



IN MEMORIAM

Isaac Harary
Professor of Cell Biology, Emeritus
Los Angeles
1923 — 2005

Whenever anyone speaks about Isaac Harary, the term “passionate” nearly always occurs within the first two sentences. Isaac was an extrovert, with lifelong interests in and strong opinions about art, music, literature, politics, religion and, of course, science. Isaac would engage anyone, at any point, on almost any topic, with enthusiasm and vitality. He was the quintessential “renaissance man”; a serious, committed and accomplished painter, a voracious reader of modern fiction, and an eclectic book collector. He was an avid listener to performances and recordings of music of all genres, including classical, folk, jazz and avant-garde. Isaac sought and appreciated beauty and content in all contexts; he regularly created “alley flower” arrangements for the table, with flowers and weeds collected from his urban walks. Isaac was the member of the painting group that brought the recordings and tapes for the evening. Friends, relatives and professional acquaintances all knew him as energetic and full of fun, spirited and playful. But they also knew him as a man with great generosity and great concern, both for the individuals in his life and for those he didn’t know – a true humanist.

Isaac was born in New York, one of four children, in 1923. The family spoke both Arabic and English at home. His father passed away when Isaac was four years old. Isaac began his education at Brooklyn College, and attended the University of Chicago, but had to return to New York for family reasons to finish his undergraduate education. He did his doctoral thesis work on intermediary metabolism with Severo Ochoa, using the classic pigeon liver system. One year, at a Passover Seder, his patriarchal uncle asked Isaac why he was still in school, when his siblings and cousins had graduated and were earning a living. What did he do all day, as a “graduate student”? During Isaac’s diligent explanation of his pigeon liver metabolic experiments, the uncle – whose attention began to wander – finally interrupted him and asked “Isaac, Isaac, someday, when you have this Ph.D., will you own your own lab?” Isaac received his doctoral degree from New York University in 1948. That same year, Isaac also married Sylvia. Isaac and Sylvia had known each other since high school. Don, their only child, was born in 1953.

Isaac’s postdoctoral training with Konrad Bloch and with Earl Stadtman continued his immersion in metabolism and lipid biochemistry. Isaac joined the research program at the Long Beach Veteran’s Hospital in 1955, and soon began an association with the newly forming medical school at UCLA. He moved to the UCLA campus in 1958, as one of the early members of the faculty of the Department of Biological Chemistry and as a member of the Atomic Energy Commission Laboratory, in the Biochemistry Division. Subsequently, Isaac became the director of a newly formed Cell Biology Division of the AEC Laboratory, where he recruited a number of faculty, in conjunction with the departments of anatomy, biological chemistry, and pathology. Many of Isaac’s recruits went on to become department chairs and institute directors, a tribute to his eye for talent, his involvement in the affairs of the institution, and his commitment to the success of the UCLA medical school during its fledgling years. Isaac spent his entire academic career at UCLA.

In 1960 Isaac published, with Barbara Farley, a seminal report in *Science*. They described their observation that separated individual heart cells from young rats, when placed into culture, begin to beat rhythmically.

Initial pharmacological studies showed that the physiological factors that modulated beating in intact hearts influenced similarly the beating of the cultured cells. In subsequent studies, Isaac and his colleagues demonstrated that the individual cells could form networks that then beat in unison, in response to a “pacemaker” cell that became dominant in the cultures. His Scientific American article in 1962 established Isaac’s leadership position in the cell biology community. Isaac’s training and interest in cellular physiology, pharmacology, energy metabolism, and lipid biology drove the ensuing research, resulting in over 40 publications elucidating the development and function of heart muscle cells.

One of the favorite vignettes stemming from Isaac’s research efforts results from some unusual properties of feline cardiac biology. Isaac wanted to pursue the question, using cultured heart cells. A litter of kittens was obtained, to prepare the cells. Barbara could not do the experiment. Nor could any of the other technicians, the postdoctoral fellows or the students working in the lab. Isaac – forceful as ever – asserted he would do the experiment himself, and entered the lab. We never learned the answer to the question (now forgotten by all the participants), but six kittens found loving homes.

Isaac Harary was nearly 82 when he died on January 21, 2005. The victim of rheumatic fever as a child, Isaac was left with a damaged heart. As a consequence of his childhood illness, Isaac had bypass surgery in 1984 and a valve replacement in 1990. The continuing disability caused by his cardiac condition, an irony noted by his scientific colleagues who were well aware of his contributions to our understanding of cardiac physiology, slowed his physical activities. But Isaac’s intellectual interests, his love of music, art, literature, politics and life itself never diminished. He remained an engaged and committed friend, father and husband for his full time with us. We remember his vitality and energy, and deeply miss his warm smiles and greetings, along with the robust discussions, the uproarious laughter and the totally enthusiastic and engaged conversations; we miss the passion.

Harvey R. Herschman