Robert J. Suhadolnik (1925–2016)

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DR. ROBERT J. SUHADOLNIK, a pioneer in nucleoside antibiotics and use of 2-5A in disease diagnosis, passed away on January 26, 2016, at the age of 90. He was Professor of Biochemistry (recently renamed Department of Medical Genetics and Molecular Biochemistry) at Temple University School of Medicine (now the Lewis Katz School of Medicine at Temple University) in Philadelphia since 1974, and an active member of the International Cytokine and Interferon Society (formerly ISICR). He grew up in Forrest City, Pennsylvania, and was a decorated World War II veteran. He received his BSc in chemistry from Pennsylvania State University in 1949, his MSc degree in chemistry from Iowa State University in 1953, and his PhD in biochemistry from Pennsylvania State University in 1956. His postdoctoral studies were completed at the University of Illinois. He was the Director of the Department of Bioorganic Chemistry at Albert Einstein Medical Center in Philadelphia from 1961 to 1974.

Dr. Suhadolnik's research at the Albert Einstein Medical Center centered on the biosynthesis of nucleoside antibiotics. He authored two books that are still considered to be the definitive publications in this area of research.^{1,2} Since the 1980s, the research in Dr. Suhadolnik's laboratory focused on the interferon-associated 2-5A synthetase/RNase L and p68 kinase (PKR) pathways, part of the antiviral defense mechanism in mammalian cells. Work from his laboratory demonstrated the potential of novel 2-5A agonists to enhance host cell innate and acquired immune defense mechanisms against HIV infection.^{3,4}

Dr. Suhadolnik was also actively involved in research on chronic fatigue syndrome (CFS) since 1985. Based on the clinical presentation of CFS, Dr. Suhadolnik reasoned that the clinical signs and symptoms observed might involve alterations in the 2-5A synthetase RNase L pathways. Among the abnormalities reported from Dr. Suhadolnik's laboratory was a new low molecular weight form of the 2-5A dependent RNase L in blood cells from CFS patients. He demonstrated that this form of RNase L was more active than the native form of RNase L. In several studies, Dr. Suhadolnik and his clinical colleagues reported that an elevated RNase L ratio correlated well with the severity of CFS clinical symptoms.^{5,6} Dr. Suhadolnik held a patent for a diagnostic test for CFS

that was licensed through Temple University to RED Laboratories of Belgium.

Dr. Suhadolnik maintained continuous research funding from the National Science Foundation and the National Institutes of Health (NIH) from 1961 until his retirement as Professor Emeritus several years ago. His research funding included a Research Career Development Award from 1961 to

1971. He authored more than 150 peer-reviewed publications. Dr. Suhadolnik and his research colleague of more than 30 years, Professor Wolfgang Pfeleiderer, Konstanz University, are co-inventors of 25 U.S. and international patents. Dr. Suhadolnik served on the Medicinal Chemistry and Bioorganic Chemistry NIH study sections and was president of the Philadelphia Biochemists Club.

In addition to his dedication to teaching and research responsibilities, he faithfully served as Director of the Graduate Program in Biochemistry for nearly 30 years. During his academic career, Dr. Suhadolnik was the doctoral thesis advisor to 22 graduate students and the mentor to 26 postdoctoral fellows. In 1990, he was honored by Temple University with its Outstanding Researcher Award. Bob was a vibrant man, a genuinely warm and caring person who was passionate about basic research. He had an insatiable thirst for knowledge. He will be sorely missed by his colleagues, students, friends, and family.

References

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