

1999 IOTA SIGMA PI NATIONAL HONORARY MEMBER

Dr. Bridgette A. Barry, University of Minnesota

Dr. Bridgette A. Barry is the **1999 recipient of the Iota Sigma Pi Honorary Member Award**. This is the highest honor that Iota Sigma Pi bestows on outstanding women chemists.

Dr. Barry received an A.B. in Chemistry with High Honors from Oberlin College in 1978 and a Ph.D., in Chemistry from the University of California, Berkeley in 1984. From 1985-88 she was a Postdoctoral Fellow at Michigan State University. Dr. Barry accepted a faculty appointment as an Assistant Professor of Biochemistry in the College of Biological Science at the University of Minnesota in 1988 where she is still employed. She was promoted to Associate Professor in 1994 and to Professor in 1999.

Dr. Barry's research on the photochemistry of biological molecules and resonance Raman microscopy began with her Ph.D. dissertation on the vertebrate visual pigments. Since that time she has worked to elucidate the mechanisms of biological energy coupling, particularly how electrochemical gradients are generated and utilized in cell membranes. The broad spectrum of techniques commonly used in her laboratory include purification, isolation and reconstitution of membrane proteins, site directed mutations and isotopic labeling of proteins and pigments, EPR, FT-IR, and fluorescence spectroscopy and mass spectrometry. She and her collaborators have applied these techniques to the light driven reactions of photosynthesis, most recently the photosystem II reaction center enzymes and cofactors. Dr. Barry also studies transport proteins, most recently lactose permease, in the hopes of understanding more about the mechanism of chemiosmotic coupling in cell membranes.

Dr. Barry's research group is diverse as well. She currently has four postdoctoral associates, three graduate students, one rotation student and one undergraduate research student. Dr. Barry teaches both graduate and undergraduate courses. Her graduate courses include parts of a spectroscopy course and a membrane course. Dr. Barry designed a new syllabus for the undergraduate majors Biochemistry course and plans to participate in the development of a new physical biochemistry course for undergraduate students. Dr. Barry has been named the 1999 National Honorary Member of Iota Sigma Pi. This is the highest honor bestowed by ISP.