

SOUTHWESTERN NEWS

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UT SOUTHWESTERN NOBEL LAUREATE ELECTED TO NATIONAL ACADEMY OF SCIENCES

DALLAS — April 29, 1997 — Nobel laureate Dr. Johann Deisenhofer, professor of biochemistry at UT Southwestern Medical Center at Dallas, today was elected to the National Academy of Sciences (NAS). Other than the Nobel Prize, membership in the 134-year-old organization is often considered the honor most aspired to by scientists.

Two other Texas scientists were chosen among the 75 total new NAS members. They are Dr. Robert F. Curl of Rice University in Houston and Dr. Ferid Murad of the University of Texas Health Science Center in Houston.

Deisenhofer, who shared the 1988 Nobel Prize in chemistry for discovering the structure of a molecule integral to photosynthesis, is the 12th UT Southwestern faculty member named to the academy since 1979. Only six other Texas medical scientists ever have been elected to the NAS: three from Baylor College of Medicine in Houston, two from UT Health Science Center at Houston, and one from UT M.D. Anderson Cancer Center.

A native of Zusamalthem, Bavaria, Germany, Deisenhofer is an expert in X-ray crystallography, the process by which protein molecules are crystallized so that their structure can be determined and studied using X-ray diffraction. By doing this, researchers can learn how these molecules function and how they interact with other molecules to perform various biological reactions.

When he learned of his election to the academy, Deisenhofer, who is an investigator in the Howard Hughes Medical Institute (HHMI) at UT Southwestern and holder of the Virginia and Edward Linthicum Distinguished Chair in Biomolecular Science, said, "I feel great. It is a great honor to be elected a member; it is a tough competition.

"It's recognition of the work that I've been doing here in Dallas. But not just my work, the work of my colleagues in the lab. I hope that they take it as a great honor for them

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with me as their representative. I look forward to continue working with the other distinguished members of the academy."

UT Southwestern president Dr. Kern Wildenthal said Deisenhofer's election to the academy is a fitting tribute to his outstanding research. "Dr. Deisenhofer continually adds important knowledge to the workings of biochemistry. We are very fortunate to have him as part of our team of researchers."

Dr. William Neaves, Southwestern Medical School dean, said, "Hans has been recognized once again for his masterful ability to show the relationship between the atomic structure of large protein molecules and their biological function. His presence at UT Southwestern contributes substantially to the institution's goal of developing medical science at the molecular level."

The Nobel Prize was awarded to Deisenhofer along with Dr. Robert Huber and Dr. Hartmut Michel of the Max-Planck Institute in Germany. Their work determined the structure of the photosynthetic reaction center of *Rhodospseudomonas viridis*, a "purple bacterium."

This membrane-attached protein is a key molecule in the process of photosynthesis, described by the Royal Swedish Academy of Sciences as "the most important chemical reaction on Earth."

Deisenhofer joined UT Southwestern in February 1988, eight months before his research won the Nobel. He earned the equivalent to a master's degree in physics at the Technical University of Munich in 1971 and his Ph.D. three years later at the Technical University and at the Max-Planck Institute, where he served as a research associate from 1974 to 1976 and as a staff scientist from 1976 to 1988.

He is married to Kirsten Fischer Lindahl, UT Southwestern professor of biochemistry and microbiology and HHMI investigator.

Because Deisenhofer is a citizen of Germany, he was elected as a foreign associate of the NAS. This will enable him to attend all the meetings, present papers to the academy and publish papers in the semi-monthly journal *Proceedings of the National Academy of Sciences*.

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Like emeritus members, he will not be entitled to vote.

In addition to the NAS, Deisenhofer is a member of Academia Europaea, American Crystallographic Association, Biophysical Society, German Biophysical Society, German Society for Biological Chemistry, Protein Society and Sigma Xi, a national scientific honorary society. He is also a fellow of the American Association for the Advancement of Science.

President Lincoln created the National Academy of Sciences in 1863 to act as an advisory board to the federal government on science and technology issues.

The 11 other UT Southwestern faculty members who were elected to the NAS and the year they were appointed include:

Ronald W. Estabrook, Ph.D., 1979; Michael S. Brown, M.D., 1980; Joseph L. Goldstein, M.D., 1980; Samuel M. McCann, M.D., 1983; Jean D. Wilson, M.D., 1983; Jonathan W. Uhr, M.D., 1984; Alfred G. Gilman, M.D., Ph.D., 1985; Roger H. Unger, M.D., 1986; A. James Hudspeth, Ph.D., M.D., 1991; David L. Garbers, Ph.D., 1993; Ellen S. Vitetta, Ph.D., 1994.

One other faculty member is a NAS member: Steven L. McKnight, Ph.D., 1992. He joined the UT Southwestern faculty in September 1996.

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NATIONAL ACADEMY OF SCIENCES

Members elected from UT Southwestern since 1979

1979	Ronald Estabrook, Ph.D.	Biochemistry
1980	Michael S. Brown, M.D.	Molecular Genetics
1980	Joseph L. Goldstein, M.D.	Molecular Genetics
1983	Samuel M. McCann, M.D.	Physiology
1983	Jean D. Wilson, M.D.	Internal Medicine
1984	Jonathan W. Uhr, M.D.	Microbiology
1985	Alfred G. Gilman, M.D.	Pharmacology
1986	Roger H. Unger, M.D.	Internal Medicine
1991	A. James Hudspeth, Ph.D., M.D.	Cell and Molecular Biology
1993	David Garbers, Ph.D.	Pharmacology
1994	Ellen S. Vitetta, Ph.D.	Microbiology
1997	Johann Deisenhofer, Ph.D.	Biochemistry