

PNRI Mourns the Loss of David J. Galas, PhD

Pacific Northwest Research Institute (PNRI) mourns the loss of David J. Galas, PhD who passed away on May 27, 2023, after a hard-fought battle with cancer. Dr. Galas was a world-renowned expert in molecular biology and genetics whose long and distinguished career led to contributions in the fields of physics, mathematics, and biology. While his past research included experimental work in several fields, his work in recent years focused on the application of mathematical and computational methods to solve complex biological and medical problems.

Dr. Galas earned his PhD in physics from the University of California, Davis in 1972 and went on to hold numerous positions in academics, independent research institutes, and federal governmental agencies. Notably, Dr. Galas was the Director for Health and Environmental Research at the U.S. Department of Energy Office of Science from 1990 to 1993, during which he played an important leadership role in the historic Human Genome Project. Dr. Galas received many distinguished honors during his career, including a lifetime National Associate of the National Academy of Science.

Ever vigilant to finding opportunities to improve human health, Dr. Galas was a successful entrepreneur with 20 patents to his name and was a founder of five separate companies involved in biomedical technology development. One of the technologies that he pioneered became the backbone of a diagnostic test introduced early in the course of the pandemic to detect the virus responsible for COVID-19 in humans. He is credited with identifying several genes associated with diseases, including those related to Alzheimer's Disease and osteoporosis.

Dr. Galas was a strong believer in service, contributing his time and energy to several non-profit organizations, including serving on the Board of Directors of the Fannie and John Hertz Foundation, where he was named Chairman Emeritus in 2022, and the Washington Research Foundation (WRF) based in Seattle, WA.

In 2012, Dr. Galas joined PNRI as a Senior Investigator where he pursued his work studying the role of non-coding RNAs in cell function regulation and intercellular communication. In addition to his research interests in basic biology, he actively pursued new applications of mathematics to better understand human genetics. His most recent work in this field was to develop a novel, information theory-based approach for identifying gene regulatory networks, modifier genes, and complex dependencies between genomic data. In David's own words, "The tools we've developed enable researchers to find patterns in genetic data, allowing the discovery of genetic networks implicated in biological functions, leading us to better understand health and disease."

Inspired to apply his novel computational approaches to find ways to improve the human condition, Dr. Galas, together with PNRI's Senior Investigator Lisa Stubbs, PhD, recently initiated the [Decoding Stress study](#). The goal of the Decoding Stress Study is to pinpoint genes, networks,

and pathways responsible for how we respond to chronic stress and, thus, identify how our genetics affect our risk for developing stress-related disorders, such as type 2 diabetes, depression, and anxiety. With PNRI's support, Dr. Stubbs will continue to lead this project. "We are honored to continue pursuing David's vision of using an individual's unique genetic make-up to identify those at greatest risk of stress-related diseases, with the goal of developing tailored therapies to treat them. This is his legacy gift to all mankind," says Dr. Stubbs.

Beyond his scientific contributions, Dr. Galas was passionate about sharing his time and energy to help develop and support the next generation of scientists. He was a driving force in establishing the WRF Postdoctoral Fellowship program, which supports up to 12 new postdoctoral scientists each year at research institutions in Washington state. According to PNRI's Senior Investigator Aimée Dudley, PhD, "David felt strongly that if you give smart, creative, collaborative young people the freedom and resources needed to follow their interests, they will make amazing discoveries."

To say that Dr. Galas shaped PNRI into what it is today is an understatement. According to John Wecker, PhD, PNRI President & CEO, "David, together with Joe Nadeau and Aimée Dudley, articulated a scientific mission for PNRI that eschewed the status quo in genetics, leveraged rapidly evolving scientific and technological advances, and, perhaps most importantly, would lead to new ways to improve human health and well-being."

Dr. Wecker adds, "The words that I use to describe David—visionary, humble, leader, disruptor, brilliant, humanitarian—remind me of PNRI's founder Bill Hutchinson. The attributes that these two giants shared have been imbued into the fabric of PNRI. David's wish to build an Institute where he wanted to work will be a guiding light for PNRI for many years to come."

We invite you to read more about David's illustrious career and accomplishments [here](#). On this sad day, we thank David for choosing to bring his brilliance to PNRI. May his memory inspire us all to courageously follow where the science leads and to never stop discovering.

If you would like to make a donation in honor of David, please [click here](#) or contact PNRI's Chief Advancement Officer Shannon Bowen at sbowen@pnri.org.