The Lee Hood Prize in Biomedical Science

The Johns Hopkins Medical School has established the Lee Hood Prize in Biomedical Science to support the research programs of outstanding young faculty members in the Institute for Basic Biomedical Sciences (IBBS). One of Johns Hopkins’ most illustrious graduates, Dr. Leroy Hood (M.D. ’64) has made ground-breaking contributions to immunology, protein chemistry, molecular genetics, genomics, biotechnology, science education, and personalized medicine. The prize is supported by an endowed fund and will be administered in perpetuity by the Johns Hopkins Medical School.

Selection Criteria for Awardees

The Lee Hood Prize in Biomedical Science will be presented annually to recognize and support an Assistant or Associate Professor who is conducting research that is unusually creative and significant. All Assistant and Associate Professors with a primary appointment in one of the departments in the Institute for Basic Biomedical Sciences (IBBS) will be eligible to receive the award. The IBBS departments are: Biological Chemistry, Biomedical Engineering, Biophysics and Biophysical Chemistry, Cell Biology, Molecular Biology and Genetics, Molecular and Comparative Pathobiology, Neuroscience, Pharmacology, and Physiology. Awardees will be chosen by a committee of senior faculty members with primary appointments in the same departments. The award will consist of a
monetary contribution from the Lee Hood Prize Endowment Fund to be used by each recipient in support of research in his or her laboratory.

About Lee Hood

Dr. Hood is currently Senior Vice President and Chief Science Officer of the Providence St. Joseph Health System and Chief Strategic Officer of the Institute for Systems Biology, a non-profit research institute that he co-founded in 2000. He has held faculty appointments at the National Institutes of Health, Caltech, and the University of Washington, where he founded the Department of Molecular Biotechnology.

After receiving his medical degree from Johns Hopkins in 1964, Dr. Hood pursued doctoral studies in immunology and protein chemistry at Caltech, discovering some of the first clues to the mechanisms responsible for antibody diversity. Dr. Hood continued this work as an independent investigator at NIH, and then as a faculty member in the Division of Biology at Caltech. During the 1970s and 1980s, he significantly improved both the chemistry and the engineering of protein micro-sequencing, and then applied this approach to DNA sequencing and automated peptide and DNA synthesis. With his Caltech colleagues, Dr. Hood founded Applied BioSystems (ABI) to commercialize the technologies and instruments developed in his laboratory. These advances revolutionized biomedical research, and provided the core technology used to sequence the human genome.

In parallel with his work on technology development, Dr. Hood made numerous fundamental discoveries in immunology, developmental biology, and neuroscience, defining the structure, function, and rearrangement of immunoglobulin genes and the structure of a wide variety of regulatory and disease-associated proteins. Dr. Hood has also pursued science education for students from kindergarten through graduate school, authoring textbooks on biochemistry, genetics, immunology, and cell biology, and, with his wife, Valerie Logan, starting an inquiry-based approach to science education for the Seattle area public schools.

Dr. Hood is a recipient of numerous awards, including the Lasker Prize and the National Medal of Science, and he is one of a very few individuals who has been elected to all three National Academies – of science, medicine, and engineering. In addition to Applied BioSystems, Dr. Hood has co-founded 14 biotechnology companies, including Amgen, Rosetta, and Arivale. Dr. Hood’s current professional interest is in developing and using the tools of systems biology in the service of predictive, preventive, personalized, and participatory (P4) medicine.

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