Obituary

Stanley Jensen Gill, a distinguished scientist and educator and a former editor of Biophysical Chemistry, died on June 25, 1991, after a long struggle with stomach cancer. He was born in Salt Lake City on August 21, 1929 and received his undergraduate education at Occidental College and at Harvard, obtaining his AB degree (*magna cum lauda*) from the latter institution in 1951. He went on to obtain his Ph.D. degree in Physical Chemistry with Frederick T. Wall at the University of Illinois in 1954 with a thesis on polyelectrolytes. After a brief period as a research associate at Cornell in 1954, working with Peter Debye, and two years of army service 1954–1956, he joined the faculty of the University of Colorado at Boulder, where he was based for the remainder of his life. During this period he utilized his sabbatical leaves for collaborations with Bruno Zimm at La Jolla, Ingemar Wadsoe in Lund, and with Brunori and the Rome hemoglobin group. He worked with great efficacy right up to the end and, in spite of ailing health, his last five years were probably the most productive of his life.

Most of his research lay in the interface between physical and biochemistry and was especially devoted to macromolecules or to problems related to macromolecules. More often than not his approach was thermodynamic and threaded through more than three decades of his research are landmark articles dealing with the measurement of thermochemical quantities and their interpretation. He had an enduring interest in the cooperative phenomena of biological molecules which manifested itself in very extensive contributions to two major fields. The first was in the areas of protein–ligand interactions, allosteric phenomena and hemoglobin. He was an important member of the group of biophysical chemists who successfully carried on the work of interpreting the solution properties of hemoglobin and other allosteric proteins in the light of their three-dimensional structure. The second was the folding problem of protein structure, the why and how of the spontaneous formation of the three-dimensional structure of proteins. This included not only the study of proteins themselves, but major contributions to our knowledge of the mechanism of molecular interactions in aqueous solution. To both of these fields he brought a range of experimental and theoretical skills which few can match.

Stan was a brilliant experimentalist. He worked in many fields in addition to those mentioned above and in each he devised ingenious techniques or devices to make new measurements possible or to improve old ones. A list of fields to which he contributed includes: conductance and transference of electrolytes, viscoelasticity, magnetic susceptibility, strain and flow birefringence, refractometry, stress relaxation, optical rotation and spectroscopy, viscometry, polymer relaxation, magneto-sedimentation and most of all to calorimetry. About a dozen of his papers deal with thermochemical instrumentation.

One of his most notable talents was the ability to form meaningful and lasting collaborations, especially at the international level. In recent years he has worked very closely with Wyman in France, Privalov in Russia, Wadsoe in Sweden and with Brunori in Italy. His contributions have been recognized in a number of ways. He has received a Humboldt Research Award, the Huffman Award and an ACS award of the Colorado section. He was a Fellow of the Swedish Academy of Sciences and a NATO fellow.

In the passing of Stan Gill, America and the world have lost a first-rate scientist. Many of us have lost an esteemed friend. Indeed, Stan Gill seemed to make only friends. He was one of those rare men of goodwill whose influence on their surroundings is wholly benign. He will be sorely missed.

Robert Steiner
University of Maryland

John Schellman
University of Oregon