Given the broad interdisciplinary nature of *MRPI* proposals, reviewers are selected for their subject matter expertise, and applicants are reminded to write proposals "accessible to a general scholarly audience and avoid jargon." Proposals are first reviewed in one of five content areas: in 2018, these were Arts, Humanities & Culture; Social & Behavioral Sciences; Biological, Health & Life Sciences; Environmental, Earth Sciences & Agriculture; and Physical Sciences & Engineering.
- **Portfolio Panel Review:** In the second tier of the review process, the chairs of each content area panel, as well as representatives of the Academic Senate and the Vice Chancellors for Research (or their designees), review the top-ranked proposals from each content area panel before making final recommendations to the Vice President of Research and Graduate Studies.
- **Award Notification and Start**: Notification of selection is approximately eight to nine months after the release of the initial request for proposals, and awards start at the beginning of the following calendar year.

As noted above, *MRPI* features a unique, two-tier review process, with rotating needs for content area experts depending on the proposals being considered. In interviews, some stakeholders noted that this process – though well regarded – requires a higher level of effort for reviewer recruitment by the Program Officers than *RGPO*'s other program teams (the *Breast Cancer, HIV/AIDS,* and *Tobacco Programs*) and may be a key driver of higher evaluation costs. As noted above, this inequality was apparent in the staff survey, as UCRI Program Officers reported a higher percentage of time spent on Research Evaluation (across all UCRI programs, including *MRPI*) than these other teams, reflecting both reviewer recruitment as well as the numbers of proposals, panels, and reviewers that each Program Officer is responsible for. At the same time, though, the ability to draw upon internal (within UC) peer reviewers may have helped limit evaluation costs as a whole, as shown in the figure below, which compares internal expenditure categories as a share of overall expenses for each of *RGPO's* four program teams.

FIGURE 43: INTERNAL FUNCTIONAL EXPENSES ACROSS PROGRAM TEAMS (FY18)
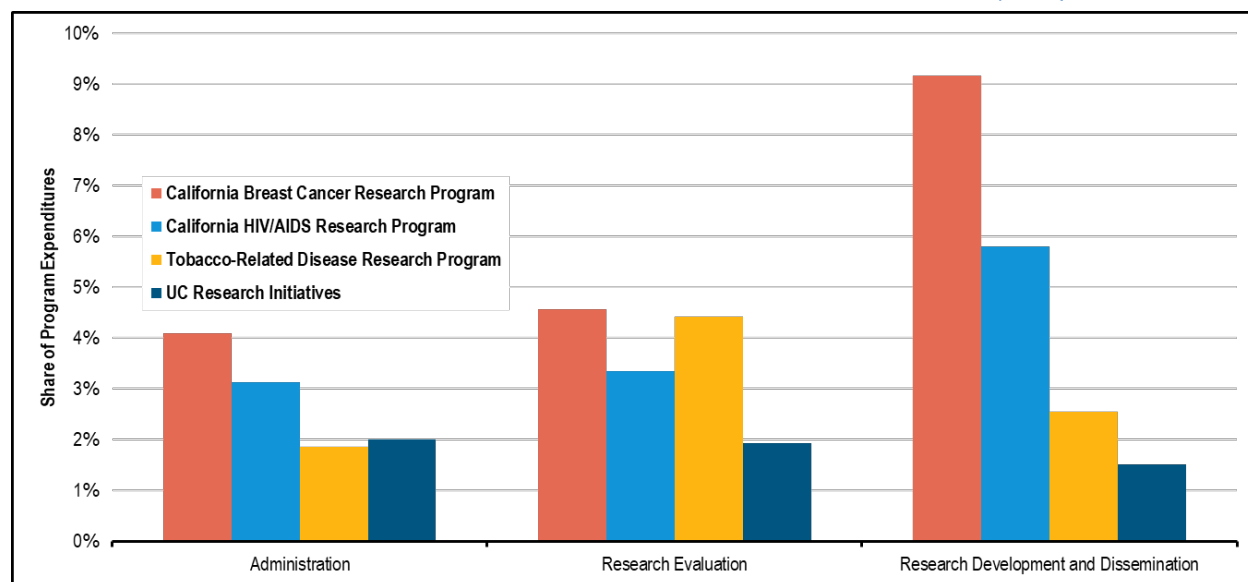
Types of Grants

After its first cycle concluded in 2014, *MRPI* shifted to more frequent competition cycles that offered:

- Two-year **pilot awards** for first-time applicants in the amount of $150,000; and
- **Program awards** of any amount.

Pilot awards are open only to new multicampus collaborations and may not be used to support existing research efforts. Funding is intended to launch new research in critical topic areas that strengthen the University's system-wide research enterprise.

Program awards may support existing collaborations, including past *MRPI* awardees, otherwise UC Office of the President-unfunded MRUs, or smaller collaborations that want to expand their reach and impact with *MRPI* support. Proposals must meet additional requirements beyond those of the pilot awards, including:

- Participation by faculty across multiple career stages;
- Clearly articulated public engagement through citizen science, community collaboration and outreach and/or education; and
- Distinct contributions to undergraduate research and education, in addition to graduate student engagement.

In the last completed cycle, both award types attracted substantial interest despite the complexity inherent in forging and maintaining multicampus collaborations. Key metrics for both award types over the past cycle are shown in the table below, which also includes application data for the final *Catalyst* awards (which were folded into the 2017 Cycle; these are described in greater detail in the following section).

TABLE 35: *MRPI* AND *CATALYST* COMBINED AWARDS (2017 CYCLE)

Award	Pilot Awards	Program Awards
Applications [93]	40	60
Awards	6	12
Success Rate	15%	20%
Total Award Commitments	$1,738,000	$17,240,260
Average Award Size	$289,673	$1,436,688

In interviews, VCRs made it clear that the cross-campus collaborations, multidisciplinary research, and (for program awards) lack of caps on funding that are facilitated by *MRPI* awards are well regarded across the University. As such, *MRPI* attracts a high number of prospective applications for the number of awards available, a trend that has intensified in the 2019 cycle. *MRPI* award recipients for the current cycle were announced in early December 2018; just 16 proposals were accepted out of 179 submissions, **for an overall success rate across both award types of less than 9%.**

As applications for the 2019 cycle were being considered, multiple VCRs expressed both respect and appreciation for the importance of *MRPI* and frustration with the projected low success rate, which was previewed to the COVCR earlier in the fall. As noted in the section on **Grants Management**, VCRs are eager to see success rates for any program at least as high as those of the NIH and NSF, which stood at 24% and 19% in their most recently published cycles. Similarly, in a survey of all *RGPO* staff, 14 Program Officers and Directors across all programs shared opinions on optimal success rates; the median answer identified was 20%, and the geometric mean was 22%. **Thus, the surge in interest in *MRPI* in the 2019 cycle led to success rates below the targets identified by campus stakeholders and *RGPO* staff.**

Special Initiatives and Other Awards

In addition to its three primary programs – *LFRP*, *CCRC,* and *MRPI* – UCRI also administers other research funding opportunities that are offered only to UC researchers.

Type 1 Diabetes Research Fund

At the behest of advocates, the State Legislature created a new tax check-off for the 2016 tax year, allowing taxpayers to make voluntary, designated contributions above and beyond their tax liability in order to support research into type 1 diabetes. As with other tax check-offs that are directed to *RGPO* programs, the exact allocation to UC is at the discretion of the California Department of Finance, which regularly holds significant portions of the revenue in reserve, and the budgeted estimate may differ from the actual donation amounts received. In both FY18 and FY19, UC was allocated $250,000 in funds. Given a short timeline for expenditure of the funds, and in consultation with the *RGPO* leadership, UCRI identified an existing meritorious, peer-reviewed multicampus collaboration within the University focused on type 1 diabetes research and awarded the funds to that research project to expand the scope of that effort. Since donations have not yet exceeded the initial $250,000 allocation, UCRI has deferred awarding the second year's allocation until sufficient donation thresholds are met.

The strategy utilized for the deployment of *Type 1 Diabetes Research Funds* allowed UCRI to maximize the amount of funding for research and reduce operational costs, and to avoid a stand-alone competitive process with award sizes and success rates that failed to meet minimal key benchmarks. As noted

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[93] Does not include withdrawn or pending applications.

elsewhere in the report, the required operational costs associated with a new program are substantial. By coupling Type 1 funding to increase the scope of previously peer reviewed research, UCRI ensured that these funds would be deployed efficiently.

UC Valley Fever Research

In 2018, the California State Budget Act included $8 million in new, restricted funding dedicated to the study of coccidioidomycosis – more commonly known as "San Joaquin Valley Fever" or simply "Valley Fever." Of these funds, $3 million are earmarked for the University of California. Valley Fever is a fungal infection that is endemic to the American Southwest and has been infecting increasing numbers of California residents in recent years. Agricultural and construction workers are particularly vulnerable due to increased exposure to disturbed soils, and certain racial groups as well as people with weakened immune systems (including transplant recipients and patients with HIV or AIDS), are particularly vulnerable to infection. The first *UC Valley Fever Research* RFP was released in December of 2018, after a statewide stakeholder webinar organized by *RGPO* in October.

The UCRI team is administering *UC Valley Fever Research* funding with eligibility and application requirements that closely follow the *MRPI* collaborative award structure. It is likely that the $3 million in funding will be repeatable moving forward, as the issue is a priority for Central Valley legislators at both the state and federal levels. Indeed, the leader of the U.S. House of Representatives Republican Caucus, Representative Kevin McCarthy of Bakersfield, recently co-sponsored proposed bipartisan legislation to dedicate $8 million in annual federal funding toward the study of the disease.[94] The proposed federal legislation was explicitly written to provide matching funds to the institutions of higher education and public hospitals that have received state funding to support research into Valley Fever, with wording that makes clear that UC and other recipients of the new state funding would be likely recipients. Given this interest, and the regional importance of Valley Fever, *RGPO* and UCRI remain poised to issue future RFPs if additional state funding becomes available.

President's Research Catalyst Awards

Over three years, from 2015-2017, the *President's Research Catalyst Awards* distributed more than $10 million in funding to support multicampus research collaborations. In practice, the awards were similar to *MRPI*, but with research priorities selected by President Napolitano to support inquiries in areas of strategic importance to the University and to the State. UCRI directly supported the President by developing the RFP, managing the competition and selection process, and administering the awards.

Although the President never intended for the program itself to last more than three years, it made multi-year awards, so many of the research projects remain active. The *Catalyst* awards are still thus featured prominently on the UCRI website, as UCRI continues to administer the awards and track research outcomes through annual progress reports. Like the *UC Discovery Grant* program (detailed below), which also had ongoing grant monitoring responsibilities three to four years after new budget allocations were eliminated, operational costs for the awards continue to be incurred in the "out-years" of the grants in order to fulfill UC's fiduciary responsibilities.

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[94] "Finding Orphan-disease Remedies With Antifungal Research and Development (FORWARD) Act of 2018," United States House of Representatives, https://kevinmccarthy.house.gov/sites/kevinmccarthy.house.gov/files/Valley%20Fever_FORWARD%20Act_Final.pdf. Senator Feinstein's office also indicated they are exploring possible legislation.

UC Discovery Grant

One notable discontinued grant program within UCRI is the *UC Discovery Grant* program, which was halted after 2012 because of significant State budget cuts. The *UC Discovery Grant* was one of the initial grant programs brought into the newly consolidated *RGPO* after the 2008 reorganization; previously, the program sat within the Industry-University Cooperative Research Program (IUCRP). IUCRP facilitated industry alliances and technology transfer on behalf of the University, but many campus stakeholders felt it was duplicative with their efforts.

While many *RGPO* programs are intended to support early stage research that can attract federal funding at a later stage, the *UC Discovery Grant* program was distinguished by two key factors. First, its primary goal was to advance promising research that could have commercialization potential. Second, awardees needed to garner matching research funds from industry. Since industry partners could make these awards through tax-advantaged R&D funds, and leverage 100% of the direct research costs through the *UC Discovery Grant* match, the program was particularly effective in attracting extramural funding and building industry, business, and agricultural board partnerships. For UC, these partnerships served as an effective means of career development opportunities for graduate students who participated in the research.

Several VCRs bemoaned the loss of this program, which they believed was an effective use of limited funding and key to faculty career development in STEM fields. As one said, "I miss the programs that had corporate matching funds. It gave UC an advantage over other universities that don't have them. It also turned every faculty member into an entrepreneur…it was complementary and reinforcing and developed our faculty well."

At the time the program was discontinued, *RGPO* and UCRI leadership expressed hope that it would be restored going forward. As the UC Office of the President has continued operating under budget constraints, though, no new funding for the program has been allocated.

Financials

UCRI has experienced significant volatility in its collective funding over the past decade, which may not be surprising given the diversity of its underlying programs and funding streams. There is limited correlation between the sources of UCRI programs' funding (endowment returns, net income from the national laboratory management fees, tax check-off revenue, unrestricted State funding at the UC Office of the President, and special State allocations); this limits the likelihood that all programs will grow or shrink simultaneously. **The ability of UCRI Program Officers to flexibly deploy across these diversified funding opportunities thus stands out as a strength of the program**.

Internal Expenses

Internal expenses at UCRI grew steadily from FY14 through FY17, reflecting new Program Officer positions, as shown in the figure below. It is important to note that although data is provided for each fiscal year beginning in FY10, UCRI only adopted the standard definitions of time allocation (Administration, Evaluation, and Development & Dissemination) in 2015 – which was the same year that the administration of the *Cancer Research Program* was moved into *RGPO*. Moreover, pre-2015 figures reflect a $500,000 payment for a new online data system for *RGPO* in FY12, which was funded from UCRI funds, as well as smaller staffing that resulted from earlier constraints on hiring. As such, it is most helpful to examine UCRI's internal expenses beginning in that fiscal year.

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FIGURE 44: UCRI INTERNAL EXPENSES BY FUNCTION (FY10-FY18)
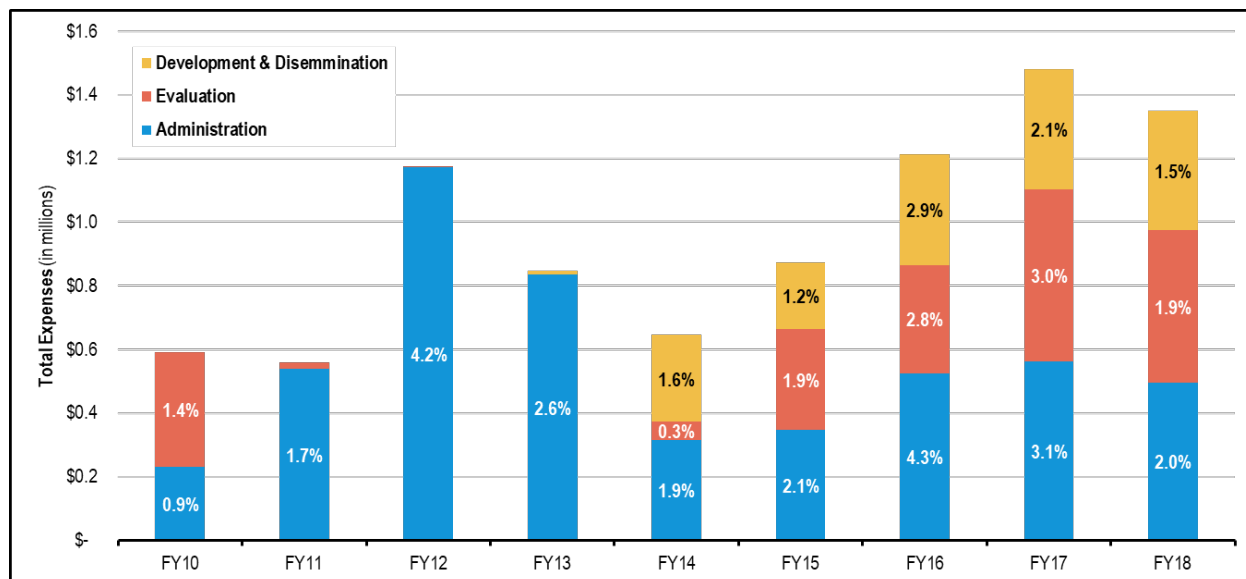
It is also worth noting that UCRI's **non-personnel, internal expenditures have actually declined over the past four years**, as shown by the blue line in the figure below, despite rising costs in personnel and central office recharges (C&G and GBFA). In addition, both personnel costs and recharges to the central support offices declined slightly in FY18, potentially due to a partial allocation of two Program Officers' capacity to support *TRDRP* in the wake of Proposition 56, as well as a substantial drop in total proposals (49%) and review meetings across all UCRI programs. Given the divergence of these cost curves from natural inflation, it is likely that these internal costs will rise over the coming years.

FIGURE 45: UCRI INTERNAL EXPENSES BY TYPE (FY15-FY18)
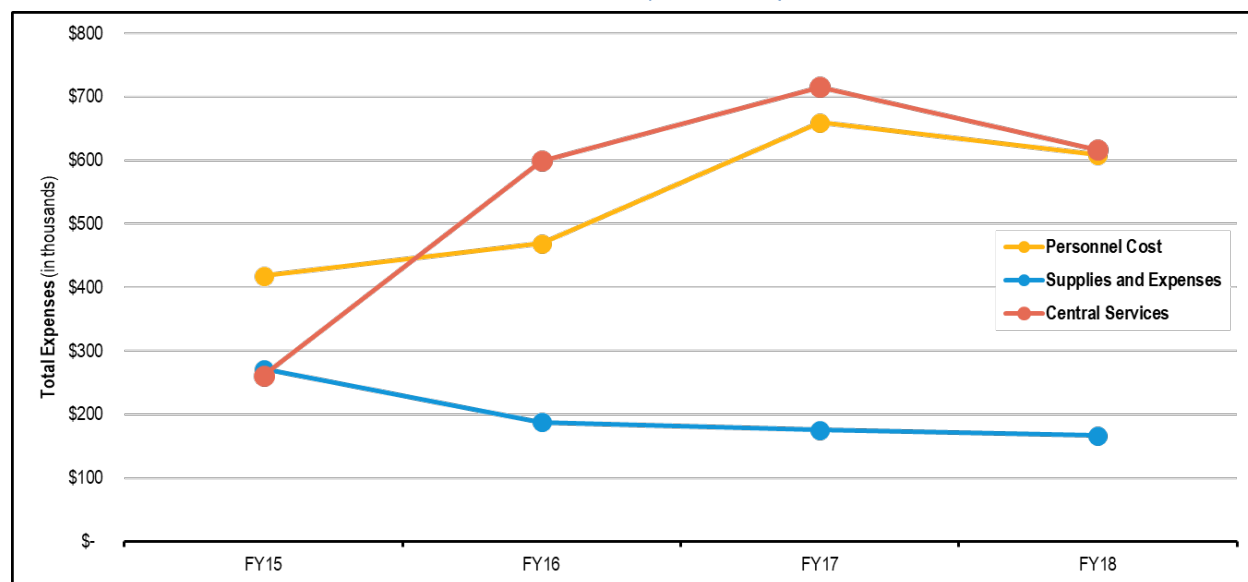
Budget vs. Actuals

Difficulties aligning *RGPO's* multi-year grant programs with the annual budget cycles of the UC Office of the President have led to large variances between budgeted and actual expenses for UCRI and other programs in the past. These variances were also driven in part by a prior practice of pegging budgets closely to anticipated allocations of new funding (from State appropriations, tax check-off revenue, endowment returns, and lab fee revenue), rather than anticipated expenditures in payments for that specific fiscal year.

Beginning with FY18, *RGPO* has been instructed by the UC Office of the President Budget & Finance Department to provide projected expenditures – including payments for active awards that were announced in prior fiscal years – which has begun to minimize these variances. Over a five-year period from FY13-FY17, for example, UCRI had an average variance (in absolute value) of 29%, but this figure dropped to just 5% in FY18. The table below details the program's budgeted and actual expenditures over the past six years. For UCRI, a significant driver of this variance has been the aforementioned practice of purposefully delaying allocation and expenditure of net fee income in support of *LFRP* until after the reconciliation that occurs in January of the fiscal year. This means most award payments against that budgeted income occur in the year following its allocation. Due to past fluctuations – sometimes of significant amounts – in that mid-year reconciliation, this practice is one the program has been encouraged to retain.

TABLE 36: UCRI PROGRAM BUDGET VS. ACTUALS (FY13-FY18)

	FY13	FY14	FY15	FY16	FY17	FY18
Budgeted Expenses	$39.0 M	$28.2 M	$12.7 M	$22.4 M	$26.4 M	$26.0 M
Actual Expenses	$33.2 M	$16.9 M	$17.0 M	$12.3 M	$18.1 M	$24.8 M
Variance ($)	($ 5.8 M)	($11.3 M)	$4.3 M	($10.2 M)	($ 8.3 M)	($ 1.2 M)
Variance (%)	-15%	-40%	34%	-45%	-32%	-5%

Key Performance Indicators

As outlined in the **Key Performance Indicators** section of this report, stakeholders identified two KPIs as being critical for effective management of grants programs:

- **Success Rates**: Defined as the percentage of applicants who ultimately receive funding, with an optimal range of 15%-30%; and
- **Award Size**: Defined as the total grant commitment over the full lifespan of the award, with a target of a minimum of $100,000-$125,000 for junior faculty and 2-3 times that for senior faculty.

As noted previously, UCRI's collective budget fluctuated dramatically between FY13-FY15. As a result of this instability, UCRI prioritized paying out previously awarded grants in FY15 and FY16, before releasing new funding in FY17 as the budget partially recovered and stabilized.

In 2018, UCRI programs – not including the *Cancer Research Program* – saw a slight increase in success rate, from 17% to 20%. In addition, the average award size increased from $1,400,000 to $2,600,000.[95] The *Cancer Research Program's* success rate increased significantly, from 31% to 42%, and average award sizes increased from $1,600,000 to $1,750,000. The increase in success rates may have been temporary, as this trend has not persisted into the FY19 cycles for the *Cancer Research Program* and *MRPI*. As noted above, *MRPI* – whose budget has been more constrained than other UCRI programs – saw success rates of just 9% in its most recent cycle.

Future State Revenue Projection

It is difficult to project UCRI's future revenue streams, for several reasons. First and foremost is the diversified and relatively uncorrelated nature of the programs' sources of funding, as well as the speculative nature of forecasting additional ad hoc funding that may be administered by UCRI in the future. The funding sources, and their determinants, are summarized in the table below.

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[95] This increase is due primarily to the larger LFRP CRT award. *CRCC* awards have been excluded from this analysis because of their focus on early smaller awards in support of early stage research, as well as the relatively small share of overall UCRI funding.

TABLE 37: UCRI FUNDING SOURCES

Funding Source	Program(s)	FY19 Budget	Key Determinant(s)	Future State Outlook
National Laboratory Net Fee Income	*LFRP*	$15.2 M	National Lab revenues and operating costs	Mixed; In 2018 the University won a new 5-year contract for LANL, and several years remain on the LLNL contract. However, earned fee varies annually, so specific budget amounts are unknown.
Cancer Research Endowments	*CRCC*	$ 2.3 M	Market returns, endowment management	Recession would diminish returns; fixed underlying endowments equate to gradually declining real value
California Cancer Research Tax check-off	*CRCC*	$ 0.4 M	Voluntary tax contributions, state-determined distributions	Relatively fixed; State allocation hasn't changed in eight years
State General Funds	*MRPI*	$ 8.4 M	State Legislature priorities, State fiscal health	Potentially greater flexibility if/when UC Office of the President returns to the campus assessment, but likely flat in the absence of significant shifts in University budget priorities
Type 1 Diabetes Research Tax check-off	*Type 1 Diabetes Research Fund*	$ 0.25 M	Voluntary tax contributions, state-determined distributions	Relatively fixed, provided that contributions exceed state mandated minimum
Valley Fever Research Special Fund	*UC Valley Fever Research*	$ 3.0 M	State Legislature priorities, State fiscal health	Repeatability and growth outlook unclear; could increase in light of federal legislation

Collectively, the outlook for these programs is mixed. *LFRP* funding – which is the largest portion of the total UCRI budget in FY19 – is the least dependent on economic conditions and the annual State budget. State General Funds represent the next largest portion of the FY19 UCRI budget and could increase if and when the UC Office of the President returns to a campus assessment funding model, as such a transition would provide the University with greater flexibility to increase budgets for discretionary systemwide programs. Despite the relative independence of each funding stream, though, a recession could directly compromise funding across UCRI's programs, as numerous funding sources – endowment returns, special legislative allocations, and voluntary tax contributions – are directly or indirectly based on market performance and/or California's economic health.

That said, the diversification of UCRI funding may well represent its greatest strength – the ability to deploy Program Officers' capacity across different program opportunities in response to changes in revenue. *RGPO* as a whole, like UCRI, has limited control over its sources of funding on a year-to-year basis. As such, UCRI's model of allocating Program Officers flexibly, while recognizing particular subject matter expertise and leadership among each, may represent a strong model for all of *RGPO* moving forward.

CONSOLIDATED FINANCIALS

Given the complexity of *RGPO's* research programs and initiatives, it is important to analyze the prior and projected financial activities for *RGPO* as a whole. The following information is summarized throughout this section:

- **Sources of Funding:** *RGPO* is funded from a diverse array of sources across its programs. These funding sources are relatively uncorrelated, but revenue from taxes on the sale of cigarettes and other tobacco products comprise a disproportionate share of total funding within *RGPO*, at approximately 62% of FY19 revenues. [96]
- **Internal Expenses**: *RGPO* spends some of its funds on internal expenses, including administrative costs which are capped at 5%, which tend to be relatively fixed compared to the amount of grants that are distributed.
- **Projected Expenses**: As tobacco consumption continues to decline over the coming decade, and nominal allocations for other funding steams within *RGPO* are held flat, the grant-making ability of the organization may diminish significantly.
- **Future Funding Opportunities**: *RGPO* and other UC stakeholders identified several possible funding opportunities for grants in the future.
- **Accounting Processes**: The complexity of the organization's collective funding and reporting requirements can make it difficult to identify broad trends across all programs, and mismatches between the programs' multi-year grants and the UC Office of the President's annual budget cycle have led to significant variances in the past between budgeted and actual expenses.

Sources of Funding

RGPO programs, at present, draw upon three primary sources of funding. These sources include:

- **State allocations from taxes on tobacco products**, representing 62% of the overall budget, include restricted revenues from Tobacco Tax and Health Protection Act (Proposition 99), the California Breast Cancer Act of 1993, and the California Healthcare, Research and Prevention Tobacco Tax Act (Proposition 56), and is used to support *TRDRP* (the *Tobacco Program)* and *CBCRP* (the *Breast Cancer Program)*;
- **Net fee income from the National Laboratories,** representing 17% of the FY19 budget, is unrestricted, undesignated revenue that is used to support *LFRP* (the *Lab Fees Program)*; and
- **State General Funds**, representing 16% of the overall budget, includes unrestricted funds in support of *CHRP* (the *HIV/AIDS Program;* designated funds) and *MRPI* (undesignated funds).

RGPO also draws approximately 5.1% of its FY19 budget from miscellaneous other funds, including the State's special appropriation for *UC Valley Fever Research* (2.5%), *CRCC* (*Cancer Research Program)* endowments (1.9%), and special tax check-offs (0.7%) in support of the *Breast Cancer Program*, the *Type 1 Diabetes Research Fund*, and Cancer Research.

Within *RGPO*, some funding is redirected to shared service teams (C&G and GBFA), which are funded through a recharge model. These teams represented just 3.3% of the total *RGPO* budget in FY19, but approximately 34% of all internal expenses (when grants are not included).

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[96] To account for carry-forward funding, FY19 Revenue figures are drawn from a combination of State allocation data (for tobacco taxes, tax check-offs, and special appropriations) and BDS budget entries (for all others).

Internal Expenses

After declining earlier in the decade, *RGPO* expenditures have surged in recent years, primarily because of the passage of Proposition 56 and subsequent expansion of the *Tobacco Program*, which is further detailed in the section on that program. As the graph below shows and has been noted elsewhere in this assessment, *RGPO's* internal expenses are relatively fixed. For example, although internal expenses declined by approximately $120,000 in FY14, the share of *RGPO* expenses used internally rose from 7% to 11% that year. The relatively fixed nature of *RGPO's* internal expenses means that reductions in program budgets primarily result in a reduction in grants.

FIGURE 46: *RGPO* INTERNAL EXPENSES (FY10-FY18)
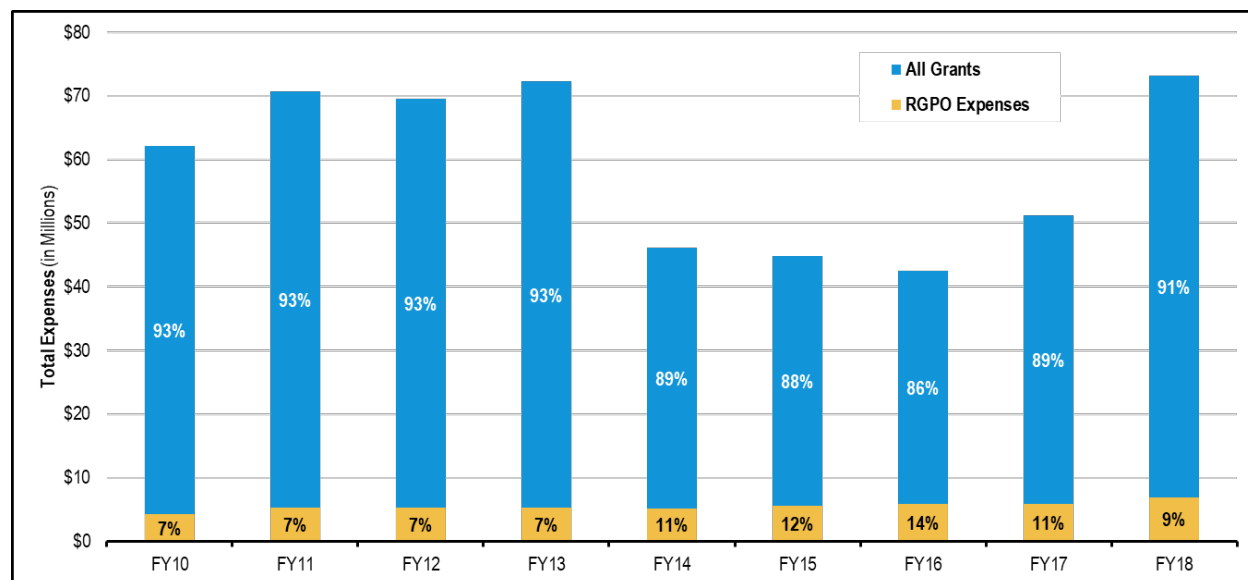
RGPO's SRPs fund the most scientifically meritorious proposals from California-based researchers. As such, a large share of *RGPO's* budget is expended outside of the University in the form of grants to non-UC institutions (such as Stanford, University of Southern California, California State University, and other universities and organizations). The consolidated, historical breakdown of these grant distributions for all SRPs is shown in the figure below; in assessing this data, it is important to note that non-UC institutions are allowed to incur higher indirect costs than UC campuses under the *Tobacco* and *Breast Cancer Programs*.

FIGURE 47: *RGPO* INTERNAL AND EXTERNAL GRANT PAYMENTS (FY10-FY18)[97]
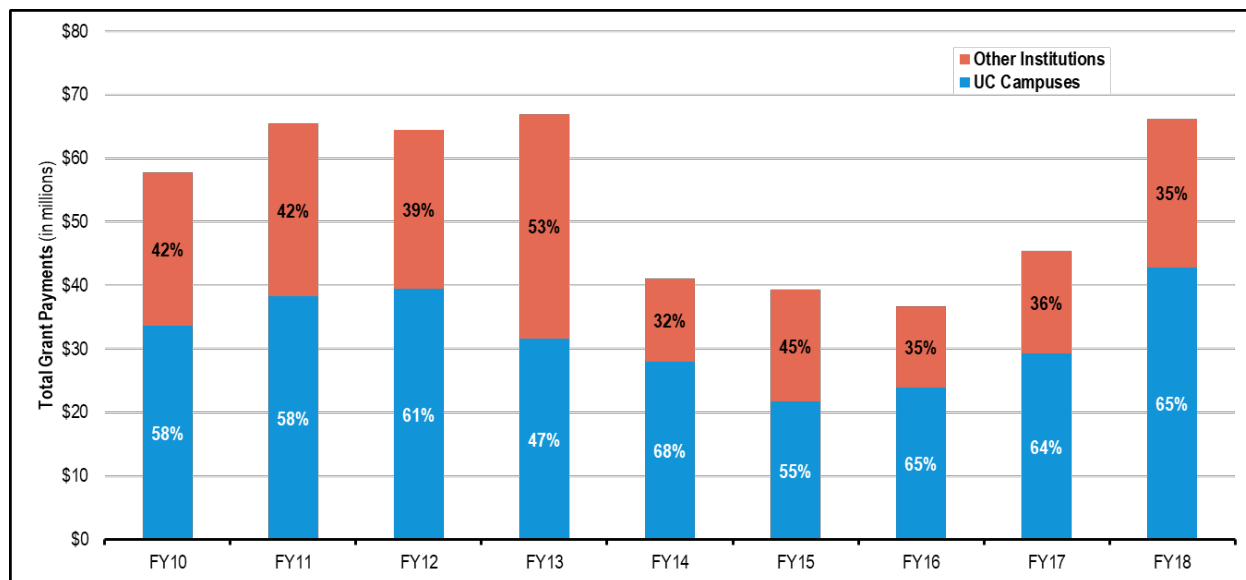
As the figure shows, payments to UC principal investigators have increased significantly in recent years, especially after the passage of Proposition 56. *RGPO* thus remains a source of funding for UC investigators, particularly for those beginning their scholarly careers or pursuing early-stage research.

Projected Expenses

Moving forward, *RGPO's* budget is likely to decline in real terms, despite a large initial increase in FY19. As the *Tobacco Program* spends down its initial revenue from Proposition 56, and major funding sources are reduced by both nominal cuts and the compounded impact of inflation, grants and expenses across *RGPO* are likely to decline.

The largest driver of the FY19 increase in budget was the substantial carryforward spending authority for the *Tobacco Program*. The program budgeted approximately $164 million in expenses for FY19, up from $32 million in actual expenses in FY18. Since the *Tobacco Program* received a total of $92 million in state spending authority in FY18 (primarily from Proposition 56 funds), it has significant carryforward spending authority against the State's FY18 allocation, in addition to new spending authority that it received for FY19. In addition, the *Tobacco Program* continues to make payments against grants that were awarded in earlier years. As a result of these factors, its budget – and that of *RGPO* as a whole – is substantially larger in FY19 than in years past. This initial surge in budget, though, is unlikely to last as the initial increase in Proposition 56 funding is expended.

In addition to the reduction of this substantial carryforward spending authority, ***RGPO's* revenue is likely to decline significantly** in coming years in nominal terms, for two key reasons. These include:
- **The stabilization of Proposition 56 funding levels**, given that the State's initial allocation (FY18) included five quarters of tax revenue (as a result of the April 1, 2017 implementation of the tax), as well as the State's downward revision of sales estimates beginning in FY19; and

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[97] Figures based on analysis of UC Office of the President ledger data for FY10-FY18.

- **Declining tobacco tax revenue**, as detailed elsewhere in this report, due to reduced tobacco usage throughout the state which should continue to diminish the nominal funding available for both the *Tobacco* and *Breast Cancer Programs*.

Thus, although the infusion of funding from the *Tobacco Program* led to a large expansion of *RGPO* grant opportunities beginning in FY18, *RGPO* **is likely to have smaller budgets moving forward unless it identifies new sources of revenue or more efficient operating models**. This is exacerbated by the impact of projected inflation, as is discussed elsewhere within this report. The following figures show the impacts of slowing tobacco sales and projected inflation on the budgets of four major *RGPO* programs – *Breast Cancer*, *HIV/AIDS*, *Tobacco*, and *MRPI* – and are further discussed in the corresponding sections. [98]

FIGURE 48: *BREAST CANCER PROGRAM* FUNDING THROUGH FY28[99]
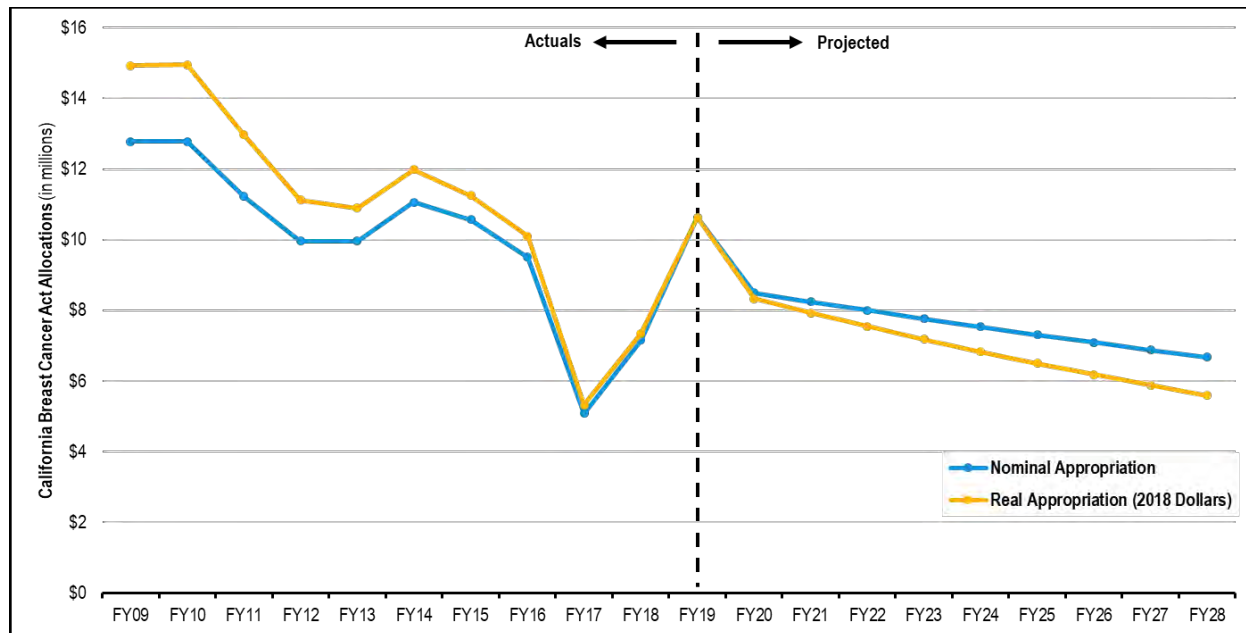
FIGURE 49: *HIV/AIDS PROGRAM* FUNDING THROUGH FY28
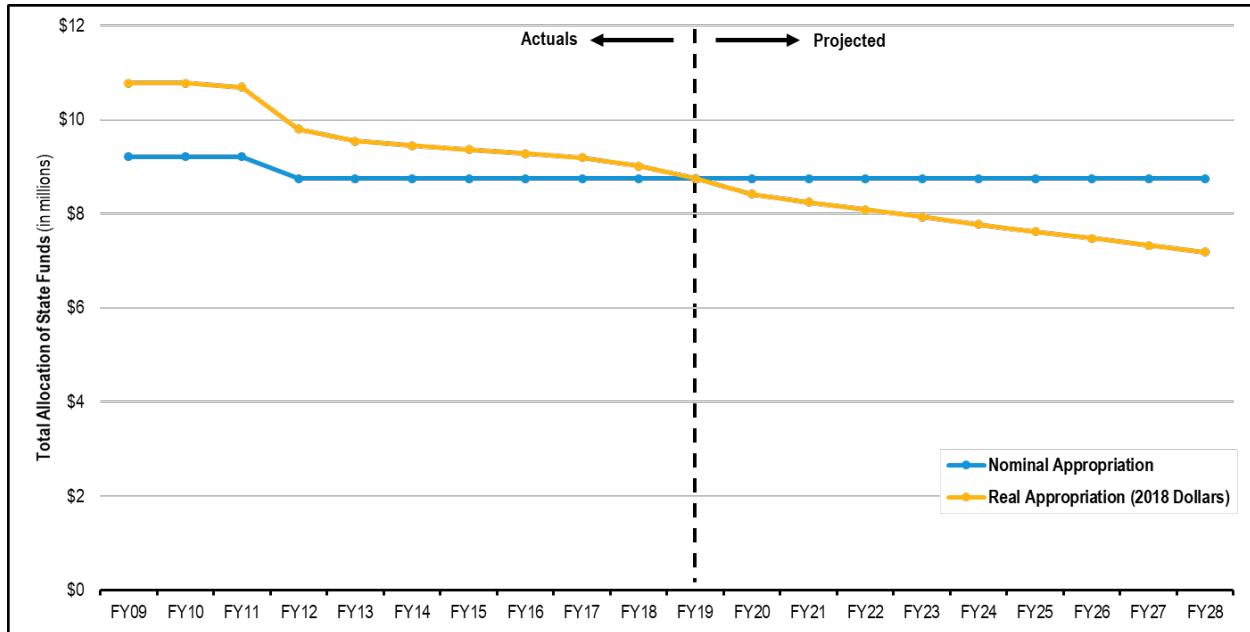
FIGURE 50: *TOBACCO PROGRAM* FUNDING THROUGH FY28
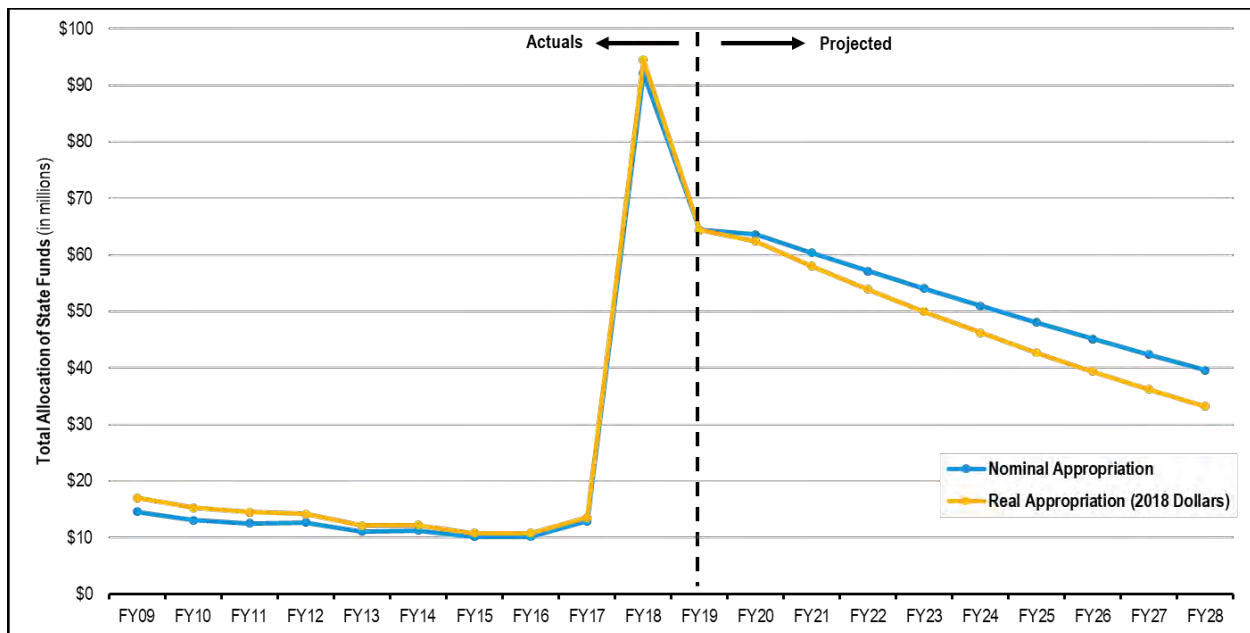
FIGURE 51: *MRPI* FUNDING THROUGH FY28
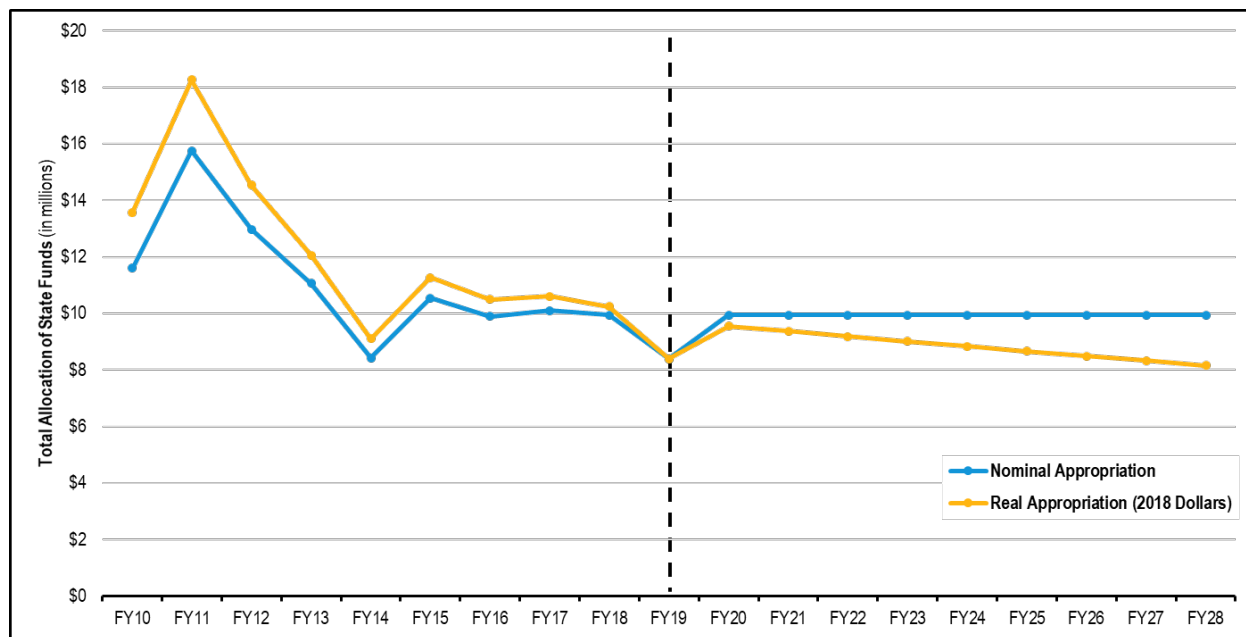
Taken as a whole, the temporary surge in budget for FY19 from Proposition 56 carry-forward spending authority, as well as forward-looking funding projections, **indicate a potential budgetary reduction (in real terms) across *RGPO* of well over 50%** over the coming decade.

Future Funding Opportunities

In addition to its existing programs, numerous stakeholders identified other prospective funding streams that could increase the size of *RGPO* moving forward. These stakeholders identified several distinct categories of potential growth, including:

- **New special taxes**, such as a tax on sugar-sweetened beverages or cannabis;
- **Special State and Federal appropriations**, similar to the recent appropriation for *UC Valley Fever Research*;
- **Existing UC grant programs**, such as the *Innovative Learning Technology Initiative*; and
- **Private or partnership funding**, through investments in existing programs or the creation of new programs through donor-advised funds or bequests.

Many stakeholders identified **the potential for new taxes**, especially on sugar-sweetened beverages, as a key source of potential growth for *RGPO* in the future. An effort is currently underway in California to gather enough signatures for a 2020 ballot initiative on a sugary beverage tax, which would revise the State's constitution and institute a tax modeled on that of Proposition 56. As with that law, a portion of funds would be directed to support research into diseases linked to the drinks. According to the State's Legislative Analyst's Office, the tax would yield between $2 billion and $3 billion in revenue.[100] If 5% of

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[100] Jeff Daniels, "California Prepares for a New War Over Soda Taxes," CNBC, 7 September 2018, https://www.cnbc.com/2018/09/07/sugary-drinks-tax-could-be-on-2020-ballot-in-california.html.

revenue was directed to research, **UC could be in position to administer as much as $150 million in new funding.**

In addition to sugar-sweetened beverages, taxes on cannabis remain a potential source of significant new research funding in the immediate future. Proposition 64, which passed in 2016 alongside Proposition 56, legalized recreational marijuana in California (though not federally) and included $2 million in annual funding for UCSD's Center for Medical Cannabis Research, as discussed elsewhere in this report. In addition to that explicit allocation, the legislation also allocated $10 million in annual funding to "a public university or universities" in California to "research and evaluate" the effect of the law, beginning in FY19.[101] To date, the State has administered this money directly, but conversations with partners in Sacramento have led *RGPO* stakeholders to believe that the State would be amenable to *RGPO's* administration of this funding in the future.

Stakeholders noted that these taxes, as with tobacco taxes, are collectively known among policymakers as "sin taxes." They primarily seek to discourage the underlying behavior being taxed, while also raising funds to prevent usage and alleviate the consequences of that behavior. Other potential taxes that have been suggested by State policymakers in recent years include new taxes on excess usage of electricity or water, or taxes on alcohol consumption.

Stakeholders also pointed to the **potential for the State Legislature (or Congress) to appropriate funds** for special research initiatives, similar to *UC Valley Fever Research*. Indeed, the oldest research program within *RGPO* (the *HIV/AIDS Program)* was launched through such an appropriation in the 1980s. The University has asked the Legislature not to utilize such line item appropriations moving forward in order to preserve maximum flexibility, so it is unlikely that the Legislature will continue to consider such one-off items in the future. This is why the *HIV/AIDS Program* was initially shifted to General Funds. In interviews, both *RGPO* staff and campus leaders pointed to several pressing issues for the State, including drought management, wildfire management, climate change, and gun violence, as potential areas where UC-administered research could provide a valuable public service. In addition, some stakeholders identified aerospace research as a unique area in which California's long-term research footprint has seeded new industries, which may be threatened by continued reductions in federally-funded research; these stakeholders identified potential interest among Legislators in preserving the State's global advantage. However, obtaining additional funds for such research would require either line item appropriations or agreements between the UC system and the State on how to expend additional funds that are not formally earmarked.

Besides research funding, numerous stakeholders identified the potential for *RGPO's* shared service teams to be leveraged by **other existing grant programs across the University**. One frequently cited example is the *Innovative Learning Technology Initiative*, which (among other activities) offers funding to faculty to develop online courses for UC undergraduates. Such a grants program would be fundamentally different from the existing programs within *RGPO*, as it would focus on non-research activities, but could nonetheless realize significant economies of scale by utilizing the infrastructure that *RGPO* has built out over the past decade.

One additional category of potential funding, **investments from private donors or partnerships**, could span any existing or new grants program. This could include funding partnerships with state or federal agencies or private donations from individual donors and foundations. Some stakeholders remarked that *RGPO* could offer philanthropists a unique opportunity to sponsor competitive research grants that are

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[101] "Statewide Initiative Measure – Control, Regulate and Tax Adult Use of Marijuana Act, No. 15-0103," California Office of the Attorney General, p. 46, https://www.oag.ca.gov/system/files/initiatives/pdfs/15-0103%20(Marijuana)_1.pdf.

accessible to some of the world's leading research institutions, without having to invest in duplicative administration within a new private foundation. Without significant fundraising efforts, for example, the *Breast Cancer Program* regularly receives small and medium-sized donations from private individuals and groups who have raised funds to fight breast cancer and are seeking proven organizations to administer them. Some stakeholders believe that an investment in fundraising would enable *RGPO* to raise significant funds from high net worth individuals – in the forms of gifts, bequests, and/or donor-advised funds – and private foundations.[102] As noted elsewhere in this report, *RGPO* previously received significant state agency funding, but this was divested earlier in this decade due to concerns about the size of the UC Office of the President's budget. Allowing *RGPO* to raise funds that aligns with its existing research programs would offer the benefit of helping to offset the funding reductions anticipated in all of the programs (in real and nominal terms) over the coming years.

Accounting Processes

RGPO's numerous programs and sources of funding make it difficult to easily categorize and understand its budget and actual expenses. GBFA has gradually developed its own processes to manage the *RGPO's* increasing complexity, one that includes the use of encumbrances to reflect the multi-year nature of most *RGPO* grants.

Budget vs. Actuals

Difficulties aligning *RGPO*'s multi-year grant programs with the annual budget cycles of the UC Office of the President have led to large variances between budgeted and actual expenses for *RGPO* as a whole in the past, and for its various constituent programs (as detailed separately in those sections). These variances were also driven in part by a prior practice of pegging budgets closely to anticipated allocations of new funding or spending authority (from State appropriations, tax check-off revenue, endowment returns, and lab fee revenue), rather than anticipated expenditures in payments for that specific fiscal year.

As shown in the figure below, SRPs in particular have typically pegged program budgets to new, multi-year State spending authority, rather than expected expenditures. When that spending authority significantly changes, large variances occur.

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[102] In a donor-advised fund, a donor or group of donors establishes a new fund within an existing nonprofit organization, allowing for immediate tax benefits, and then makes recommendations on distributions and allocations over time. RGPO's existing infrastructure could make it difficult to leverage such a fund, but the creation of a subordinate foundation in support of *RGPO* programs could administer these.

FIGURE 52: SRP BUDGET VS. ACTUALS (FY13-FY18)
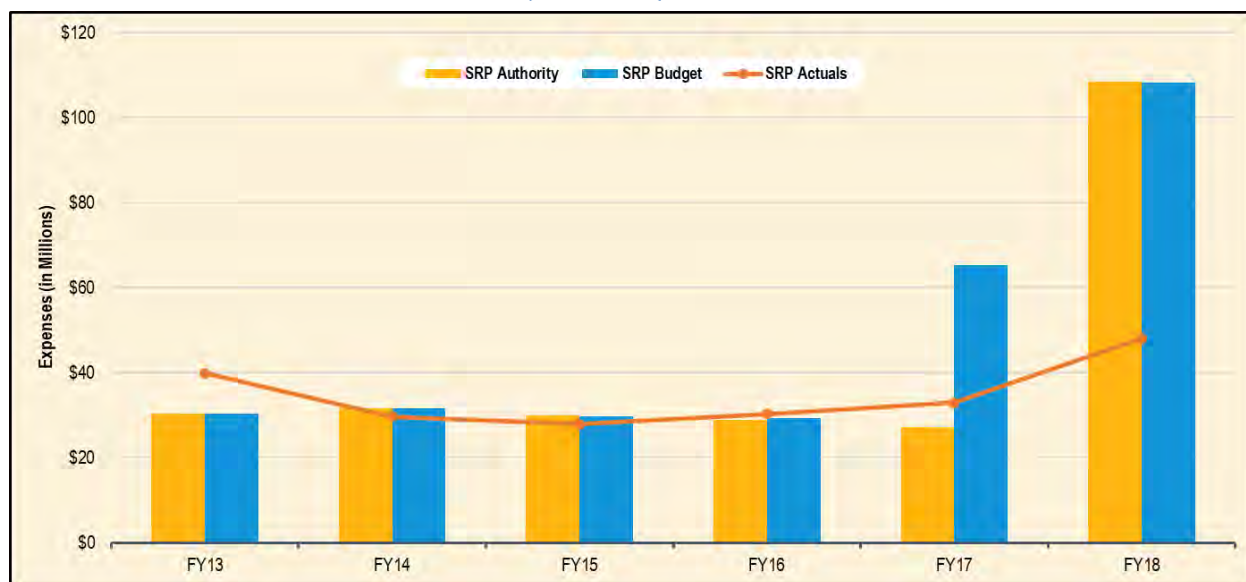
Beginning with FY18, *RGPO* has been instructed by the UC Office of the President Budget & Finance Department to provide projected expenditures – including payments for active awards that were announced in prior fiscal years – which has begun to minimize these variances for some programs. Delays in initial *Tobacco Program* payments in the first year of post-Proposition 56 funding, though, led to *RGPO's* substantial variance across all programs in FY18. The previous year (FY17), *RGPO* had been instructed to include all spending authority, including carry-forwards and projected encumbrances, in the permanent budget submitted to the UC Office of the President, which led to a large variance that year as well. As Proposition 56 funding stabilizes and *RGPO* continues to base annual budgets on expected expenditures, **the significant variances of years past should decrease – as is already apparent for some individual programs**. The table below details the program's budgeted and actual expenditures over the past six years.

TABLE 38: *RGPO* BUDGET VS. ACTUALS (FY13-FY18)

	FY13	FY14	FY15	FY16	FY17	FY18
Budgeted Expenses	$69.4 million	$59.7 million	$42.4 million	$51.7 million	$91.6 million	$134.3 million
Actual Expenses	$73.1 million	$46.5 million	$44.8 million	$42.5 million	$51.0 million	$72.9 million
Variance ($)	$3.7 million	$13.2 million	$2.4 million	$9.2 million	$40.6 million	$61.4 million
Variance (%)	5%	22%	6%	18%	44%	46%

Accounting Taxonomy

RGPO utilizes a relatively complex accounting structure in the financial systems to categorize expenses. There are four key criteria which *RGPO* seeks to track for all expenses, including:

- **Fund source**, referring to source organization or process that has provided the funding, categorized by whether the funding is restricted or designated in how it can be used;
- **Grant program**, referring to the group or program that has been allocated the funding (e.g., *Tobacco, HIV/AIDS, MRPI*);

- **Expense type**, referring to the classification (Administration, Research Evaluation, Research Development & Dissemination, and internal/external Grant Payments) that is mandated for the *Tobacco* and *Breast Cancer Programs* and is utilized within *RGPO* for internal evaluation; and
- **Natural classification**, referring to the expense categories utilized by the UC Office of the President's Budget & Finance Department (e.g., Personnel, Supplies & Expenses, Recharges, Unallocated).

RGPO tracks these four criteria for expenses using combinations of accounting codes in three different fields in the financial systems, including:
- **Fund Codes**, which are typically used to track the source of funding used for expenses (e.g., tuition, grants, gifts);
- **Account Codes**, which are typically used to track the organization or activity that originated the expenses and roll-up in the organizational hierarchy to Departments (e.g., RGPO), Sub-Divisions (e.g., Research & Graduate Studies), and Divisions (e.g., Academic Affairs); and
- **Project Codes**, which are typically used to track special or unique criteria for expenses, like projects or initiatives.

In FY18, *RGPO* utilized 18 unique Account Codes and 39 unique Fund Codes to track expenses by the four criteria listed above (fund source, grant program, expense type, and natural classification), and 69 unique combinations of the two. Since FY10, 368 unique combinations of Account Codes and Fund Codes have been utilized to track *RGPO* expenses. Some Accounts, such as "447665 –TOBACCO RELTD DISEASE PRG (ADMIN)" seem to provide clarity on both the grant program and expense type in isolation, while others do not.

Funds are often quite specific regarding the source of funding. For example, "18109 – TOBACCO REL DIS RES 16-17 (2021)" indicates spending authority granted to the *Tobacco Program* by the State in FY17 with a sunset of FY21. This relatively specific fund, though, does not provide information on the State's source of revenue (e.g., Proposition 99 funds, tax check-off funds), and it can also make it difficult to quickly amalgamate program data.

RGPO also utilizes a large set of Project Codes to track the four key criteria for expenses. In FY18, 74 unique project codes were utilized, each containing one of 13 prefixes that track expenses by expense type. Most expense types have multiple project prefixes.

Collectively, the array of Account Codes, Fund Codes, and Project Codes means that a full analysis of *RGPO* expenses requires manual mapping of hundreds of combinations of these criteria and makes it difficult to understand *RGPO's* actual expenses. The complexity of *RGPO's* accounting structure arose from the two reorganizations over the past decade, internal staff turnover, and changes in guidance from the UC Office of the President. Over the course of this assessment, some stakeholders suggested changing *RGPO's* accounting structure to make it easier to amalgamate and analyze expenses.

ANALYSIS OF FINDINGS

Several topics and inquiries were raised throughout this assessment by stakeholders and leaders from the campuses and the UC Office of the President, including:

- **Administrative Home**: Where *RGPO* should be located administratively within the UC system;
- **Funding Opportunities**: How *RGPO* should determine whether to accept or manage additional funding streams in the future; and
- **Ownership of Programs**: How to determine whether *RGPO* or a campus should manage a grant program in the future.

The following sections offer additional details and analysis of these topics.

Administrative Home

Part of the reason for this assessment, at least initially, was to identify the most appropriate administrative home for *RGPO* in the future. Potential options under consideration included:

- **Option 1 – UC Office of the President**: Continuing to administer *RGPO* within the UC Office of the President;
- **Option 2 – UC Campus(es):** Moving the administration – though not necessarily the physical location – of *RGPO* programs to one or more UC campuses; and
- **Option 3 – Separate UC Location:** Moving the administration of *RGPO* to a separate location or entity within the UC system that is distinct from the UC campuses and the UC Office of the President.

RGPO stakeholders and staff were asked to identify benefits and risks of each of these options, and **they expressed overwhelming support for continuing to administer *RGPO* within the UC Office of the President in Oakland (Option 1).**

Option 1 – UC Office of the President

There is overwhelming support among *RGPO* stakeholders and staff to continue administering the program as part of the UC Office of the President. **Among 59 themes identified across 52 stakeholder interviews, which covered a variety subjects, maintaining this administrative structure was one of the five most common**. Other oft-mentioned themes included general satisfaction with the current performance of *RGPO*, as well as the importance of impartiality for *RGPO's* review processes.

The perception of impartiality for *RGPO* programs emerged as a key theme for campus stakeholders in particular. This group, which consisted of Vice Chancellors for Research (VCRs) and/or their delegates at all ten UC campuses, was more ambivalent about the potential for *RGPO* to be administered by a campus, either in part or in full. Overwhelmingly, though, this group identified impartiality – particularly the perception of it among potential grant applicants – as a vital feature of UC's administration of these programs. Indeed, this was the most commonly identified theme across all campus stakeholder interviews, with 80% of interviewees independently identifying this as a key priority for *RGPO* (without specific prompting). Moreover, there was a general consensus among this group that such impartiality would be most easily achieved and conveyed from a location within the UC Office of the President.

That said, *RGPO* stakeholders also identified concerns and constraints associated with the organization's home within the UC Office of the President. These challenges include:

- **Constraints on hiring** due to periodic hiring freezes and budgetary constraints;

- **Constraints on pursuit of new revenue and partnerships** from the legislature and private sector because of concerns about the impact on the UC Office of the President's budget;
- **Difficulty aligning budget processes**, particularly the multi-year funding cycles for *RGPO* grants and the annual budget cycles of the UC Office of the President, which has occasionally led to large variances between budgeted and actual expenses;
- **General association with the UC Office of the President,** which some staff believe leads to diminished interest in partnership among some potential funders, including the state legislature.

As is apparent throughout this report, some of these concerns are supported by analysis of financial and human resources data, as well as forward-looking revenue projections.

Despite these constraints, *RGPO* staff are very supportive of the current administrative structure of the organization within the UC Office of the President. In a survey of all staff, the most commonly identified theme (68% of all respondents) among all open-response questions referred to the ability of *RGPO* to best serve the State of California from within the UC Office of the President. Similarly, the second-most popular theme attested to the current structure's ability to convey neutrality to applicants and stakeholders. In contrast, **only one staff member (4% of respondents) identified an alternative reporting structure as preferable to the current state.**

Option 2 – UC Campus(es)

Another option for the future administration of *RGPO* entails moving the organization in full or in part to one or more UC campuses. In this scenario, the staff and budget for *RGPO* would sit under a campus, and not under the UC Office of the President. Depending on campus proposals, this would not necessarily require a physical relocation of staff, as a campus could remotely administer existing staff in Oakland, much as the UC Office of the President currently oversees UCPath staff in Riverside.

Several stakeholders identified benefits associated with Option 2, including:
- **Potential improvements in budgeting processes**, as some staff believe that campus-based operations teams would be more familiar with the challenges of aligning multi-year grant budgets with annual forecasts of expenditures;
- **Reducing the size of the UC Office of the President budget**, as *RGPO* constitutes one of the largest uses of funding within the broader organization, and some interviewees believe that reducing the central budget could have positive ramifications for the University as a whole;
- **Aligning *RGPO* scientific staff and campus-based research more closely**, which some respondents believe could help to attract and retain Program Officers;
- **Removal of constraints on talent management and partnership development,** which many interviewees associated with the staffing pressures faced by the UC Office of the President; and
- **Operational savings, leading to more funding utilized for grants**, as some stakeholders expressed hope that *RGPO* programs could realize greater economies of scale within a campus administrative structure.

Despite these potential benefits, **only one respondent expressed a preference for campus administration of *RGPO*** across 52 interviews and 28 staff survey responses. In general, respondents identified a number of considerable risks associated with such a transition, including:
- **The loss of real (or perceived) impartiality**, which many respondents identified as integral for the continued operation of *RGPO*, and the need for costly processes to ensure impartiality moving forward;

- **Staff attrition** in the event of a physical relocation of *RGPO* (though this need not accompany an administrative transition);
- **Systems transitions** that would be concurrent with, or immediately follow, the costly transition to a new grantmaking system (SmartSimple); and
- **Implementation costs** that would be associated with any transition, which could diminish or negate any perceived efficiencies that might arise from campus administration.

Although there is little appetite for moving *RGPO* to a campus, stakeholders and staff did identify certain criteria wherein an individual program should be managed by one or more campuses. Some 39% of staff survey respondents suggested, in response to open-answer questions, that **non-competitive programs should be managed by the campus receiving the funds**, including those programs that were either explicitly or implicitly intended for a single campus by the funding entity. This was the third-most common theme among open-answer responses in the survey. In interviews, 40% of VCRs expressed a belief that **campuses could effectively manage programs if particular and unique expertise is required** for doing so.

One frequently cited example involving both criteria is the UC San Diego Center for Medicinal Cannabis Research (CMCR), which receives a special allocation of revenue from taxes on the sale of medical marijuana. The CMCR offers a unique concentration of globally recognized leaders in the field of medicinal cannabis research and is also designated by legislation as the intended recipient of funding. At the same time, some staff and stakeholders cited this example as one in which a "blended" or hybrid model could be utilized, wherein campus-based program managers can draw upon the services of *RGPO*'s central services (i.e., the C&G and GBFA teams), and potentially limited *RGPO* Program Officer capacity, to help establish and administer a new program. These stakeholders believe that utilizing already-established University capacity within *RGPO* could ultimately ensure that a greater proportion of funding is distributed in the form of grants, rather than spent on internal administration, evaluation, and support.

Option 3 – Separate UC Location

A third option for *RGPO's* administrative placement entails positioning the organization as a distinct entity within the University, separate from both the UC Office of the President and the campuses.

Stakeholders and staff identified several benefits with the option to separate *RGPO* from both the UC Office of the President and campuses, including:
- **Reducing the size of the UC Office of the President budget**, which – as with the option to move *RGPO* to one or more campuses – could have positive ramifications for the University as a whole;
- **Potential improvements in budgeting processes**, as the separation of *RGPO* from the UC Office of the President could allow for more rapid and robust development of multi-year budgeting systems;
- **Removal of constraints on talent management and partnership development,** which many interviewees associated with the political pressure faced by the UC Office of the President; and
- **Increased transparency**, as there is potential for a standalone entity to lend itself more effectively to clear communications and stronger governance with systemwide and statewide stakeholders than a unit within the UC Office of the President would.

While staff and stakeholders acknowledged these potential benefits, **none expressed a preference for *RGPO* to function as a new entity within the University**. Risks identified include:

- **New questions surrounding governance and transparency,** as creating the first stand-alone entity within the University would necessitate a potentially lengthy implementation process with uncertain outcomes for reporting lines and oversight, which could complicate potential benefits;
- **Potential inefficient and/or costly duplication of administrative resources**, as *RGPO* currently benefits from economies of scale for services received from the UC Office of the President; and
- **Implementation costs** that would be associated with any transition, which could diminish or negate any perceived efficiencies that might arise from campus administration.

Funding Opportunities

A key challenge facing *RGPO* is deciding when to accept new funding opportunities from the State or other partners, when to divest opportunities to a campus or multiple campuses, and when to return funds to their source without running a grants program. To evaluate key decision points, it is helpful to build off of three principles that were identified over the course of interviews with *RGPO* staff, leadership, and stakeholders, as well as the staff survey:

- **Cap on Administrative Expenses:** *RGPO* programs may not incur administrative expenses in excess of 5% of total expenditures. This is legally mandated for the *Tobacco* and *Breast Cancer Programs* but is also reflective of grantmaking best practice and should not be exceeded by any *RGPO* program.
- **Value of Competitive Process:** A grant competition that makes awards to the most promising and meritorious proposals through a rigorous review process has multiple benefits, including the assurance of equitable access to funding among all campuses (and external institutions, for SRPs). In addition, a competitive process can provide valuable experience for graduate students and early-career researchers in particular for subsequent grant competitions. Accordingly, competitive processes should be retained for *RGPO* programs when feasible.
- **Importance to the University and State**: The programs offered by *RGPO* are prime examples of the unique opportunities afforded to UC through its scale and cross-campus collaboration. In addition, the SRPs are important symbols – and tangible manifestations – of the service the University provides as the public research arm of the State.

RGPO currently determines when and how to accept funding for a program on a case-by-case basis. To independently test the appropriate cut-off level for funding, it is helpful to examine actual program data from recent years to determine the level at which *RGPO* can comfortably keep administrative costs below 5% of expenditures, while also factoring in interview and survey findings on alternate program management options.

As noted throughout this report in analyses of expenditures and grant payments, some internal costs for grants programs are fixed, and will be incurred regardless of how large a program's overall budget is or how many grants are processed. Understanding the expected amount of fixed administrative costs for any grant program can thus serve as an important first step before estimating how large a program needs to be for *RGPO* to administer it.

By examining recent program expenditures across *RGPO* teams, it is possible to create a trendline that isolates fixed expenses from variable expenses. This method of analysis seeks to identify potential predictive variables, and then create a simple regression equation that predicts administrative costs (on the y-axis) as a function of a predictive variable (on the x-axis). The y-intercept in this equation serves as a baseline level of administrative costs – or the "fixed" costs in this analysis. This figure can then be

divided by 5% – the cap on administrative expenses – to estimate the minimum annual funding for a program.

The requisite data for this analysis was derived from FY15 to FY18 across each of *RGPO*'s four grants teams (*HIV/AIDS, Breast Cancer, Tobacco,* and *UCRI)* to create a relatively larger sample size.[103] Simple linear regressions were then be used to ascertain the relative value of both grant payments and numbers of funded applications as predictors of administrative costs. Ultimately, doing so yielded two equations:

- ***Administrative Costs****= (0.00898 * Grant Payments*) *+ $334,583.70*
- ***Administrative Costs****= ($2,177.39 * Funded Applications) + $390,096.89*

Using two equations allows for a range of estimates to be generated based on two factors (grant payments and funded applications) that were frequently cited by staff as drivers of internal costs. These trendlines are shown in the two figures below, where each observed data point represents a specific *RGPO* grant team (*HIV/AIDS, Breast Cancer, Tobacco,* and *UCRI*) in a specific year, with monetary figures for each adjusted to 2018 dollars.

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[103] This analysis requires three key pieces of data: Actual administrative expenditures in recent years (adjusted for inflation); Actual grant payments in recent years (adjusted for inflation); and the numbers of funded applications.

FIGURE 53: PREDICTED ADMINISTRATIVE EXPENSES (*RGPO* PROGRAMS, FY15-FY18)
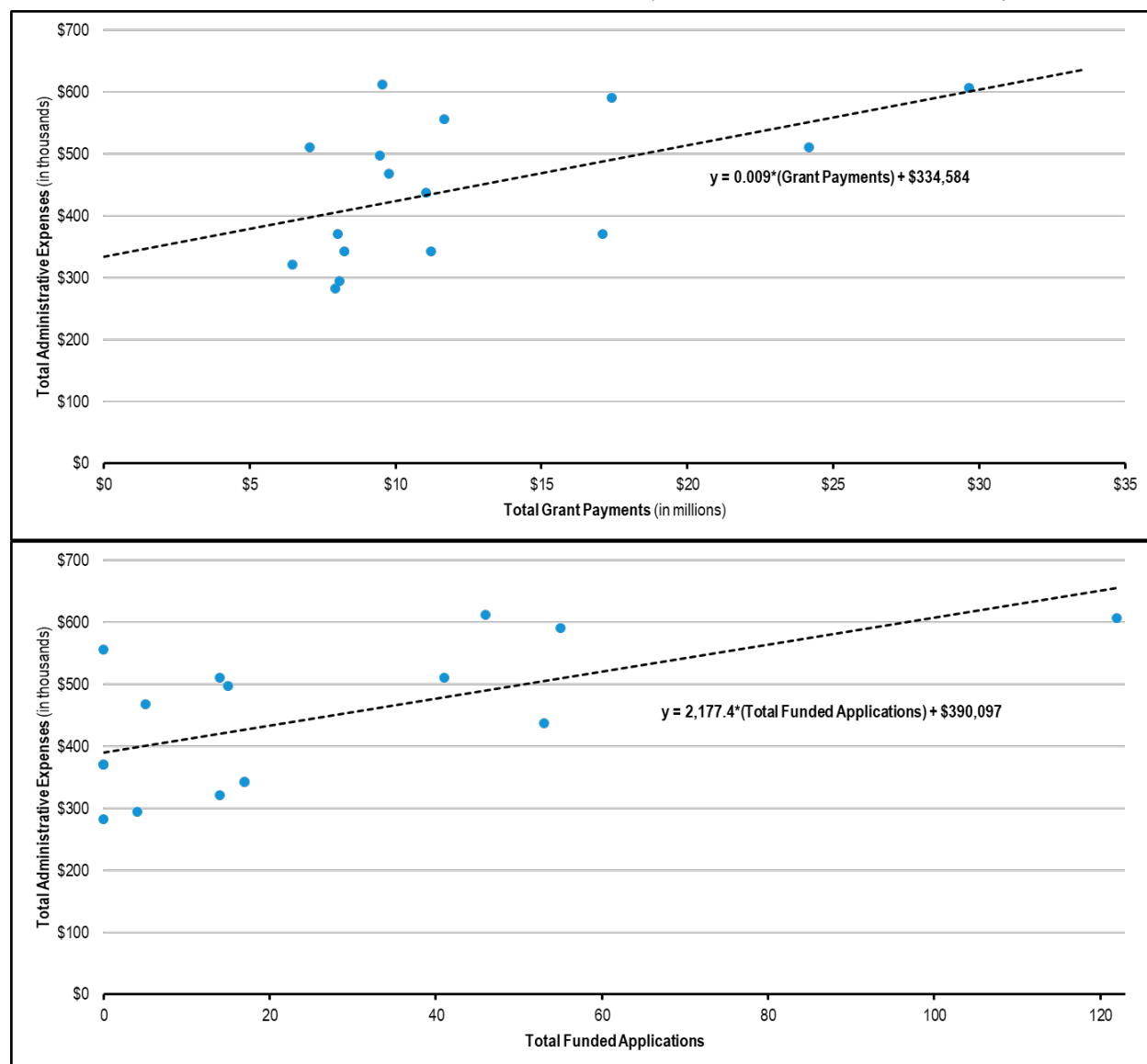
Each regression is relatively significant[104], and the intercept gives a baseline prediction of a program team's administrative expenses in a given year before any new grant is made:

- The first regression equation would predict minimum administrative costs of $335,000 upon the first $50,000 of grant payments; and

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[104] The trendlines provided R² values of 0.38 (for funded applications) and 0.22 (for total grant payments), and p-values of 0.01 (for funded applications) and 0.04 (for total grant payments), indicating relative predictive value for each variable. Since there is some correlation between these variables, and the combined multilinear regression yielded an R² of just 0.38 (nearly the same as for the simple regression for funded applications) and negligible p-values for each, both simple regressions are presented here to allow for a range.

- The second regression equation would predict administrative costs of approximately $392,000 upon the funding of the first award in a cycle.

The range of predictive administrative expenses for each ongoing, repeatable program team implies a range of minimum funding required to operate a program at *RGPO*. If administrative expenses are capped at 5% of a program's total budget, then the implied minimum budget for an *RGPO* program can be deduced by dividing these predicted administrative expenses by 5%, **yielding a range of $6.7 million to $7.8 million in minimum annual funding**.

Based on this analysis, two of the SRPs at *RGPO* may be in medium-term danger of falling below the minimum sizes necessary to ensure ongoing efficient operations. These projections, which are detailed further in the corresponding sections, are illustrated in the figure below.

FIGURE 54: FORECASTED REVENUES FOR CBCA AND *CHRP* (FY20-FY28)
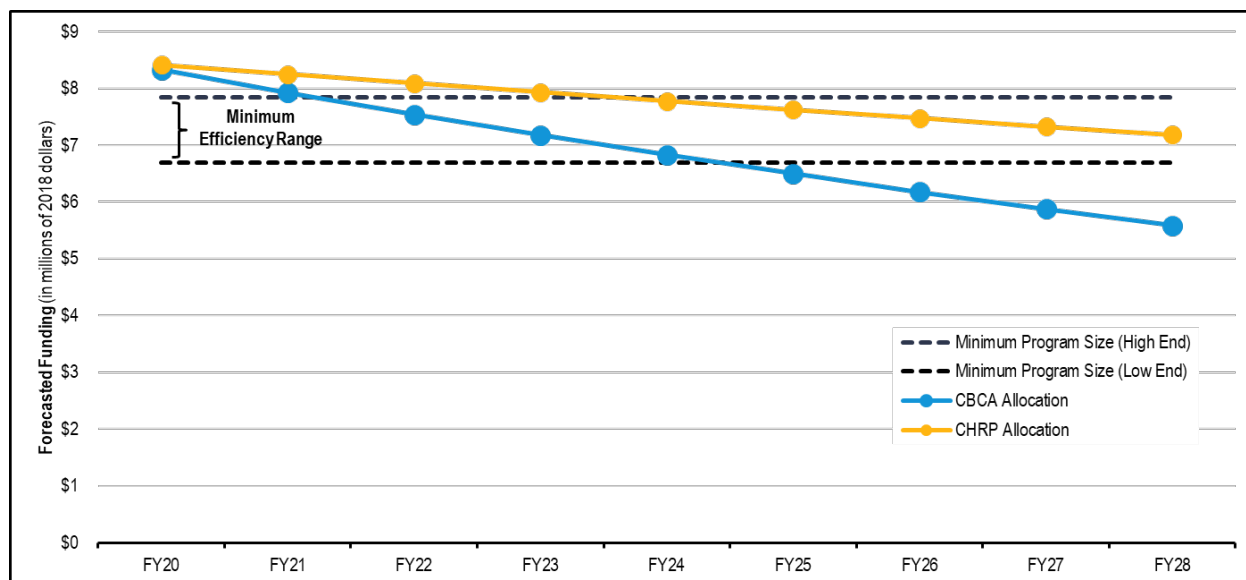
As detailed in this report, the *Breast Cancer Program* funding from the California Breast Cancer Act (CBCA), which assesses a nominal tax on cigarette sales, is projected to fall in both nominal and real terms over the coming decade; as this funding comprises almost all of the *Breast Cancer Program's* budget, it may require alternative funding or operating models to continue through the next decade. The *HIV/AIDS Program*'s budget allocation is currently held flat in nominal terms, and its grantmaking ability will similarly continue declining in real terms because of inflation. For both programs, this analysis indicates a need to identify additional revenue sources, or else to identify alternative operating models that could reduce expenses, over the coming decade.

Ownership of Programs

Although there is little appetite for moving *RGPO* in its entirety to a campus, several stakeholders suggested identifying criteria for when an individual grant program should be managed by one or more campuses rather than *RGPO*.

These individuals expressed a commonly cited belief that programs must be of a certain size to operate efficiently as a competitive grants program within the UC Office of the President, although **there are varying perspectives on the appropriate minimum size of such a program**. As such, a key endeavor of this report is to estimate appropriate target sizes for an individual program to operate efficiently within *RGPO*, as is further detailed in the **Grants Management** section.

Two other criteria were also suggested as important considerations for when a campus should manage an SRP. Some 39% of staff survey respondents suggested, in response to open-answer questions, that **non-competitive programs should be managed directly by the campus or campuses receiving the funds**, including those programs that were either explicitly or implicitly intended for a single campus by the funding entity. As noted above, this was the third most commonly stated theme among open-answer responses in the survey. [105] In interviews, 40% of VCRs also expressed a belief that **campuses could effectively manage programs if particular and unique expertise is required** for doing so.

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[105] Absence of concurrence with this perspective does not indicate opposition to this proposal among survey respondents, as these perspectives were not presented in response to binary questions.

PROPOSAL FOR THE FUTURE STATE

The *Research Grants Program Office* (*RGPO*) and its programs have undergone several transformations over the past decade. Stakeholders from across the UC system clearly expressed an appreciation for the work of *RGPO* and advocated for growth in the future.

Based on the information and suggestions highlighted in this assessment, the Academic Affairs division has, at the direction of Provost Brown, developed the following high-level proposal for the future of *RGPO*. This proposal should be considered a draft and open for revisions. There are undoubtedly many more details that need to be explored, but this proposal was developed to facilitate conversations with members of the community and help the interested campus leadership determine what additional considerations should be discussed.

Terminology

For the sake of clarity and consistency, this proposal uses certain terms and language related to *RGPO* and grants administration, including:

- **Funds**: A sum of money that *RGPO* makes available to an individual or organization through a grant or spends internally on its operations.
- **Grants**: Funds disbursed by *RGPO* to a recipient that the recipient may spend within a defined scope and set of restrictions. *RGPO* grants currently are, but need not in the future, be related to research.
- **Funding Stream**: A fund source provided by a distinct agency, organization, or donor to *RGPO* that is earmarked for grants related to a specific purpose. For example, funds from a tobacco tax and private donations would be separate funding streams even if they are earmarked for similar purposes.

Alternate definitions and clarifications for other terms are identified later in this proposal as well.

Vision & Goals

Based on findings and suggestions from stakeholders, leadership from the UC Office of the President defined the scope of *RGPO*, developed a cohesive and strategic vision for *RGPO*, and identified a series of goals aligned with advancing *RGPO* toward that vision.

Scope of RGPO

RGPO has historically focused only on research-related grants and targeted research fellowships, as implied by its name. While *RGPO* will and should continue to support research grants in the future, *RGPO* should expand its focus to include other forms of grant-making for non-research related activities, so long as the grant-making aligns reasonably well with *RGPO's* internal capabilities and processes. *RGPO* should only accept other funding streams for grants if at least one of the following is true:

- **Grants Competition**: Applicants will have to compete for grant funding through an application or proposal process; and/or
- **Expense Restrictions**: The provider of the funding has placed restrictions on how the funds can be spent.

Examples of non-research-related grants could include funds to develop new academic courses, funds to achieve certain administrative goals, and merit-based scholarships.

Vision Statement

Nearly all of the stakeholders interviewed for the assessment noted the uniqueness and importance of *RGPO* to the State of California and the UC system. *RGPO* offers an opportunity for the University to advance its mission of research, education, and public service by ensuring funds are directed to the most meritorious efforts, efficiently distributing funds, and ensuring compliance with funding restrictions and guidelines. The following vision statement was developed for *RGPO* based on overwhelming feedback and desires from stakeholders across the UC system.

> **Vision Statement:**
>
> *The Research Grants Program Office will be a primary engine that drives research activity for the University of California AND the State of California by attracting significant extramural funds, supporting the University's mission, and advancing the public's interest in research and education through fair, transparent, and compliant grant competitions.*

Goals

This vision is intended to be bold, and to represent the expressed desires of the UC Provost and stakeholders from across the UC system. Leadership from the UC Office of the President also identified five main goals, which are listed in the table below, which will help support and achieve this vision over the next few years. It is critically important that *RGPO* affirm its commitment and strive to achieve these goals in the future, though stakeholders noted that *RGPO* is already meeting several of the goals currently.

TABLE 39: GOALS FOR RGPO

ID	Topic	Goal
1	Cost Effectiveness	*RGPO* must manage grant competitions and distribute grant funding in the most cost effective and efficient way, while meeting the stipulations and intent of the funding source. Stakeholders must perceive that *RGPO* is an appropriate, cost-effective organization to distribute funds.
2	Impartiality	*RGPO* must be impartial and transparent in the manner in which it competes and distributes funds and grants. It is critically important that stakeholders perceive and acknowledge *RGPO* as being an impartial and fair arbiter as well.
3	Adaptability	*RGPO* must be able to quickly adapt in the way it manages funding streams and distributes grants based on addressing needs of stakeholders, changes in the size and type of funding streams, and administrative limitations within the UC system.
4	Staffing Flexibility	*RGPO* must be able to shift staffing assignments relatively easily based on workload changes, urgent needs, and changes in levels of funding between funding streams.
5	External Funding	*RGPO* must be positioned as the UC hub for grant-making and attract significant new funding from the State legislature, State agencies, and organizations outside the University of California to promote research across the UC system and throughout the State and ensure *RGPO* can achieve scale and efficiencies in its grant-making.

The following sections outline recommendations and proposed future frameworks for *RGPO*. All of these recommendations are intended to help *RGPO* achieve the goals and the strategic vision articulated above.

Administration

Several key concerns and questions around *RGPO* were raised in 2017-18 which led to this assessment, including questions around where *RGPO* should be located administratively within the UC system, whether *RGPO* should be allowed to hire, and how to manage the budget for *RGPO*.

Administrative Home

Based on the overwhelming opinion from stakeholders across the UC system, *RGPO* and all of its current funding streams should remain within the UC Office of the President. *RGPO* should not transition to a campus or other location within the UC system. Future suggestions to do so should reference the feedback highlighted in this report.

Budgeting & Hiring

Given that *RGPO* should stay within the UC Office of the President, there is a consideration of whether and how *RGPO* should be allowed to grow its budget and headcount in the future. In the past, *RGPO* has been limited in its ability to grow its headcount because of budgetary pressures within the UC Office of the President. *RGPO* will need to continue adhering to the budgetary and human resources guidance and processes within the UC Office of the President. However, the UC Office of the President commits to working with *RGPO* and Academic Affairs leadership to allow more flexibility to hire additional staff as needed. This does not mean that every staffing request from *RGPO* should be allowed, but this assessment has highlighted the need for more flexibility and hiring capacity.

Funding Stream Development

To meet the goals identified previously, UC must permit *RGPO* to solicit and raise funds from external organizations for grants aligned with their existing funding streams and the University's mission. This would have several benefits:
- *RGPO* and the UC Office of the President would further the research and teaching missions of the UC system by increasing available resources for the faculty and campuses;
- It would allow *RGPO* to ensure a reasonable and efficient size for its current funding streams, especially those that have been decreasing in nominal or real terms (e.g., *CBCRP*, *CHRP*); and
- *RGPO* could grow and scale the grant-making capacity of *RGPO* to achieve further efficiencies and reduce its reliance on State General Funds.

RGPO should solicit funds from and funding partnerships with State and federal agencies, individual donors, and private foundations that raise money for research or other grants (e.g., family foundations, celebrity foundations, donor advised funds, charitable trusts). *RGPO* has previously solicited funds in a limited capacity but was advised against further solicitations due to downward staffing pressures from past reorganizations within the UC Office of the President. These development activities should complement campus fundraising efforts and be carried out in consultation with campuses to avoid conflict. Current fundraising efforts for *CBCRP* are an example of successful development activities that do not conflict with campus fundraising initiatives.

UC should establish the expectation that the leadership and Program Officers within *RGPO* focus on funding stream development in the near term. As *RGPO* solicits additional funds and funding streams, *RGPO* and the UC Office of the President could consider hiring dedicated staff as needed. UC should also establish a distinct **UC Research Foundation** as an independent 501(c)3 organization to receive and house funds raised by external sources. This would ensure that the donations are not co-mingled with the funds at the UC Office of the President and confused for dormant fund balances.

State Appropriations

RGPO has historically received most of its funding from the State of California, and it appears as if the State could potentially add several new funding streams in the future (e.g., cannabis-related research, sugar-sweetened beverages, wildfire-related research). The State of California has also occasionally earmarked funds for specific campuses to perform targeted research – such as funding for the UC Firearm Violence Prevention Research Center at UC Davis and funding for medicinal cannabis research at UC San Diego. Several stakeholders, including several campus Vice Chancellors of Research, noted that the reasons why funds were directed to *RGPO* versus a campus were inconsistent and requested guidance to help determine how such funds should be allocated in the future.

UC should establish clear criteria to help determine when *RGPO* should receive State funds to distribute for grants and when the funds should be allocated directly to a campus. These criteria should be:

- *RGPO* **Appropriations**: UC or the State of California will direct funding to *RGPO* for distribution if ANY of the following are true: (1) the funding could be awarded to any campus or qualified researcher; (2) the exact scope of research is not pre-determined; or (3) the awarding of funding will require independent peer review of applications or proposals.
- **Campus Appropriations**: UC or the State of California will direct funding to a campus for distribution if ALL of the following are true: (1) the funding is intended for only one campus or researcher; (2) the scope of research is clearly articulated; and (3) the awarding of funding does not require independent peer review of applications or proposals.

These criteria are based on feedback from stakeholders across the UC system regarding the relative strengths and capabilities of *RGPO*. *RGPO* is perceived to be generally fair and impartial and has a long history of running peer reviewed competitions that sometimes require further scoping and definition with stakeholders. Though some of the campus research administration units also have these capabilities, stakeholders felt that *RGPO* would be best positioned to administer the funds if any of the stated criteria were true. The following diagram illustrates a decision tree to facilitate future determinations as well.

FIGURE 55: PROPOSED DECISION TREE FOR STATE OF CALIFORNIA GRANT APPROPRIATIONS
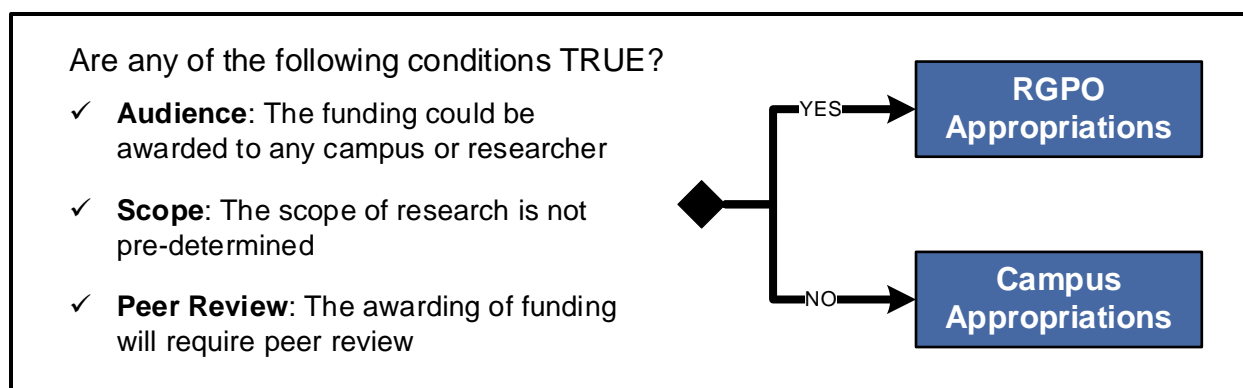
UC would need to work with the State of California during the annual budgeting process to advise on where new funding streams should be allocated. This advice should be consistently provided by all stakeholders, including leaders from the campuses and the UC Office of the President, but staff from the Academic Affairs division, Chief Financial Officer division, and External Relations & Communications division (especially the State Government Relations department) within the UC Office of the President should be primarily responsible for these communications with the State.

Grant Structures

RGPO will continue receiving direct funding streams for grants in the future – including those provided by the State of California, the University of California, and private sources. The guidance provided above will help determine when *RGPO* should receive additional funding streams provided by the State as well. UC should establish clear guidelines for how to structure and organize funding streams for grants in the future, partly to help enforce consistency in terminology and partly to help ensure appropriate management of these funding streams.

Based on feedback from stakeholders, UC should organize funding streams into four key **Grant Structures**, which are listed in the table below. Notably, each Grant Structure aligns with the UC Office of the President's budget classifications for Programs & Initiatives to allow for easy and consistent reporting.

TABLE 40: PROPOSED GRANT STRUCTURES FOR *RGPO*

Structure	Scope	Status	Funding Amount	UCOP Budget Classification
Grant Programs	Statewide OR UC System	Permanent Funding	High Funding	State/Federal Program; Systemwide Program
Grant Initiatives	UC System Only *Unless required by State law*	Temporary Funding	High Funding	Systemwide Initiative
Block Grants	UC System Only *Unless required by State law*	Permanent Funding OR Temporary Funding	Medium Funding	Campus Program
Grant Supplements	UC System Only *Unless required by State law*	Permanent Funding OR Temporary Funding	Low Funding	Campus Program

Additional details for these Grant Structures are included in subsequent sections.

Grant Programs

As is currently done by *RGPO* on a smaller scale, UC could organize one or several funding streams that have the same purpose or goals into a **Grant Program**, which would require a long-term commitment of funds and include a formal peer-reviewed, competitive grants process. Grant Programs should only be established if BOTH of the following criteria are true:
- The funding streams are indefinite or available long-term; and
- The funding is high enough to justify the operational costs of running such a competitive process.

RGPO could offer funding opportunities as part of Grant Programs to researchers or Principal Investigators across the State of California or just within the UC system. Most of the current programs and initiatives, like TRDRP, CBCRP, CHRP, MRPI, LFRP, and CRCC would be classified as Grant Programs. This classification would not change their operations or priorities.

Grant Initiatives

UC could organize one or several funding streams that have similar goals, restrictions, or designations[106] into a **Grant Initiative**, which would be a short term or temporary commitment of funds administered through a peer-reviewed, competitive grants process. Grant Initiatives should only be established if BOTH of the following criteria are true:
- The funding streams are short-term or of indeterminate length; and
- The funding is high enough to justify the operational costs of running such a competitive process.

RGPO could only offer funding opportunities as part of Grant Initiatives to researchers or Principal Investigators within the UC system (unless otherwise required by law). Grant Initiatives could evolve into Grant Programs if the funding streams become more permanent. An example of a current Grant Initiative would be the *Valley Fever Research Funding Opportunity.*

Block Grants

UC could organize one or several funding streams that have the same purpose or goals into a **Block Grant**, which would be a disbursal of funds to a UC campus-based entity (e.g., Multicampus Research Unit, Organized Research Unit, Academic Department) for distribution amongst UC researchers. Block Grants should only be established if ALL criteria of the following are true:
- The funding stream(s) could not be combined with an existing Grant Program or Grant Initiative;
- The cost of operating a competitive grant process for the funding stream(s) would be too high to justify compared to the overall amount of funding;
- The funding stream(s) is large enough to warrant distribution in multiple grants; and
- The campus entity has the subject-matter expertise and research infrastructure to meet the purpose of the funds.

RGPO could operate a brief competition of limited scope to determine which campus entity would be awarded the Block Grant. Block Grants are not currently administered by RGPO but could be a means of minimizing administrative and operational costs for smaller funding streams that could not be organized or combined with other Grant Programs or Grant Initiatives.

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[106] Funding Streams that are undesignated and unrestricted could be combined.

Grant Supplements

UC could organize one or several funding streams that have the same purpose or goals to fund a **Grant Supplement**, which would provide funding as an addendum or supplement to an existing research project led by a Principal Investigator within the UC system, regardless of primary funding source (e.g., NIH, NSF). Grant Supplements should only be established if the amount of funding is so low that a competitive process (through a Grant Program or a Grant Initiative) or redistribution (through a Block Grant) would be too costly.

RGPO could determine which Principal Investigator receives the Grant Supplement based on an evaluation of ongoing research projects within the system. An example of a current Grant Supplement is an award made with the *Type 1 Diabetes Voluntary Tax Check-off Fund*, which at $250,000 was too small for a competitive process and instead was provided to an existing peer-reviewed Type 1 Diabetes research project within the UC system.

Additional Considerations

Though existing programs and initiatives would not necessarily be renamed to align with these Grant Structures, *RGPO* should consider establishing guidelines for naming new Grant Structures as additional funds are procured and tweaking the names of some current programs/initiatives. For example, MRPI has both "program" and "initiative" in its name but would likely be classified as a Grant Program. Though *RGPO* would not necessarily need to rename MRPI, it could do so to align with these classifications

Also, *RGPO* should reevaluate the classification for Grant Structures every few years to ensure that they are classified appropriately. If a Grant Program shrinks in size, for example, then it might need to be reclassified and restructured to be a Block Grant or Grant Supplement or combined with other funding streams in a Grant Program or Grant Initiative to sustain an adequate economy of scale. Similarly, a Grant Supplement that grows in size could be reclassified to a Grant Program or a Grant Initiative.

Organizational Structure

Given these Grant Structures and the goal of making *RGPO* more flexible, UC should establish rules and guidelines for the organizational and team structure within *RGPO*. The following sections outline a series of proposed team structures. These do not necessarily differ significantly from the current organizational structure for *RGPO*, but would allow for more flexibility, sustainability, and clarity within *RGPO* moving forward.

Grants Teams

UC should establish **Grants Teams** dedicated to directing grant-making of funding streams earmarked for a particular topic or focus. Each team may direct one or more Grants Programs, Grants Initiatives, Block Grants, or Grant Supplements, but would not need to be solely focused on one funding stream. Some examples of possible Grants Teams are listed below:

- An **Interdisciplinary Grants Team**[107] could oversee several UC and statewide funding streams of high priority to the system and the State that are broad in scope and often require interdisciplinary and multi-institutional research, including the Laboratory Fees Research Program

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[107] In the past, UCRI focused almost exclusively on grant competitions within the UC system. and developed particular expertise with that strategic focus. This Team would take the place of UCRI and would focus on all grant-making outside the scope of the other Grant Teams, including some that are statewide.

and the Multicampus Research Programs & Initiatives, both of which would be Grant Programs, as well as potential new programs or initiatives addressing climate and wildfire research;

- A **Public Health & Infectious Disease Grants Team** could oversee several UC and statewide funding streams, including the *California HIV/AIDS Research Program* (which would be classified as a Grant Program) and the *Valley Fever Funding Opportunity* (which would be classified as a Grant Initiative);
- A **Tobacco & Cannabis Grants Team** could oversee several UC and statewide funding streams, including the *Tobacco-Related Disease Research Program* (which would be classified as a Grant Program) and potential new funding streams directed for cannabis research; and
- A **Cancer Grants Team** could oversee several UC and statewide funding streams, including the California Breast Cancer Research Program and the Cancer Research Coordinating Committee, both of which would be classified as Grant Programs.

A **Director** should lead each Grants Team, overseeing the Program Officers and other staff supporting the Grant Programs, Grant Initiatives, Block Grants, and Grant Supplements in their purview. Each Director could also be named the Director of Grant Programs managed by their Grants Team as well, especially if there is a legal requirement to do so. For example, the Director of the Cancer Grants Team could also bear the title of Director of the California Breast Cancer Research Program, as is required by State law. This would conform with the title structure for other leaders in the UC system, like the Vice President for Agriculture & Natural Resources, who also bears the titles of Director of Cooperative Extension and Director of the Agricultural Experiment Stations as required by federal law.

There would be several benefits to moving to this team structure, most notably to add flexibility for staff and ensure a sustainable organizational model as funding streams increase and decrease over time. Although one Grant Team could cover one Grant Program – as TRDRP, CHRP, and CBCRP currently do – in the future they could also expand their purview to cover additional Grant Structures. This would better leverage their staff, especially as some Grant Programs diminish in size, and allow *RGPO* to add new Grant Structures from other fund sources.

Budget & Award Management Team

UC should establish a single **Budget & Award Management Team** within *RGPO* responsible for all "shared services" and for the management of grant-making support processes including Pre-Award, Post-Award, Budget, Finance, etc. This team would be established by merging the *Grants, Budget & Finance Administration* (GBFA) and *Contracts & Grants* (C&G) units, and restructuring them into several sub-teams, such as Budget & Finance, Pre-Award and Post-Award.

This would reduce the number of Directors from two to one, and allow for a more stratified reporting structure, with the smaller groups led by Team Leads (e.g., Pre-Award Lead, Budget Lead). Considering the Directors of GBFA and C&G have more than 15 direct reports combined, this will allow the Director to have only three to five direct reports and allow for some opportunities for career advancement within the broader Budget & Award Management Team.

Program Evaluation Team

In a few years, after other changes have been implemented, UC should consider adding a **Program Evaluation Team**. This team could support all of the Grants Teams in evaluating the efficacy and relevant metrics of their funding streams and help with broader communication efforts for *RGPO*. Several *RGPO* staff articulated this as a need for the future. It may be difficult to establish this team in the near

term given competing priorities for funding and staffing, but UC should revisit the proposal to establish this team in the future.

Staff Positions

The proposed structure for Grant Teams and goal to increase flexibility would likely require some additional types of positions and expectations for staff. UC should establish new positions within *RGPO* to allow for more career development opportunities and a less expensive staffing models that can support multiple Grant Structures. This means that all scientific staff, excluding the Directors, could support multiple Grant Structures and Grant Teams as needed and may not be solely dedicated to one Grant Program or Grant Initiative as they typically have been in the past. In addition, UC should consider:

- Regularizing an **Intern** program;
- Establishing tiers for the **Program Officer** position; and
- Evolving the **reporting relationships** between the scientific staff and the Directors.

Interns

RGPO should regularize temporary graduate or post-graduate internships to help support the Grants Teams. *RGPO* would gain access to a temporary, relatively inexpensive, but highly skilled labor pool, and the interns would gain valuable experience given the uniqueness of *RGPO's* role within American higher education. *RGPO* had employed interns in the past but stopped doing so because of limits imposed on FTE growth.

Program Officers

UC should establish clear tiers and a career pathway for Program Officers. This would help align *RGPO* with position levels and practices at other grant-making institutions, meet an expressed need from current staff for more growth opportunities, and add flexibility in terms of staffing assignments. Based on conversations with *RGPO* staff and industry benchmarking, *RGPO* should consider three levels of Program Officers in the future:

- Associate Program Officers;
- Program Officers; and
- Senior Program Officers.

The **Associate Program Officer** position would require understanding of grant-making and research processes and would not require a doctoral degree. *RGPO* should establish the expectation when hiring for this position that staff may transition across Grant Teams and may not be focused on any one topic. This expectation should be formalized in job descriptions as well. This position would offer flexibility in staffing across Grant Teams at a lower salary base, offer a new starting point for younger staff, and mimic trends in the industry. Staff in this position could advance to be Program Officers either by pursuing doctoral degrees or by gaining comparable and adequate work experience.

The **Program Officer** position currently exists and is the most common job title in *RGPO*. The scope of this position should not change in terms of its current responsibilities, and any current Program Officers would retain their existing expectations. Any new employees hired into this position should be expected to be flexibly assigned across Grants Teams and hired for their broad understanding of research and grant-making processes (similar to the Associate Program Officer position). This would be a change compared to prior hiring practices in some programs, where many Program Officers were dedicated to only one program and hired because of specific topical expertise. This change in emphasis in future hiring should

not impact current staff. UC should also continue to recognize the critical benefit that topical expertise amongst Program Officers contributes to targeted and ongoing Grant Programs (e.g., *CHRP*) and ensure that essential expertise is retained as current Program Officers evolve or transition in their roles.

RGPO currently has two staff in the **Senior Program Officer** position. *RGPO* should expand the practice of promoting Program Officers to Senior Program Officers where warranted and reflecting the needs of a Grant Program.

Reporting Relationships

Since Program Officers and Interns could support multiple Grant Teams and funding streams, the scientific staff may report to multiple Directors at any one time. This may create a situation where the staff receive adequate direction and oversight of their day-to-day work from the Directors but lack any one individual supporting their broader professional development and career growth within *RGPO*. To address this potential issue, UC should establish two key roles for the Directors of Grant Teams:

- **Work Management**: The Directors will need to manage and oversee the day-to-day work and assignments of the Program Officers and Interns supporting their specific Grant Structures; and
- **Professional Development**: Each Director should be assigned to coach, mentor, and generally supervise a cohort of Program Officers and Interns to support their professional development and trajectory within *RGPO*.

In many cases, the same Director may be managing an employee's work and professional development, especially if that employee is assigned to only one Grant Team. However, this distinction in responsibilities should help clarify roles for employees who are assigned to multiple Grant Teams throughout a given year.

Grant Management Models

RGPO has historically focused on both directing grant-making, through the program teams, and managing grant-making operations through the shared services teams (*GBFA* and *C&G)*. As *RGPO* attracts additional funds from external sources, new funding streams could be managed in this model as well. However, *RGPO* may need to adapt its operating model to allow for other organizations to leverage its shared services teams but direct grant-making themselves (retaining the responsibility that would normally fall to the Grant Teams). This would be particularly true for two groups:

- **UC Entities**: Other grant-making entities within the UC system that could leverage *RGPO's* shared services apparatus while still internally directing the grant-making; and
- **Non-UC Entities**: External funders who may want to leverage *RGPO's* grant-making infrastructure but continue directing grant-making within their own organizations.

UC should distinguish between the two possible grant management models to help allow for flexibility in *RGPO's* operations, increase its funding opportunities, and continue allowing *RGPO* to scale its shared services teams. These models would be for ***RGPO*-Directed Funds** and **Externally-Directed Funds**.

RGPO-Directed Funds

For all of the Grant Structures mentioned previously in this proposal (e.g., Grant Programs, Grant Initiatives, Block Grants, Grant Supplements), *RGPO* will be responsible for:

- **Grants Teams**: Directing grant-making through a Grants Team led by a Director and supported by Program Officers and Interns; and

- **Shared Services**: Managing the grant operations (e.g., budget, financial transactions, pre-award, post-award) through *the Budget & Award Management Team*.

For example, the *Public Health & Infectious Disease Grants Team* could direct grant-making for the *California HIV/AIDS Research Program* while the *Budget & Award Management Team* would manage the financial, pre-award, and post-award processes for this Grant Program. All of *RGPO's* current programs and initiatives fit this model and would continue to do so in the future.

Externally-Directed Funds

Several stakeholders noted the possibility for *RGPO* to manage grant operations for other UC entities or external organizations. These partner organizations could be responsible for directing and setting the terms for grant-making, in the same way a Grant Team would for *RGPO*-Directed Funds. *RGPO* would be responsible for managing the grant operations (e.g., budget, financial transactions, pre-award, post-award) through the *Budget & Award Management Team*. *RGPO* would recoup the costs of their shared services support by charging the partner organization a fee.

There are several entities within the UC Office of the President and the UC system that offer grants outside the current scope of *RGPO* but could leverage *RGPO's* grant-making services. Examples include:
- Some research-related grants like the graduate student fellowships for the *UC-HBCU Initiative*;
- Other academic grants like the online course development grants for the *Innovative Learning Technology Initiative*; and
- Administrative grants like the Regents Housing Assistance Project.

Many of these entities maintain similar processes to *RGPO* to administer the grants – for example, *ILTI* uses proposalCENTRAL like *RGPO* to manage proposals. Though these organizations should retain control and direction of their grants, they could leverage *RGPO's* shared services to reduce the cost of administering their grants, de-duplicate efforts, and benefit from *RGPO's* expertise and scale.

Some external funders like private foundations may similarly want to pursue this model if they have the in-house expertise and staff to direct grant-making. In the past, concerns have been raised regarding the potential for *RGPO* to support other organizations' grant-making abilities, including:
- **Organizational Risk** since UC and *RGPO* would be accountable for certain activities without full authority over the external entities;
- **Focus on Shared Services** may erode contributions or emphasis on the scientific staff and Program Officers; and
- **Increases in Administrative Costs** to *RGPO* and the external funding streams.

While these concerns are still valid, *RGPO* and UC can mitigate these concerns by clearly establishing policies and guidelines to govern the relationships with external entities and establish expectations.

Accountability

RGPO is currently advised by several oversight and advisory groups. However, *RGPO* and Academic Affairs leadership and many stakeholders from across the UC system suggested establishing additional accountability and governance structures for *RGPO* as a whole and for the individual funding streams. This could include:
- Establishing a recurring **Committee of Visitors**;
- Establishing **oversight committees** and councils for all Grant Programs; and

- Publishing an annual **Accountability Report.**

Committee of Visitors

RGPO could establish an ongoing *Committee of Visitors* that is responsible for:
- Advising *RGPO* leadership on the grant operations, competitions, and processes;
- Providing feedback on the annual Accountability Report; and
- Reviewing every Grant Structure every three years to assess the quality and integrity of operational, technical, managerial matters and comment on how the results generated by awardees have contributed to the attainment of the stated mission and goals.

This would mimic a similar oversight structure employed by the National Science Foundation, but there could be one standing Committee of Visitors for all *RGPO* Grant Programs, Grant Initiatives, Block Grants, and Grant Supplements rather than new Committees convened for each Grant Structure every few years (as NSF does).

The purpose and goal of this Committee would be distinct from the oversight currently provided by existing program-specific councils and committees. The Committee of Visitors would act as an independent review panel for *RGPO* as a whole and provide feedback for the Grant Teams and councils/committees on their grant-making operations. This Committee would not have formal authority to make changes to any Grant Teams or funding streams, as that authority would continue resting with the oversight councils and committees. Rather, the Committee of Visitors would act in an advisory role to help ensure accountability across *RGPO* and all its funding streams.

Accountability Report

RGPO could develop an annual **Accountability Report** for the UC Provost, Vice President of Research and Graduate Studies, Committee of Visitors, and other stakeholders that analyzes the expenses, awards, and operations of all Grant Structures and *RGPO* as a whole. This Report would focus on:
- **Key Performance Indicators**: Highlighting the KPIs for each Grant Structure, including the types of awards, the average award amounts, and the success rates for each competition;
- **Finances**: Illustrating the overall amount of funds awarded and expenses for each Grant Structure, including the amount spent on grants versus internal operations and the percent spent on Administration, Research Development & Dissemination, and Research Evaluation;
- **Expectations**: Forecasting the amount of available funding in upcoming years and highlighting any possible issues or risks facing the Grant Structures; and
- **Outcomes**: Presenting notable outcomes from recent research and activities that were funded by the grants.

This report would complement the existing accountability reports that are mandated by the State for *CBCRP* and *TRDRP*, as this report would offer consistent metrics and analysis across all Grant Structures. This report would also help achieve one of the goals articulated by *RGPO* staff and UC leadership during this assessment – to better explain *RGPO's* finances and activities to stakeholders across the UC system and the State of California. *RGPO* would likely need to rely on other units for support in developing this Accountability Report, including the Budget & Finance and Institutional Research & Academic Planning (IRAP) departments within the UC Office of the President.

Oversight Committees

RGPO should mandate a formal **Oversight Committee** or council for any Grant Program[108] in the future. These committees should be responsible for meeting regularly to:
- Establish funding priorities;
- Review grant proposals and awards; and
- Advise the Grant Team.

Most Grant Programs currently have dedicated oversight committees. *RGPO* would need to add formal oversight committees for any new Grant Programs, and create dedicated committees for MRPI and LFRP, both of which currently rely on guidance from the Council of Vice Chancellors of Research and committees of the Academic Senate. These oversight committees should complement, not supplant, the role of the VCRs and the Academic Senate, and should include representatives of those groups to ensure adequate representation and accountability.

RGPO should ideally establish a set of guidelines for oversight groups to help ensure some consistency in how they operate and are structured. However, these guidelines would need to be suggested, not mandated, as State law governs the oversight committees for some legislatively-mandated Grant Programs.

Financial Accounting

In line with stakeholder suggestions, *RGPO* should work with the Budget and Finance department within the UC Office of the President to establish clear, straightforward standards for its accounting structure (also called its Chart of Accounts) and to allow for more consistent tracking and reporting in the financial systems. This would allow *RGPO* to reduce the administrative effort required to track budgets and report on relevant metrics. The updated accounting structure should allow staff within the UC Office of the President to easily analyze and report on *RGPO's* budgeted and actual expenses by the following:
- **Source of Funds**: *RGPO* should be able to report on expenses based on the source of the funds that were spent (e.g., gifts, general state appropriations, tax check-off funds, Proposition-based funds).
- **Organizational Structure**: *RGPO* should be able to report on expenses incurred by teams (e.g., Grant Teams, Budget & Award Management Team).
- **Grant Structure**: *RGPO* should be able to report on expenses incurred by each Grant Program, Grant Initiative, Block Grant, and Grant Supplement, including illustrating how those expenses were incurred by the team (e.g., Grant Team, Budget & Award Management Team).
- **Allowable Expense Classifications**: *RGPO* should be able to report on incurred expenses that align with the three allowable expense classifications (e.g., Administration, Research Development & Dissemination, Research Evaluation) and grants to both UC and non-UC institutions; and
- **Natural Classification**: *RGPO* should be able to report its expenses based on what the funding was spent on (e.g., personnel costs, travel, honoraria). This is often called the natural classification for expenses.

It is critical for *RGPO* to track its budgeted and actual expenses in a way that is easy to isolate and track all of these categories. Though some of these categories are correlated, they still must be tracked

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[108] Grant Initiatives, Block Grants, and Grant Supplements should not have oversight committees given their temporary nature and/or limited funding.

separately since they are not always in alignment. For example, *RGPO* should be able to report on the expenses for a Grant Program, but:

- That Grant Program may be funded by several sources, some of which could be shared with other Grant Programs or Grant Initiatives (State General Funds, for example);
- Several teams may incur expenses on behalf of a Grant Program (like the Grant Team and the Budget & Award Management Team); and
- The expenses for that Grant Program should be tracked by the three classifications that all funding streams use (e.g., Administration, Research Development & Dissemination, Research Evaluation) and the natural classifications to ensure accountability.

To allow for relatively easy reporting on budgeted and actual expenses, *RGPO* should consider organizing its Chart of Accounts in line with the structure in the table below.

TABLE 41: PROPOSED ACCOUNTING STRUCTURE

Structure	Interpretation	Examples	Description
Fund Code[109]	Source of Funds	Proposition 56 Funds; Tax Check-Off Funds; General Funds	Organizing funds by the actual source of funding would allow for clearer analysis of revenue trends and forecasting.
Account Code[110]	Organizational Structure by Team	Public Health & Infectious Disease Grants Team; Budget & Award Management Team	Grouping accounts by team would allow for reporting to illustrate how much each team has budgeted or spent each year.
Project Code[111]	Combination of: Grant Structure + Expense Classification	*TRDRP* – Administration; *TRDRP* – Research Evaluation; *Valley Fever* – UC Grant; *LFRP* – Research Development & Dissemination	Aligning Project Codes with the Grant Structures (e.g., Grant Programs, Grant Initiatives) and the Expense Classifications (Administration, Research Evaluation, Grants) would allow for more consistent reporting by each category.
Expense Category[112]	Natural Classifications	Personnel; Supplies & Expenses	Fully leveraging existing Expense Categories could eliminate the need for some existing project codes, simplifying overall tracking.

RGPO also currently processes recharges to distribute personnel costs from the shared services teams (*GBFA* and *C&G*) across the various Grant Structures (e.g., *TRDRP*, *CHRP*). While *RGPO* could continue using recharges with this structure, the recharges do require effort to process and track, and can obfuscate the amount of funds spent by each team. This could make it difficult to determine how much a Grant Team spent versus the Budget & Award Management Team on a particular Grant Program. *RGPO* should still have the shared services teams track their time to ensure they are monitoring how much effort and funds are spent on each Grant Structure but should consider eliminating the use of recharges. There are several ways *RGPO* could still track the actual allocation of the shared services teams' effort across the Grant Structures, including:

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[109] Previously, Fund Codes were used to illustrate the proposed uses for the funds (e.g., *TRDRP*) rather than the source of funding.

[110] These Accounts should be organized under the Academic Affairs Division, the Research & Graduate Studies Sub-Division, and the *RGPO* Department within the financial account schema.

[111] This would require five different codes for each Grant Program, Grant Initiative, etc. While this would be a large number of Project Codes, it would still be less than *RGPO* currently manages. This should also allow for relatively easy reporting on both criteria if the naming conventions are standardized.

[112] Expense Classifications are required in the financial systems, as they are associated with the object code for each expense. Previously, Project Codes duplicated this information by listing information on how the funds were spent (e.g., catering). Since Expense Classifications already track this information, Project Codes should not be used.

- **Budget Estimations**: *RGPO* could estimate the amount of time each individual will spend on each Grant Structure and in each expense classification during the annual budgeting process based on prior year actual effort and the proposed grants calendar for the upcoming year;
- **Payroll Corrections**: *RGPO* could retroactively change the Project Codes associated with payroll and benefits expenses based on the actual allocation of effort for each individual (this should be done infrequently to reduce the administrative effort required); and
- **Combination**: *RGPO* could develop a planned allocation for the shared services teams during the budgeting process and then submit any significant corrections in batch jobs intermittently throughout the year.

Changing *RGPO's* accounting structure and eliminating the recharge model should help reduce the administrative effort required to track and report against expenses and should make *RGPO's* expenses more transparent.

Additional Recommendations

UC should also pursue some changes to the way State research funds are distributed to UC campuses and to the funding levels for multicampus research projects. These additional changes include:
- Increasing MRPI funding;
- Investigating the endowment investments for the CRCC;
- Distributing funds as Block Grants to UC campuses; and
- Advocating for full F&A rate recovery by the UC campuses on State grants.

MRPI Funding

UC should increase the amount of MRPI funding to match FY09 funding levels of $15 million. This would require $7.5 million in additional budgeted funds from the UC Office of the President, double the budget for FY19. Reinstating these funds was supported by the Academic Senate, Council of Vice Chancellors, and Portfolio Review Group in 2014, and was supported by several campus stakeholders during this assessment.

CRCC Endowments

UC should investigate the endowment returns and current investment agreement for the Cancer Research Coordinating Committee (CRCC) funds. The UCLA Foundation currently manages the endowments, and the principal for the endowments has been relatively fixed at approximately $40 million since 1970. The payout for CRCC grants has fluctuated between $1.5 million and $2.3 million over the past few years, around 5% of the total principal.

Several stakeholders noted that this arrangement should be reviewed, in part because the endowment's principal should be growing over time as excess investment returns (above the roughly 5% payout amount) are reinvested. Endowments can grow through one of two means – new gifts that are added to the principal and unspent endowment returns that are reinvested with the principal. If the endowments have been relatively stable at $40 million in principal since 1970, and the UCLA Foundation has achieved investment returns higher than the roughly 5% annual payout, then there is a chance that the endowment is not receiving the excess returns to reinvest. Detailed analysis on this topic was outside the scope of this assessment, but UC should investigate this topic further to ensure the CRCC is receiving all the appropriate funds.

Block Grants

UC should work with the State to allow *RGPO* to send funds to the UC campuses as upfront block grants. Currently, UC campuses must submit reimbursement claims for any expenses they incur from the State-funded grant programs every month. Non-UC institutions, like Stanford University and the University of Southern California, receive their funds from *RGPO* upfront and do not need to submit reimbursement claims to the State.

The different processes are due to the fact that UC is a State institution, whereas the non-UC institutions are not required to follow the same rules. However, the disparity requires significantly more work from the UC campuses and gives the non-UC institutions the opportunity to earn returns on the grant funding until they spend down the funds. UC campuses should be treated the same as non-UC institutions to ensure parity and fairness. UC should advocate to change this situation.

Full F&A Rate Recovery

UC should work with the State to allow UC campuses to claim their full Facilities & Administrative (F&A) rates on State grants. Currently, UC campuses are capped at claiming no more than 25% of direct expenses for indirect expenses, though this amount will increase to 40% in the next few years. However, all UC campuses have negotiated F&A rates with the federal government at higher than 50%. Non-UC institutions, in contrast, can claim their full federal F&A rates – including those higher than 40% - on State grants.

The different F&A practices are due to the fact that UC is a State institution, whereas the non-UC institutions are not required to follow the same rules. However, the disparity means that non-UC institutions recoup far more of their indirect costs on State grants than UC campuses are permitted to. UC campuses should be treated the same as non-UC institutions to ensure parity and fairness. UC should advocate to change this situation.

CONCLUSION

RGPO has persevered despite many difficult challenges in recent years. Many stakeholders, especially the external committees and councils that oversee *RGPO's* statewide research programs, felt that *RGPO* offered significant benefits to the State of California, its residents, and the broader global society due to its support for impactful and life-changing research. However, *RGPO* has faced several obstacles and faces an uncertain financial state in the future based on current trends and projections.

Stakeholders feel that the *RGPO* should remain within the UC Office of the President and make strategic changes over time to its structure and operating model to ensure financial and functional sustainability over the long-term. There were several opportunities identified in the course of this assessment that *RGPO* could pursue in the future, including:

- **Developing new funding streams and raising additional funds** for its grant programs and initiatives to advance the research, teaching, and public service missions of the University and to leverage the scale and infrastructure of *RGPO*;
- **Establishing guidelines and standards** to help determine how funding streams should be managed, who should manage them, and when to adapt or change them in the future;
- **Increasing accountability** for *RGPO's* operations across all grant programs and initiatives to ensure its activities meet stakeholder needs, are transparent, and align with best practices;
- **Adding flexibility** to *RGPO's* internal organizational structure and staffing model to ensure it can adapt to changes in its financial situation and to the needs of stakeholders; and
- **Adapting grant-making practices** to ensure grant competitions are drawing an appropriate level and number of applicants and to ensure the grants are large enough to make an impact.

RGPO could pursue some of these opportunities, but is facing several key issues and risks in its current state, including:

- **Diminished Funding**: *RGPO's* historic funding streams are likely to diminish in the future - in real and nominal terms – if they haven't already been diminishing over the past few years. This will require *RGPO* to reassess its expenses and staffing model unless trends change.
- **Inability to Grow**: *RGPO* has received a significant amount of funding for *TRDRP*, which is expected to begin diminishing in the coming years, but *RGPO* was not able to increase its staffing or expenses to handle the influx of new funding.
- **Limited Career Trajectory**: *RGPO* staff do not have a clear career trajectory that would allow them to grow their skillsets and responsibilities over time.
- **Complex Accounting Standards**: *RGPO* has a complex accounting and data structure across several financial and tracking systems which makes reporting and analysis difficult.

At the same time, there are several aspects of *RGPO's* current situation that stakeholders felt benefited the State and the UC system and should be maintained, including:

- The **perception of impartiality** amongst statewide and systemwide stakeholders;
- The **efficient grant-making operations** and capabilities that do not exist elsewhere in the UC system or the State of California; and
- The **subject matter expertise** that it has developed over decades of managing grant programs.

The proposal at the end of this report seeks to address the issues and achieve the opportunities that stakeholders identified during the course of this assessment, while retaining the aspects of *RGPO* that stakeholders felt were important. Ultimately, Provost Brown and President Napolitano will need to decide on the future state for *RGPO*, and whether to implement the changes included in the proposal.

APPENDIX

The following appendices include additional information collected for this assessment or describing the means of data collection for this assessment.

- *Appendix I: Glossary of Terms*
- *Appendix II: Stakeholder Interviews*
- *Appendix III: List of Documents and Data*

Appendix I: Glossary of Terms

Throughout the report, a variety of UC entities, government entities, research programs, and other organizations are referenced as acronyms. The following table outlines these acronyms, the full names of these entities, and a brief description of each.

TABLE 42: GLOSSARY OF TERMS

Acronym	Entity	Description
ACSCOLI	Academic Council Special Committee on Laboratory Issues	UC Academic Senate committee
BASC	Building and Administrative Service Center	UC Office of the President department responsible for management of facilities
CBCA	California Breast Cancer Act	State legislation passed in 1993 to increase cigarette taxes and inspire creative breast cancer research
CBCRP	California Breast Cancer Research Program	Statewide Research Program founded in 1993 and administered by *RGPO*
CCGA	Coordinating Council on Graduate Affairs	UC Academic Senate committee
CFAR	Center for AIDS Research	NIH-funded centers for research on HIV/AIDS treatment and prevention
CHRP	California HIV/AIDS Research Program	Statewide Research Program founded in 1983 and administered by *RGPO*
CMCR	Center for Medicinal Cannabis Research	UC San Diego center dedicated to studying the safety and efficacy of cannabis in medicine
COVCR	Council of Vice Chancellors for Research	UC-wide standing body consisting of the individual campus Vice Chancellors for Research
CRC	Community Research Collaboration Awards	*CBCRP* grant designed to encourage community organizations to work in teams with research scientists
CRCC	Cancer Research Coordinating Committee	UC's oldest internal grant-making program, which supports seed grants and graduate fellowships in innovative cancer research
CRT	Collaborative Research and Training Awards	*LFRP* award for proposals that include at least four UC campuses and either LLNL and/or LANL
C&G	Contracts and Grants	*RGPO* staff team that supports pre-award evaluation and post-award monitoring across all programs
GBFA	Grants Budget and Finance Administration	*RGPO* staff team that oversees general office administration and processes award payments to grantees
IDEA	Innovative, Developmental, & Exploratory Awards	*CBCRP* grant designed to support early-stage exploratory research projects
IUCRP	Industry-University Cooperative Research Program	UC Office of Research initiative that administered the *UC Discovery Grant* but was disbanded in the 2008 reorganization

Acronym	Entity	Description
KPI	Key Performance Indicator	Metrics used to measure effectiveness of grant-making programs
LANL	Los Alamos National Laboratory	U.S. Department of Energy laboratory that partners frequently with UC researchers with support from *RGPO*'s *LFRP*
LFRP	UC National Laboratory Fees Research Program	Competitive program established in *RGPO* in 2008 using funding from management income from LLNL and LANL
LLNL	Lawrence Livermore National Laboratory	U.S. Department of Energy laboratory that partners frequently with UC researchers with support from *RGPO*'s *LFRP*
LOI	Letter of Intent	Document submitted by Principal Investigators describing proposed project, its design, benefit, and impact
MRPI	Multicampus Research Programs & Initiatives	*RGPO* initiative founded in 2008 as a competitive, peer-reviewed research grant program designed to promote multi-campus collaboration
MRU	Multicampus Research Units	UC units that receive non-competitive funding to support systemwide, interdisciplinary research partnerships across UC campuses
NIH	National Institutes of Health	U.S. Federal Agency and leading medical research center
NSF	National Science Foundation	U.S. Federal Agency that supports research in non-medical fields of science and engineering
PAAC	Program Administration and Assessment Center	Early *RGPO* administrative unit that provided central administrative services; consolidated into new C&G unit in 2011
PARC	Proposal Application and Review Center	Early *RGPO* administrative unit that provided central administrative services; consolidated into new C&G unit in 2011
PDA	Program-Directed Awards	Grants given as part of *CRCBP*'s Program-Directed and Policy Initiatives; fund projects identified by *CBCRP* Steering Committee
PrEP	Pre-Exposure Prophylaxis	Drug designed to reduce the risk of HIV infection
RFP	Request for Proposals	Calls for applications that are put out by *RGPO* program teams for their competitive awards
RGS	Research and Graduate Studies	UC Office of the President subdivision under the Division of Academic Affairs
RFQ	Request for Qualifications	Open calls designed to identify the most qualified researchers to conduct studies with specific, pre-planned research questions
RGPO	Research Grants Program Office	One of five units within the UC Office of the President Division of Academic Affairs' Department of Research and Graduate Studies
SRP	Statewide Research Program	Grant-making programs that award UC and non-UC researchers and are administered by *RGPO*
TEROC	Tobacco Education and Research Oversight Committee	California Department of Public Health advisory committee that oversees the use of Proposition 99 and Proposition 56 revenues distributed across the State
TRDRP	Tobacco-Related Disease Research Program	Statewide Research Program founded in 1988 and administered by *RGPO*
UCORP	University Committee on Research Policy	UC Academic Senate committee
UCPB	University Committee on Planning and Budget	UC Academic Senate committee
UCRI	UC Research Initiatives	*RGPO* unit that administers a series of internal, UC-wide research programs

Acronym	Entity	Description
WPRP	Welfare Policy Research Project	UC Office of Research initiative created through special State appropriations and disbanded in the 2008 reorganization

Appendix II: Stakeholder Interviews

In addition to the various data sources collected for this assessment, a variety of *RGPO* stakeholders were interviewed. These interviews offered first-hand insights on *RGPO* and perceptions of its strengths, areas for development, opportunities, and challenges. A standardized interview protocol was developed to ensure a fair process and consistent data collection.

Interviews, most of which ranged from 30-60 minutes, were conducted in-person when possible or over the phone. With the exception of one interview, all stakeholders were interviewed individually. [113] Two interviewers completed most interviews, with one leading and another typing notes. All stakeholders were promised confidentiality, and no direct quotes were attributed to individuals either verbally or in the body of this report.

Interview Questions

The following list of questions was provided to each interviewee in advance. These questions were used to guide the conversation and were intentionally framed to avoid binary "yes or no" or "true or false" responses. Interviewers did, however, frequently pose specific follow-up questions or request clarification in response to stakeholder comments.

Context
1. **Role**: Please describe your role and responsibilities at *RGPO*. How has your role evolved over the past few years?
2. **Purpose**: What are the primary goals or purposes of *RGPO*?
3. **Structure**: Please describe *RGPO's* structures from your perspective. How have they evolved over the past few years?
4. **Partners**: Who do you see as the primary stakeholders and partners of *RGPO*? How does *RGPO* engage and collaborate with these groups?

Perspective
5. **Areas of Strength**: What do you think is working well with *RGPO* and why?
6. **Areas of Development**: What do you think could be improved within *RGPO* and why?
7. **Opportunities**: What opportunities exist for *RGPO* to better support UC's mission in the future? This can include services or activities it is not currently pursuing.
8. **Challenges**: What challenges does *RGPO* face currently, or might it face in the future that threaten its ability to support UC's mission?

Additional Thoughts
9. **Success Criteria**: How does/should *RGPO* measure its performance?
10. **Comparisons**: Are there any peers or benchmark institutions we should examine?
11. **Final Thoughts**: What else do you think we should know about *RGPO*?

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[113] At the request of one campus stakeholder, an additional individual (the stakeholder's direct report) was included in the interview.

List of Interviews

In total, 51 stakeholders were interviewed during the course of this assessment, including 17 current *RGPO* staff, 8 former and current Committee Chairs, 10 UC Office of the President stakeholders, 15 campus VCRs and/or their delegates from all 10 UC campuses, and an Academic Senate representative. The tables below list all staff and stakeholders who were interviewed for this assessment, and their titles.

TABLE 43: *RGPO* STAFF

Name	Job Title	Affiliation
Bart Aoki	Executive Director	*RGPO*
Julia Arno	Director, C&G	*RGPO*
Nancy Chamberlain	Pre-Award Team Lead	*RGPO*
Amy Gee	Pre-Award Team Lead	*RGPO*
Susan Witt	Post-Award Team Lead	*RGPO*
Rosemary Chengson	Director, GBFA	*RGPO*
Nina Lwai	Lead Budget Analyst	*RGPO*
Harvey Wong	Senior Budget Analyst	*RGPO*
Marion H. Kavanaugh-Lynch	Director, CBCRP	*RGPO*
Katherine McKenzie	Clinical & Prevention Sciences Program Officer	*RGPO*
Senaida Poole	Community Initiatives & Public Health Sciences Program Officer	*RGPO*
Ginny Delaney	Biomedical Sciences Program Officer	*RGPO*
Uta Grieshammer	Biomedical Sciences Program Officer	*RGPO*
Tyler Martz	Health Policy & Health Services Research Program Officer	*RGPO*
Laura Packel	Clinical Sciences Program Officer	*RGPO*
Kathleen Erwin	Director, UCRI	*RGPO*
Christopher Spitzer	UCRI Program Officer	*RGPO*

TABLE 44: *RGPO* COMMITTEE CHAIRS

Name	Job Title	Affiliation
Edith D. Balbach	Chair, *TRDRP* Scientific Advisory Committee	Tufts University
Terry L. Cunningham	*CHRP* Advisory Council	Retired
Judson King	Chair, *MRPI* Portfolio Review Committee	UC Berkeley (retired)
Ana Navarro	Vice Chair, Breast Cancer Research Council	UC San Diego
Michael Ong	Chair, Tobacco Education & Research Oversight Committee	UCLA
Neil Schore	Immediate Past Chair and Former Executive Secretary, *CRCC*	UC Davis
Joan Venticinque	Chair, Breast Cancer Research Council	Cancer Patient Advocacy Alliance
Michael Witherell	Past Chair, *MRPI* Portfolio Review Committee	LBNL

TABLE 45: UC OFFICE OF THE PRESIDENT STAKEHOLDERS

Name	Job Title	Affiliation
Art Ellis	Vice President, Research & Graduate Studies	UC Office of the President
Kimberly Budil	Vice President, Office of the National Laboratories	UC Office of the President
Dave Baltaxe	Executive Director, Budget & Finance	UC Office of the President
Lourdes DeMattos	Research Policy Manager, Research Policy Analysis & Coordination	UC Office of the President
David Alcocer	Associate Vice President, Budget Analysis & Planning	UC Office of the President
Eva Goode	Director, Budget & Finance	UC Office of the President

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Name	Job Title	Affiliation
Brad Niess	Director, Business Resource Center	UC Office of the President
Ellen Auriti	Senior Counsel - Educational Affairs, Office of General Counsel	UC Office of the President
Barbara Heilmann	Events Services Manager, Building & Administrative Service Center	UC Office of the President
George Lemp	Former Director, *CHRP*	UC Office of the President (retired)

TABLE 46: CAMPUS STAKEHOLDERS

Name	Job Title	Affiliation
Vice Chancellors for Research (or delegates)		
Scott Brandt	Vice Chancellor for Research	UC Santa Cruz
Kate Aja	Assistant Vice Chancellor for Research	UC Santa Cruz
Sandra Brown	Vice Chancellor for Research	UC San Diego
Lindsey Criswell	Vice Chancellor for Research	UC San Francisco
Cora Diaz	Director, Sponsored Projects	UC Santa Barbara
George Hopwood	Associate Director, Sponsored Projects	UC Santa Barbara
Pramod Khargonekar	Vice Chancellor for Research	UC Irvine
Chris Yetter	Chief of Staff, Office of the Vice Chancellor for Research	UC Berkeley
Prasant Mohapatra	Vice Chancellor for Research	UC Davis
Cindy Kiel	Executive Associate Vice Chancellor for Research	UC Davis
Michael Pazzani	Vice Chancellor for Research & Economic Development	UC Riverside
Samuel Traina	Vice Chancellor for Research & Economic Development	UC Merced
Patti Manheim	Director, Office of Contract and Grant Administration	UCLA
Kathy Kawamura	Assistant Director, Office of Contract and Grant Administration	UCLA
Cindy Gilbert	Assistant Director, Office of Contract and Grant Administration	UCLA
Other Stakeholders		
Dan Hare	President's Research Catalyst Review Panel; Past Chair, Academic Council	UC Riverside (Academic Senate)

Interview Themes

Interviewers extracted the most prominent topics of discussion, or themes, from the interviews within each stakeholder group. The top themes for each stakeholder group are summarized in the figures below.

FIGURE 56: TOP INTERVIEW THEMES FROM *RGPO* STAFF

Theme	Mentioned
RGPO is effective and efficient in its stewardship of research funds	76%
RGPO can take on additional programs	76%
Certain UC Office of the President administrative processes present hurdles to RGPO	76%
RGPO is short-staffed	71%
RGPO's matrixed structure increases efficiency	65%
RGPO's peer reviews are fair, transparent, and rigorous	53%
RGPO needs a well-designed career ladder for Program Officers	47%
RGPO should remain in the UC Office of the President	47%
Funding for some programs is at risk	41%
RGPO should add a communications and evaluation function	41%

Commonality of Themes
■ Theme Mentioned ■ Theme Not Mentioned

FIGURE 57: TOP INTERVIEW THEMES FROM *RGPO* COMMITTEE CHAIRS

Theme	Mentioned
RGPO is effective and efficient in its stewardship of research funds	88%
RGPO's peer reviews are fair, transparent, and rigorous	63%
RGPO should remain in the UC Office of the President	63%
The perception of impartiality is important for RGPO	63%
RGPO's matrixed structure increases efficiency	50%
RGPO can take on additional programs	38%
RGPO is short-staffed	38%
The RGPO budget is confusing to the Regents and State auditors	38%
Funding for some programs is at risk	25%
RGPO should add a communications and evaluation function	25%

Commonality of Themes
■ Theme Mentioned ■ Theme Not Mentioned

FIGURE 58: TOP INTERVIEW THEMES FROM UC OFFICE OF THE PRESIDENT STAKEHOLDERS

Theme	Theme Mentioned
The perception of impartiality is important for RGPO	70%
RGPO should remain in the UC Office of the President	70%
RGPO is effective and efficient in its stewardship of research funds	70%
RGPO can take on additional programs	40%
RGPO's peer reviews are fair, transparent, and rigorous	40%
Certain UC Office of the President administrative processes present hurdles to RGPO	40%
RGPO should pay for its share of UC Office of the President services	30%
The RGPO budget is confusing to the Regents and State auditors	20%
RGPO is short-staffed	20%
Funding for some programs is at risk	20%

Commonality of Themes
■ Theme Mentioned ■ Theme Not Mentioned

FIGURE 59: TOP INTERVIEW THEMES FROM CAMPUS VCRS

Theme	Theme Mentioned
The perception of impartiality is important for RGPO	80%
Campuses have some existing capacity to manage certain programs	80%
Guidelines should determine when RGPO takes on programs	70%
RGPO is effective and efficient in its stewardship of research funds	60%
Success rate is an important KPI	60%
Award size is an important KPI	40%
RGPO can take on additional programs	40%
Campuses could manage programs if particular and unique expertise is required	40%
RGPO could take steps to ease research administration for campuses	40%
Funding for some programs is at risk	40%

Commonality of Themes
■ Theme Mentioned ■ Theme Not Mentioned

Appendix III: List of Documents and Data

111 documents and datasets were analyzed in support of this assessment report. These datasets were provided by *RGPO* and UC Office of the President staff and the various interviewed stakeholders. The tables below list the 111 documents and datasets that were received as part of this assessment.

TABLE 47: DOCUMENTS AND DATASETS RECEIVED FOR *RGPO*

#	Title	Description	Year	Format
1	ARI *CHRP* Letter to President Napolitano	May 16, 2018 letter to President Napolitano from the Executive Committee of the AIDS Research Institute at UCSF urging the continued funding of *CHRP*	2018	PDF
2	*CBCRP* Council Chair Letter to President Napolitano	March 26, 2018 letter to President Napolitano from the Chair of the *CBCRP* Council that responds to the Huron report, states *CBCRP's* preference to stay in OP or move to a 501(c)3 based on concerns about program overhead, shares *CBCRP's* history, and shares critical language from *CBCRP's* enabling legislation	2018	PDF
3	TEROC Chair Letter to Regent Kieffer	February 12, 2018 letter to Regent George Kieffer from the TEROC Chair that responds to the Huron report, states TEROC's opposition to moving *RGPO* based on concerns about program overhead, and shares background on TEROC and *TRDRP*	2018	PDF
4	Optimizing Public Benefits from State-Funded Research	March 2018 white paper written by the California Senate Office of Research identifying nine key principles to consider when designing, assessing, or reconfiguring state-funded research programs to optimize public benefits and the basic components necessary to achieve optimal research program performance. *RGPO* is mentioned on pages 8 and 9 as an effective organization worthy of additional funding.	2018	PDF
5	UCRI President's Research *Catalyst* Awards Overview	2018 overview of the impacts of *Catalyst* Award funding, including catalyzing innovative scholarship with real-world benefit, training for the next generation of problem-solvers, public engagement in the UC research mission, and faculty collaboration across campuses and mentorship across career stages	2018	PDF
6	*CHRP* Advisory Council Chair Letter to President Napolitano	April 11, 2018 letter to President Napolitano from the *CHRP* Advisory Council Chair that responds to the Huron report, states *CHRP's* preference to stay in OP or move to a 501(c)3, shares *CHRP's* history, lists its major accomplishments, and lists *CHRP*-funded programs	2018	DOC
15	Budget Reporting Policy Update	2000 email and amendments to the Special Research Programs budget reporting policy that expands the evaluation and research support activities categories	2000	PDF
16	Budget Reporting Policy	Document outlining CA statutes and appropriations policies that direct how *RGPO* administers state-funded programs and providing definitions and examples for	2000	DOC

#	Title	Description	Year	Format
		budget categories that include grant and contract awards, administrative expenses, research evaluation expenses, and research development and dissemination		
17	Definitions for Administrative Costs	Document outlining the history of changes in administrative cost definitions as well as current definitions of and examples for budget categories that include grant and contract awards, administrative costs, evaluation costs, and research support and activity costs	2016	DOC
18	Monthly Effort Reporting Template	Monthly effort reporting template outlining and providing examples of budget categories including administrative costs, evaluation costs, and research support and activity costs, and research support	2018	XLS
19	CBCPI Chart	Chart outlining California Breast Cancer Prevention Initiatives that include 15 topics across 4 areas: Identification & Elimination of Environmental Causes, Identification & Elimination of Disparities/Inequalities in the Burden of Breast Cancer in California, Population-Level Interventions on Known or Suspected Breast Cancer Risk Factors and Protective Measures, Targeted Intervention for High-Risk Individuals Including New Methods for Identifying or Assessing Risk	N/A	PDF
20	*CRCC* Strategic Mission	2018 document outlining *CRCC* including information on UC's commitment to the fight against cancer, systemwide administration and governance, and creating and sustaining UC excellence in cancer research	2018	PDF
21	*LFRP* Strategic Mission	2018 document outlining *LFRP* including information on mission-driven research, systemwide leadership and administration, project portfolio, and future outlook	2018	PDF
22	*MRPI* Strategic Mission	2018 document outlining *MRPI* including information on strategic investments, systemwide leadership and administration, research portfolio, and opportunities and challenges	2018	PDF
23	*CHRP* Funding Agreement	FY14 budget update on the state of *CHRP* funding including details on the handshake agreement between *CHRP* and the State	2014	MSG
24	*CRCC* FY18 Budget to Actuals	FY18 *CRCC* budget to actuals report	2018	XLS
25	*TRDRP* FY18 Budget to Actuals	FY18 *TRDRP* budget to actuals report	2018	XLS
26	Lab Fees FY18 Budget to Actuals	FY18 Lab Fees budget to actuals report	2018	XLS
27	*MRPI* FY18 Budget to Actuals	FY18 *MRPI* budget to actuals report	2018	XLS
28	*TRDRP* 2017 Reviewer Survey	Reviewer survey results from 2017 *TRDRP* award cycle	2017	XLS
29	*TRDRP* 2018A Reviewer Survey	Reviewer survey results from 2018A *TRDRP* award cycle	2018	XLS

#	Title	Description	Year	Format
30	*TRDRP* 2018B Reviewer Survey	Reviewer survey results from 2018B *TRDRP* award cycle	2018	XLS
31	FY09-18 *RGPO* and *UCDC* Expenses and Revenues	Revenues and expenses for the *RGPO* FY09-18	2018	XLS
32	Object Code List	Object code list that accompanies FY09-18 *RGPO* and *UCDC* Expenses and Revenues	2018	XLS
33	FY11-18 Event Summary	OP Event Services event list including start date and department number for FY11-18	2018	XLS
34	2017 *CRCC* Reviewer Survey	Reviewer survey results from 2017 *CRCC* award cycle	2017	XLS
35	2018 *CRCC* Reviewer Survey	Reviewer survey results from 2018 *CRCC* award cycle	2018	XLS
36	Firearm Violence Research Center Legislative Report	2017 Legislative Report from UC to CA Legislature regarding the Firearm Violence Research Center that includes an executive summary, a description of the center and its history, programming, sustainability efforts, financial reports, and the programs future outlook	2017	PDF
37	Application Data	2015-2018 document that provides awards and not-funded applications by program, budget request of awarded and not-funded applications, award type composition of awarded and not-funded applications, and applications by institution and funding status	2018	PDF
38	Reviewer Data	FY18 document that provides data by program including unique reviewers participating in final reviews, reviewers by program, reviewers by meeting, and reviewers by program and location	2018	PDF
39	*RGPO* Overview Deck	2018 deck providing a summary of the *RGPO's* purpose, programs and funding streams, operations and services, organizational structure, grant program cycle, stewardship responsibilities, Prop 56 administrative cost exclusions, and program management models	2018	PPT
40	SRI Chart	Chart outlining 9 special research initiatives related to breast cancer research, the environment, and disparities and the projects related to them	2017	PDF
41	SRP Budget Policy Definitions	Definitions of expenses in the functional category's evaluation and research support activities	N/A	PDF
42	Financial Analyst 3 Position Description	Position description for a Financial Analyst 3	2017	PDF
43	Lead Budget and Systems Analyst Position Description	Position description for a Lead Budget and Systems Analyst	2017	PDF
44	Post-Award Team Lead Position Description	Position description for a Post-Award Team Lead	2011	PDF
45	Program Specialist Position Description	Position description for a Program Specialist	2017	PDF
46	Pre-Award Analyst Position Description	Position description for a Pre-Award Analyst	2018	PDF

#	Title	Description	Year	Format
47	Pre-Award Team Lead Position Description	Position description for a Pre-Award Team Lead	2017	PDF
48	GBFA Director Position Description	Position description for a GBFA Director	2016	PDF
49	Program Director Position Description	Position description for a Program Director	2018	PDF
50	*CHRP* Fact Sheet	2016 overview of *CHRP* and its impact, including its impact on the epidemic in CA, preventing new HIV infections, patient care in CA, decreasing HIV/AIDS disparities, and CA state policy	2016	PDF
51	*RGPO* Organizational Chart	July 2018 organizational chart for *RGPO*	2018	PDF
50	Executive Director Position Description	Position description for an Executive Director	2017	PDF
51	*RGPO* Annual Report	2016 *RGPO* annual report sharing examples of impact, award values by program, and changes in award funding between 2013 and 2016 by program	2016	PDF
51	Program Officer Position Description	Position description for a Program Officer	2017	PDF
52	*CBCRP* Legislative Report	2015 Legislative Report from UC to the State Legislature on *CBCRP* that includes an executive summary, *CBCRP* program background, *CBCRP's* strategy for allocating research funds, an overview of the relationship between federal and CA funding for breast cancer research, *CBCRP* funding and research highlights from 2010 to 2015, *CBCRP* program highlights from 2010 to 2015, activities undertaken to increase funding for breast cancer research and awareness of breast cancer research, *CBCRP* impact in the community, and *CBCRP's* future	2015	PDF
52	Senior Program Officer Position Description	Position description for a Senior Program Officer	2017	PDF
53	*TRDRP* Legislative Report	2015 Legislative Report from *TRDRP* to the State Legislature containing a table of contents, executive summary outlining required reporting elements and *TRDRP* financials, impacts of *TRDRP* in CA, *TRDRP's* strategy for allocating research funds, 2010-2015 funding highlights, 2010-2015 dissemination activities and funding partnerships, and future plans	2015	PDF
54	UCRI National Laboratory Fees Research Program Overview	2017 overview of the impacts of the National Laboratory Fees Research Program, including training the next generation of national security experts; tackling real-world problems to benefit California and the nation; engaging expertise and facilities across UC; stimulating cutting-edge discoveries; and positioning UC and California for continued national leadership in science, technology, and policy	2017	PDF

#	Title	Description	Year	Format
53	*CBCRP* Program Summary	*CBCRP* program summary providing program history, mission, goals, strategic planning, alignment with systemwide principles, and award overviews	2013	PDF
54	UCRI *Multicampus Research Programs & Initiatives* Overview	2017 overview of the impacts of *MRPI*, including strengthening UC, benefitting the lives of Californians, stimulating groundbreaking research, and enhancing UC collaboration	2017	PDF
54	*CBCRP* Program Summary Expenditures	*CBCRP* program summary appendix outlining FY13 expenditures by fund sources and recipient	2013	PDF
55	*CRCC* Annual Report	2017 *Cancer Research Coordinating Committee* annual report providing an executive summary; program mission, goals, structure, governance, and resource use; scope of present activities; major achievements and significant contributions; planned activities and improvements; and program budget and justifications	2017	PDF
55	*CBCRP* Program Summary Roster of Affiliates	*CBCRP* program summary appendix listing program affiliates	2013	PDF
56	*CBCRP* Program Summary Publications List	*CBCRP* program summary appendix listing program publications	2013	PDF
57	*CHRP* Program Summary	*CHRP* program summary providing program mission, history, goals and niche, initiatives overviews, alignments with systemwide principles, and program budget and narrative	2013	DOC
58	*CHRP* Program Summary Appendix	*CHRP* program summary appendix providing program affiliates, awards and amounts by campus, FTE by initiative, and contracts and grants	2013	XLS
59	*TRDRP* Program Summary	*TRDRP* program summary providing program mission, background and context, goals, initiatives, and alignment with systemwide principles	2013	DOC
60	*TRDRP* Program Summary Financials	*TRDRP* program summary appendix providing FY09-13 revenues by fund source, expenditures by campus for FY13, FY13 expenditures by fund type, and FY13 expenditures by program grant and contract	2013	XLS
61	*TRDRP* Program Summary Affiliates	*TRDRP* program summary appendix listing program affiliates	2013	XLS
62	*TRDRP* Program Summary Impact Metrics	*TRDRP* program summary appendix listing success metrics including publications and references, dissemination and outreach, applicant institutions, survey responses, career development impacts, 2011-2013 cycle award metrics, and funding and applications by priority area	2013	XLS
63	UCRI Program Summary	UCRI program summary providing mission and goals for UCRI as a whole; overviews of *MRPI*, Lab Fees, and UC innovation opportunities; alignment to systemwide principles; and a program budget narrative	2013	PDF
64	*CRCC* Program Summary	*CRCC* program summary providing an executive summary; mission; goals; structure, governance, and resource use; present activities; major achievements;	2017	PDF

#	Title	Description	Year	Format
		planned activities and improvements; and program budget		
65	*CRCC* Program Summary v2	*CRCC* program summary providing mission, goals, initiatives, and alignment with systemwide principles	2017	DOC
66	*CRCC* Program Summary Appendix 1	*CRCC* program summary appendix containing FY09-13 program revenues; FY13 expenditures by campus; FY13 expenditures by fund type; and FY13 expenditures by program grant and contract	2013	XLS
67	*CRCC* Program Summary Appendix 2	*CRCC* program summary appendix containing a roster of program affiliates, awardees, and program grants	2013	XLS
68	*CRCC* Program Summary Appendix 3, Supplemental Information I	*CRCC* program summary appendix containing grant awards made FY12-14 and testimonials from recipients solicited 2011-2013	2013	DOC
69	*CRCC* Program Summary Appendix 3, Supplemental Information II	*CRCC* program summary appendix containing budget reports for FY11-13	2013	XLS
70	Cycle 1 Portfolio Review Group Findings and Recommendations	Portfolio Review Group findings and recommendations for 2012-2013 cycle 1 that includes a letter to the Vice President for Research and Graduate Studies; executive summary; background and process overview; and findings and recommendations for *MRPI*, Lab Fees, *CHRP*, and UCRI Proof of Concept Commercialization Gap Grants	2014	PDF
71	Cycle 2 Portfolio Review Group Findings and Recommendations	Portfolio Review Group findings and recommendations for 2012-2013 cycle 2 that includes a letter to the Vice President for Research and Graduate Studies; executive summary; background and process overview; and findings and recommendations for *TRDRP*, *CBCRP*, and UC Cancer Coordinating Committee	2014	PDF
72	Portfolio Review Group Observations	Overarching observations on the systemwide research portfolio from the PRG that include observations on the value of a systemwide research portfolio, key characteristics of new or continuing systemwide research programs, observations on funding systemwide research programs, and observations on UC Office of the President oversight of the systemwide research portfolio	2014	PDF
73	2015 *RGPO* Annual Report	2015 *RGPO* annual report sharing examples of impact, award values by program, and changes in award funding between 2012 and 2015 by program	2015	PDF
74	Final NAR Report	Non-advocate review of the *RGPO* containing an executive summary, introduction, overview of RGS and the *RGPO*, and analysis and recommendations	2009	PDF
75	2013 *RGPO* Annual Report	2013 *RGPO* annual report sharing examples of impact, award values by program, and changes in award funding between 2011 and 2013 by program	2013	PDF
76	*CBCRP* Funding Distribution	Projected funding distribution for *CBCRP* between 2016 and 2020	N/A	PDF

#	Title	Description	Year	Format
77	*CBCRP* Funding Strategy	Document outlining *CBCRP's* funding strategy including its planned impact on the field of breast cancer research, declining resources, and ideas for optimizing funding	N/A	PDF
78	*CBCRP* Strategic Plan	Outline of *CBCRP's* 2015-2020 strategic plan including continued efforts and new projects	2015	PDF
79	*CHRP* Strategic Plan	*CHRP* FY16-18 strategic plan including mission, vision, stakeholder input and critical priority areas, strategic goals, rationale for the past 5 years, and approach beyond 2018	N/A	PDF
80	Systemwide Research Initiatives Presentation	Presentation on SRI including overviews of *MRPI* and Lab Fees	2013	PPT
81	*RGPO* Goals and Objectives	2018-2019 *RGPO* goals and objectives overview	2018	PDF
82	*RGPO* Goals and Objectives Graphic	Graphic outline of *RGPO* goals and objectives	2018	PDF
83	*TRDRP* Strategic Plan	Document outlining the 2015-2020 grantmaking strategic plan that includes staff, oversight, and committee members; executive summary, core principles; strategic goals; research priority areas; background; strategic planning process; environmental analysis; grant funding strategy from 2010 to 2015; and summary of strategic changes	2015	PDF
84	Program Officer Percent Distributions	Document providing time distributions for program officers across administration, application review, and research dissemination	2018	XLS
85	*RGPO* Decision Diagram	Process flow outlining critical decision points for proposed guidelines to determine if the *RGPO* should administer a program	2018	PDF
86	Pre and Post Reorg FTE Counts	FTE counts by group before and after the reorganization and the historical org charts that informed these calculations	2018	MSG
87	Grant Master Calendar	FY19 master calendar for *RGPO* grants	2018	PDF
88	C&G Staffing Needs	C&G staffing needs estimates and justifications based on transactional analysis	2018	DOC
89	Career Impact Anecdote	Email from a former *TRDRP* grant recipient describing the career impact of the grant	2018	MSG
90	Crosswalk for Program Officer Distribution	Crosswalk providing the meanings for acronyms used in the Program Officer Percent Distributions document	2018	MSG
91	ILTF Annual Count	Estimate of inter-location transfers of funds completed in an average calendar year	2018	MSG
92	*CBCRP* Initiatives Timeline	Graphic displaying the progression of *CBCRP* Program Initiatives over time	2018	MSG
93	Application Data	2015-2018 document that provides awards and not-funded applications by program, budget request of awarded and not-funded applications, award type composition of awarded and not-funded applications, and applications by institution and funding status	2018	XLS

#	Title	Description	Year	Format
94	Reviewer Data	FY18 document that provides data by program including unique reviewers participating in final reviews, reviewers by program, reviewers by meeting, and reviewers by program and location	2018	XLS
95	Program Officer Effort Outline	Document providing concrete examples of time spend on administration, application evaluation, and research support	2018	XLS
96	*CBCRP* Meeting Budget & Actuals	Document providing detailed expenditures for *CBCRP* 2018 review meeting	2018	XLS
97	*CBCRP* Review Meeting Expenses	Document providing detailed expenditures for *CBCRP* 2018 review cycle (all actuals)	2018	XLS
99	*RGPO* Employee Listing	A census of all *RGPO* employees, on or around Oct. 31, for each year from 2010 to 2018	2018	XLS
98	*TRDRP* Review Meeting Expenses	Document providing detailed expenditures for TRDRP 2018 review cycle (all actuals)	2018	XLS
100	*RGPO* Project Codes	Listing of all project codes used in the ledger by *RGPO*	2018	XLS
101	Costing Rules for the Tobacco Tax Act	California State Auditor guidance on allocation definitions for Tobacco Tax Act of 2016	2016	DOC
102	Staff Time Allotment Definitions	*RGPO* detailed definitions related to CSA regulations on Tobacco Tax Act of 2016 funds' costing	2016	DOC
103	Cancer Registry Diversion Trend Data	Detailed information on the increasing divergence of Proposition 99 funds to support the California Cancer Registry	2015	XLS
104	February 14 Letter re Cancer Registry Funds	Letter to TEROC Chair requesting action on the increasing divergence of *TRDRP* funding toward the California Cancer Registry	2011	DOC
105	Prop 99 Charts May 2016	State budget information on the allocation of Proposition 99 funds in the coming fiscal year	2016	PDF
106	Prop 99 Charts May 2017	State budget information on the allocation of Proposition 99 funds in the coming fiscal year	2017	PDF
107	Prop 99 Charts May 2018	State budget information on the allocation of Proposition 99 funds in the coming fiscal year	2018	PDF
108	California Tobacco Facts and Figures 2018	State government presentation of data regarding cigarette and tobacco sales and trends	2018	PDF
109	Program Officer Assistance to *TDRP*	Listing of other Programs' loaned capacity to *TRDRP*, FY18-FY19	2018	XLS
110	*CBCRP* 5-year balances	Provided year-end fund balances for *CBCRP* over previous five fiscal years (FY14-FY18)	2018	XLS
111	*TRDRP* 5-year balances	Provided year-end fund balances for *TRDRP* over previous five fiscal years (FY14-FY18)	2018	XLS