

**MEMORIAL RESOLUTION OF THE FACULTY
OF THE UNIVERSITY OF WISCONSIN-MADISON**

ON THE DEATH OF PROFESSOR EMERITUS HELMUT BEINERT

Helmut Beinert, professor emeritus of the Institute for Enzyme Research and the Department of Biochemistry, died on December 21, 2007 at the age of 94 following a brief illness.

He was born November 17, 1913 in Lahr, Germany. He received an undergraduate education in the classical traditions of Latin, mathematics, Greek and French, along with some chemistry and physics. He then studied acting at the State Theater and became a professional actor prior to being drafted into the army. Helmut asked for and was granted a leave to pursue graduate studies in chemistry at the universities of Leipzig and Heidelberg. His thesis work, completed in 1943, was carried out at Kaiser-Wilhelm Institute for Medical Research in Heidelberg. Dr. Beinert was careful to avoid research that would stimulate any interest from the military, and surviving the turmoil of the war years was something that he attributed to the good fortune of simply being born in 1913 instead of 1914.

After the war, the Control Commission of the Allied Forces moved a group of medical doctors and chemists to Randolph Field in Texas, where Dr. Beinert carried out studies on the fate of exogenously administered cytochrome c in tissues. In 1950, Dr. Beinert came to the Institute for Enzyme Research in Madison to carry out postdoctoral work with David Green, where he developed a new method for the isolation of coenzyme A. Dr. Beinert was promoted to rank of assistant professor in 1952 and became a full professor in 1962. He retired from the University of Wisconsin in 1984 and took a professorship at the Medical College of Wisconsin in Milwaukee and the National Biomedical ESR Center, where he remained until returning to the University of Wisconsin-Madison as professor emeritus in 1994. He remained actively engaged in research and scholarly activities, and his passion for science continued until his death.

Dr. Beinert leaves a remarkable record of pioneering contributions and accomplishments in biochemistry and biophysics. His research defined a new class of metalloproteins, known as iron-sulfur proteins, although he was adamant in pointing out that he was not the original discoverer of this class of proteins. Nevertheless, his research shaped this field, making fundamental and pioneering discoveries for over four decades. His major contributions include characterizing the electronic structures and surprising functions of many members of this large family of metalloproteins. In addition, using a combination of physical and spectroscopic methods, together with micro methods for the quantitative measurement of iron and sulfur, Dr. Beinert rigorously established the experimental framework by which these proteins were characterized. For these reasons, he is often referred to as the “father of Fe-S proteins.”

Dr. Beinert was also well known for promoting the use of electron paramagnetic resonance spectroscopy (EPR) to study paramagnetic intermediates in flavoproteins as well as metalloproteins such as the iron-sulfur proteins. His research articles and scholarly reviews had a profound impact in introducing EPR to the biochemical community. Dr. Beinert’s work on fatty acid oxidation and tissue respiration led to many important discoveries including an abundance of iron-sulfur centers in proteins of the respiratory chain of mitochondria. The discovery of an iron-sulfur cluster in the tricarboxylic acid cycle enzyme, aconitase, expanded the repertoire of iron-sulfur clusters beyond electron carriers to catalysts. Subsequently, Dr. Beinert participated in revealing the surprising roles of iron-sulfur clusters in transcriptional and in translational regulation. Dr. Beinert’s scientific contributions span a period of more than 60 years and resulted in well over 200 publications.

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Dr. Beinert's accomplishments were recognized internationally. He was respected as a pioneer in the areas of bioinorganic chemistry and biophysical spectroscopy. He was a recipient of a lifetime NIH Career Development Award. He was elected a member of the US National Academy of Sciences in 1980. Dr. Beinert's numerous awards included the Keilin Medal of the British Biochemical Society, the Sir Hans Krebs Medal of the European Biochemical Societies, the Fritz Lipmann Award from the American Society of Biochemistry and Molecular Biology, the Otto Warburg Medal of the German Society for Biochemistry, and honorary doctorates of science from the University of Wisconsin-Milwaukee and the University of Konstanz.

Up until the time of his passing, Dr. Beinert maintained an active presence on campus, writing and reviewing manuscripts, regularly attending seminars and symposia and performing experiments in his lab; his early morning trips to the Steenbock Library equipped with his briefcase, dark glasses, and flat cap were a familiar and comforting sight. Dr. Beinert was popular with students and postdoctoral fellows who benefited from his encyclopedic knowledge of biochemistry and his willingness to share his perspective on science. Dr. Beinert had many collaborators at the University of Wisconsin and around the world. Many of these projects established new areas of investigation that provide a continuing legacy for Dr. Beinert. His sharp wit, remarkable intellect, exceptional standards, and indomitable spirit will be sorely missed.

Dr. Beinert is survived by his son, Hannes, daughter, Isabel, stepson, Christian and stepdaughter, Elisabeth junior. His wife Elisabeth passed away in 2005.

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