

UC San Diego Professor Wins Wolf Prize in Chemistry

January 8, 2007

Kim McDonald

A physics professor at UC San Diego who uncovered the basic mechanisms for how plants and bacteria use photosynthesis to convert light into chemical energy, has been awarded the prestigious 2007 Wolf Prize in Chemistry. Israel's Wolf Foundation, which promotes "science and art for the benefit of mankind," announced the award today.

George Feher, a research professor at UCSD, will share the \$100,000 prize with Ada Yonath of Israel's Weizmann Institute of Science "for ingenious structural discoveries of the ribosomal machinery of peptide-bond formation and the light-driven primary processes in photosynthesis." The award will be presented to the two scientists by the President of Israel at a formal ceremony at the Knesset, or parliament, in Jerusalem, on May 13.

The Wolf Foundation was established by the late German-born inventor, diplomat and philanthropist Ricardo Wolf. Five annual Wolf Prizes have been awarded since 1978 to outstanding scientists and artists "for achievements in the interest of mankind and friendly relations among peoples, irrespective of nationality, race, color, religion, sex, or political view." The prizes of \$100,000 in each area are given in four out of five scientific fields, in rotation: agriculture, chemistry, mathematics, medicine and physics. In the arts, the prize rotates among architecture, music, painting and sculpture. To date, a total of 232 scientists and artists from 22 countries have been honored.

Feher, who started at UCSD as a physics professor in 1960, is one of the university's founding faculty members and has been a research professor since 1993. Born in Czechoslovakia in 1924, he received his bachelor's degree, master's degree and doctorate from UC Berkeley, then worked as a physicist at Bell Laboratories and Columbia University before coming to San Diego. At UCSD, he established a laboratory that has been engaged in developing physical techniques and theories to unravel the primary processes of photosynthesis. He is a member of the prestigious National Academy of Sciences and the American Academy of Arts and Sciences.

According to the Wolf Prize jury, Feher, "pioneered the structure/function relations of the simplest reaction center in photosynthesis, revealing the basic principles of light energy conversion in biology." It added: "Feher's impressive work in research on photosynthesis rests on his extraordinarily vivid imagination and on the sustained discipline with which he forced himself to master the underlying biochemistry in a brilliant and systematic manner. His work is seminal for the construction of synthetic and semi-synthetic molecular energy converters, which may have profound implications in an energy-demanding world.

Yonath was cited by the jury as "the first to discover the unified ribosomal mechanism leading to the production of proteins. She is the first and only person to determine, in an incredibly short period of time, the structures of over a dozen different complexes of antibiotics, to reveal the ribosome-antibiotics binding sites on the molecular level and to provide insight into antibiotics selectivity. Her work paves the way to dealing with the crucial issue of drug activity and resistance mechanisms, thus touching on a central problem in medicine."

The Wolf Foundation announced that the 2007 Wolf Prize in the Arts, also in the amount of \$100,000, has been awarded to Italian artist Michelangelo Pistoletto "for his ever inventive career as an artist, educator and

activist, whose restless intelligence has created prescient forms of art that contribute to fresh understanding of the world."

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