

Howard Schachman to deliver 14th annual Behring Diagnostic Lecture in Chemistry

February 24, 1987

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PIONEER IN BIOCHEMISTRY TO SPEAK AT UCSD

Howard K. Schachman, an internationally recognized biochemist in the Department of Molecular Biology at the University of California, Berkeley, will deliver the fourteenth annual Behring Diagnostic Lecture in Chemistry, March 2, 3 and 4 at the University of California, San Diego.

The lectures will be held each day at 4 p.m. in the Liebow Auditorium in the Basic Science Building at the School of Medicine.

Co-sponsored by Behring Diagnostics and UCSD, the series is titled "From Allostery to Site-Directed Mutagenesis: 20 Years with Aspartate Transcarbyamylase." The topics of the three talks are:

March 2 -- "Anatomy, Physiology, Biosynthesis and Assembly"

March 3 -- "Interallelic Complementation in Relation to Protein Structure: Formation of Active Enzyme from Defective Mutants"

March 4 -- "Allostery and Conformational Changes: Cross-talk Between Polypeptide Chains"

"Dr. Schachman is a pioneer in the study of a very important enzyme, aspartate transcarbyamylase," Ed Dennis, vice chairman of the UCSD Department of Chemistry, said. "We are extremely fortunate to have him as this year's Behring Diagnostic lecturer."

Aspartate transcarbyamylase is the key regulatory enzyme in the synthesis of pyrimidines, one of the basic ingredients in DNA and other nucleic acids. In his research, Schachman is focusing on the enzyme to gain an understanding of the initial chemical processes that trigger the construction of DNA, the genetic blueprint of life.

Future control of abnormal development in humans and certain disease states will rely in good part on a solid understanding of aspartate transcarbyamylase and its regulation.

It is one of a number of very complex enzymes which contain protein components that are both regulatory and catalytic and are therefore referred to as allosteric.

"Aspartate transcarbyamylase is one of the best studied examples of allosteric enzymes. Dr. Schachman has been working with that enzyme for 20 years. Many of today's ideas of how complex allosteric enzymes work have come from his research," Dennis said.

Today Schachman and his colleagues are using the tools of modern molecular biology to alter the amino acid sequence of aspartate transcarbamylase and other proteins; they are making mutants to understand the enzyme and how it works.

Schachman joined the faculty at UC Berkeley in 1948, after receiving his Ph.D. from Princeton University. To name a few of his many honors, he is a member of the American Academy of Arts and Sciences and the National Academy of Sciences, has an honorary doctor of science degree from Northwestern University, and won the Merck Award of the American Society of Biological Chemists in 1986. Presently, he is president-elect of that society.

Behring Diagnostics is a long-time La Jolla pharmaceutical company. Its parent company, the American Hoechst Corp. is a subsidiary of Germany's Hoechst Corp., one of the largest chemical companies in the world.

Chairman of UCSD's Behring Diagnostics Lectureship Committee is Elvin Harper, professor of chemistry.

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