## Memorial Resolution – Vinod K. Shah January 25, 1934 – December 21, 2015

Dr. Vinod K Shah, Senior Scientist Emeritus in the Department of Biochemistry, passed away from complications following a heart attack on December 21, 2015. A Memorial Service was held on December 29 at Cress Funeral Home.

Born in Vadondara, India to Kasturchand and Savitaben Shah, Vinod studied Biochemistry at the Maharaja Sayajirao University in Baroda where he received his Ph.D. for a dissertation on fungal metabolism. Immigrating to the United States in 1965, Vinod joined the Department of Bacteriology at UW in 1966 where he began an incredibly productive research career, most prominently in the area of biological nitrogen fixation. He discovered, isolated and characterized the Iron-Molybdenum cofactor (FeMo-co) of the enzyme nitrogenase, that is essential to the global nitrogen cycle on earth. Collaborating broadly across several departments and institutes, together with post-docs and graduate students, he isolated the gene products required for the synthesis of the cofactor and demonstrated the complete synthesis of FeMo-co using purified components. Vinod sought out important research questions, no matter how difficult and pursued them with tenacity. He was extraordinarily inventive in his experimental approaches and this allowed success where others failed. His insightful use of solvents to extract FeMo-co was characteristic of his creativity in the laboratory.

He retired in 1998 as a senior scientist in the Department of Biochemistry, and at a symposium devoted to nitrogen fixation at UW that year, scientists from around the world gathered at a banquet to recognize and celebrate Vinod's seminal contributions to the field. He received the Chancellor's Award for Excellence in Research in 1992.

An extraordinarily generous man, Vinod was a caring mentor to many younger scientists who sought his advice on science and life. On numerous occasions, he deferred first authorship on important manuscripts in order to promote the careers of students working with him on the projects. A number of established investigators have noted Vinod's important role in the development of their own careers. Vinod never gave up on a student and would work to find ways bring out the best in each young scientist.

In his retirement, Vinod remained active in scientific circles and within the Madison Indian community. He was an enthusiastic card player and he became an accomplished chef. He was a gracious patriarch to a large community of family and friends, many of whom he sponsored and supported as immigrants to the U.S. and in their educational pursuits. He took great pride in the contributions of his family and friends in the academy, the arts, medicine, education, engineering, business and finance.

Vinod is survived by his daughter Dakasha Dalal and husband Dinesh Dalal, son Mayank Shah and wife Swati Shah, daughter Hetal Larsen and husband Andy Larsen, son Dhavan Shah and wife Christine Garlough. He is also survived by his brothers Arvind and Jagdish, sisters Champa and Padma, step-mother Kamlaben and their children. His extended family includes eight grandchildren, five great-grandchildren and many nieces and nephews. Vinod was preceded in death by his first wife, Varsha and his second wife Dharmishtha, his brothers, Pushkar and Manu and his parents. Vinod was a first-rate scholar who contributed significantly to one of the most challenging research areas of his time, a generous and caring mentor, devoted patriarch to his family and a civic-minded citizen of the University and the broader society.

## Respectfully Submitted,

Dhavan V. Shah, Louis A. & Mary E. Maier-Bascom Professor of Journalism, Director of the Mass Communication Research Center, UW-Madison Winston J. Brill, Bacteriology Professor Emeritus, UW-Madison Gary P. Roberts, Bacteriology Professor Emeritus, UW-Madison Paul W. Ludden, Biochemistry Professor Emeritus, UW-Madison