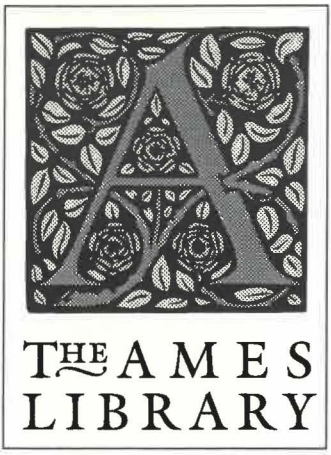
10-25-2002

Dedication of the Wilma B. Beckman Auditorium

Illinois Wesleyan University



Dedication of the

WILMA B. BECKMAN AUDITORIUM

Honoring Women in the Sciences

The Ames Library
Illinois Wesleyan University
October 25, 2002

Dedication of the

WILMA B. BECKMAN AUDITORIUM

Honoring Women in the Sciences

Welcome . . . . . Minor Myers, jr.
President, Illinois Wesleyan University

Unveiling of Plaque . . . . . President Myers

Introduction of Speaker . . . . . Narendra Jaggi
Chairperson and Professor of Physics

Presentation . . . . . Jacqueline K. Barton
Arthur and Marian Hanisch
Memorial Professor of Chemistry
California Institute of Technology

Question and Answer

Closing Remarks . . . . . President Myers

WILMA B. BECKMAN

Born in Cullom, Illinois in 1903, Wilma Beckman and her family moved to Bloomington in 1914 where she went to University High School before coming to Illinois Wesleyan. She graduated in 1926 receiving a Bachelor of Science degree and earning election into Phi Kappa Phi. After earning a Master's degree from the University of Chicago, she worked as a nutritionist in Detroit and Chicago, pursuing a Ph.D. in nutrition at Cornell University before she married noted community planner Karl J. Belser and raised three sons; Karl, Stephen, and Lawrence. She died in 1984. Wilma Beckman pursued her studies in the sciences at time when few women entered the field and, as such, is a pioneer and a model for Illinois Wesleyan students.

Her brother, Arnold O. Beckman, has been a chemist, inventor, and founder of Beckman Instruments, as well as creator of the Arnold and Mabel Beckman Foundation. The Wilma B. Beckman Auditorium is a gift of the Arnold and Mabel Beckman Foundation

Dr. Jacqueline K. Barton

Dr. Jacqueline K. Barton is the Arthur and Marian Hanisch Memorial Professor of Chemistry at the California Institute of Technology. She is a native New Yorker. Barton was awarded the Bachelor of Arts degree summa cum laude at Barnard College in 1974 and went on to receive a Ph.D. in Inorganic Chemistry at Columbia University in 1979 in the laboratory of S. J. Lippard. After a postdoctoral fellowship at Bell Laboratories and Yale University in the laboratory of R. G. Shulman, she became an assistant professor of Chemistry and Biochemistry at Hunter College, City University of New York. In 1983, she returned to Columbia University, becoming an associate professor of chemistry and biological sciences in 1985 and professor in 1986. In the fall of 1989, she joined the faculty at Caltech.

Professor Barton has pioneered the application of transition metal complexes as tools to probe recognition and reactions of double helical DNA. Using chiral coordination complexes, matching their shapes, symmetries, and functionalities to sites along the strand, she has designed octahedral metal complexes which recognize nucleic acid sites with affinities and specificities rivaling DNA-binding proteins. These synthetic transition metal complexes have been useful in elucidating fundamental chemical principles which govern the recognition of nucleic acids, in developing luminescent and photochemical reagents as new diagnostic tools, and in laying a foundation for the design of novel chemotherapeutics and biosensors. With these transition metal probes, she has also carried out seminal studies to elucidate electron transfer chemistry mediated by the DNA double helix. This work provides a completely new approach to the study of DNA structure and dynamics and may be critical to understanding the chemical consequences of radical damage to DNA within the cell.

Barton has received numerous awards. These include the Alan T. Waterman Award of the National Science Foundation (1985), awarded to the outstanding young scientist in the United States, and the American Chemical Society (ACS) Award in Pure Chemistry (1988). She has also received the ACS Eli Lilly Award in Biological Chemistry (1987), the ACS Baekeland Medal (1991), the Fresenius Award (1986), the ACS Garvan Medal (1992), the ACS Tolman Medal (1994), the Mayor of New York's Award in Science and Technology (1988), the Havinga Medal (1995), the Paul Karrer Medal (1996), and the ACS Nichols Medal (1997). She was a fellow of the Sloan Foundation, a Dreyfus Teacher-Scholar, and an NSF Presidential Young Investigator. She is a recipient of a prestigious MacArthur Foundation Fellowship (1991) and she has been elected a member of the American Academy of Arts and Sciences (1991), the American Philosophical Society (1999), and the National Academy of Sciences (2002). She has, in addition, served the chemical community through her participation in a wide range of governmental and industrial boards.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