



## *IN MEMORIAM*

Steven Lewis Wechsler, Ph.D.  
Department of Ophthalmology  
UC Irvine  
1948 – 2016

Our longtime collaborator and colleague Steven Lewis Wechsler, Ph.D., "Steve", has passed away at the age of 68 in Irvine, CA on Sunday, June 12, 2016. Steve was pre-deceased by his wife Elizabeth "Beth" Wechsler in 2015. Dr. Wechsler leaves behind his loving memories to all of us. He is survived by his children Robert, Matthew, Michelle, and Adrianna Wechsler Zimring, son-in law Jason Zimring, and two granddaughters, Sedona Leah and Lorelai Sarah.

Dr. Wechsler, Professor and Director of Virology Research, Gavin Herbert Eye Institute, University of California, Irvine, was a true pioneer and a renowned world leader in the field of Herpes Simplex Virus (HSV-1) latency, reactivation, and pathogenesis. He received his B.S. in Biology from City College of New York in New York, NY and received his Ph.D. from University of North Carolina, Chapel Hill, NC in Molecular Genetics. He completed a postdoctoral fellowship in virology with Bernard Fields at Harvard Medical School, Boston, M.A. From 1980 to 1986, he was an Assistant Member in the Department of Molecular Virology at the Gamble Institute of Medical Research in Cincinnati, OH where he did important work on measles virus. In 1986, he was hired by Dr. Anthony B. Nesburn to serve as Director of Ocular Virology Laboratory and Associate Director of Ophthalmology Research at Cedars-Sinai Medical Center in Los Angeles. There, Dr. Wechsler started the work that became the main focus for the rest of his outstanding research career; HSV-1 latency and reactivation using the rabbit ocular model that mimics human recurrent HSV.

In 2002, he was recruited to the University of California, Irvine Department of Ophthalmology as Professor and Director of Virology Research at the Gavin Herbert Eye Institute. He had co-appointments as a Professor in the Department of Microbiology and Molecular Genetics and the Center for Virology Research at UC Irvine.

When Dr. Wechsler first began working on HSV-1 latency in 1985, it was thought that all viral genes were turned off during latency. Then, his laboratory showed that one viral gene (originally called LR-RNA for latency related RNA, and now call LAT for latency associated transcript) was highly transcribed during latency in mice. In collaboration with Dr. Nesburn, he showed that LAT was the only viral gene abundantly expressed in the trigeminal ganglion (TG) during latency of HSV-1 infected rabbits and humans.

With a long series of well-planned and beautifully executed studies he literally wrote the book on HSV-1 latency. Some highlights follow: Wechsler showed the following: 1) that LAT is essential for the HSV-1 high spontaneous reactivation phenotype in rabbits. 2) that LAT has anti-apoptosis activity based on transient transfection assays and that there are significantly more apoptotic neurons in TG of rabbits infected with LAT(-) compared to LAT(+) viruses. This paper was published in *Science*. The discovery of LAT's anti-apoptosis activity, which is a key factor in how LAT enhances reactivation, created a new paradigm that greatly increased our understanding of HSV-1 latency and reactivation. 3) In addition to LAT having anti-apoptosis activity, Wechsler and Lbachir BenMohamed, Ph.D., demonstrated that LAT also acts as an immune evasion gene. In his latest work, Steve had begun investigating the role of 6 microRNA's important for LAT function. He found that microR-H2 acts to help maintain latency and confirmed the hypothesis that at least one of the LAT microRNAs plays a role in HSV-1 latency.

Dr. Wechsler, who was known as a clear thinker, a meticulous scientist and superlative grant writer, was continuously funded by grants from the National Eye Institute. Steve had group of outstanding collaborators outside of UCI (Rafi Ahmed, Nigel Fraser, Homayon Ghiasa, Clinton Jones and Oscar Perng). Being a team player, Steve was key in helping younger investigators write important and fundable NIH grants. Through the years, he mentored numerous postdoctoral fellows, graduate and undergraduate students who went on to jobs in academia and industry. He contributed immensely to the scientific and medical communities with over 145 peer-reviewed publications, including papers in *Nature* and *Science*.

Dr. Wechsler was an Ad Hoc reviewer of the *Journal of Virology*, *Journal of General Virology*, *Virology*, *Infection and Immunity*, and *Investigative Ophthalmology and Visual Sciences*. From 2002-2006, he was Vice Chair of the IACUC committee and from 2011 to 2016, a member of the IBC at UCI. In 2007, he was honored with the Athalie Clarke Research Association Achievement Award (Senior Faculty Award) at University of California Irvine.

Above all, Dr. Wechsler loved discovering new biological phenomena, teaching science and playing winning poker. He was a pioneer in HSV-1 latency, reactivation and pathogenesis. His work added a breadth of knowledge to science. He will be remembered as a significant pillar of both the scientific and herpes research communities worldwide.

Anthony Nesburn  
Professor, Ophthalmology Research

Lbachir Benmohamed  
Associate Professor in Residence, Ophthalmology Research