

Frank H. Westheimer among winners of the National Medal of Science

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UCSD VISITING PROFESSOR WINS NATIONAL MEDAL

Dr. Frank H. Westheimer, a visiting professor in the Department of Chemistry at the University of California, San Diego and a professor emeritus at Harvard University, is among twenty winners of the National Medal of Science to be awarded during a White House ceremony on March 12.

President Ronald Reagan is scheduled to present the awards at a 1 p.m. (EST) ceremony, assisted by John McTague, the newly appointed presidential science advisor.

The Medal was established by Congress in 1959 and is considered the nation's highest scientific honor. The award recognizes individuals who have made "outstanding contributions to knowledge" in the sciences.

"I am very pleased that Professor Westheimer has received this outstanding recognition," said UCSD Chancellor Richard C. Atkinson. "He is internationally recognized for his achievements in bioorganic chemistry and has collaborated with a number of individuals in our Department of Chemistry throughout the years."

"I am delighted he received the award while he was visiting our department," Kurt Shuler, chairman of the chemistry department said. "Students have thoroughly enjoyed the opportunity of learning from him. He is one of the world's great organic chemists."

Westheimer's early work contributed to an understanding of what happens during organic chemical reactions. Among the first to apply chemistry to biological problems, he is credited with explaining in detail how enzymes set off chemical reactions in the body, the pathways by which these reactions occur and the rates at which they take place.

This branch of chemistry, known as mechanistic chemistry, is considered responsible for a revolution in the way organic chemists synthesize chemical compounds. Chemical synthesis leads to the development of new molecules, the basis for new and improved drugs.

In collaboration with the late chemist Joseph Mayer at the University of Chicago, Westheimer laid the groundwork for the field of molecular mechanics, which is now recognized to be of tremendous importance in explaining the activity of biological molecules. Mayer later became one of the first faculty members in UCSD's chemistry department.

"He has been responsible for a number of important advances in organic chemistry," according to Teddy Traylor, the professor of chemistry who made the arrangements to bring Westheimer to UCSD for the winter quarter.

"The series of lectures he is giving here concern his studies in phosphate chemistry as it relates to biochemical processes and biomolecules," Traylor said. An example of a phosphate is ATP, a chemical involved in the metabolic process of all living things.

"He has been, if not the major contributor, certainly one of the major contributors in phosphate biochemistry as it relates to biochemicals," Traylor said.

Westheimer, whose distinguished career has spanned a half century, received his Ph.D. from Harvard. During World War II, he was a research supervisor at the Explosive Research Laboratory of the National Defense Research Committee, work that earned him the Army-Navy Certificate of Appreciation and the Naval Ordnance Award.

After a sixteen-year tenure at the University of Chicago, he returned to Harvard, where he is presently the Morris Loeb Professor Emeritus.

During the late 1960s, Westheimer served on President Lyndon B. Johnson's Science Advisory Committee. He chaired the Committee for the Survey of Chemistry of the National Academy of Sciences (NAS) and was elected to the Academy's National Council for two terms.

Among his numerous awards are the NAS Award in the Chemical Sciences, the Robert A. Welch Award in Chemistry and the Arthur C. Cope Award of the American Chemical Society. He also has received a number of fellowships, including a Guggenheim and a Fulbright-Hayes, which took him to Yugoslavia for a year.

A special committee of the National Science Foundation selects National Medal of Science winners each year from nominations made by universities and colleges, professional societies and the National Academy of Sciences and National Academy of Engineering. To date, some 200 scientists have been selected for the honor.

In 1985, UCSD's E. Margaret Burbidge, director of the Center for Astrophysics and Space Sciences, and Dr. Walter Munk, professor of geophysics at Scripps Institution of Oceanography, were among the medal recipients.

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