



ARNOLD R. BROSSI
1923 – 2011

The death of Arnold Robert Brossi on July 16, 2011 at age 87 in Bethesda, MD, is a loss to the chemistry community of a most charismatic, exuberant, engaging, and accomplished person. Born in Winterthur, Switzerland on December 19, 1923, Arnold received his doctorate in chemistry from the Swiss Federal Institute of Technology (ETH), Zurich, in 1952 under the mentorship of Professor Oskar Jeger for research on terpenes. On completion of his doctorate, he joined the chemistry research department of Hoffmann-La Roche in Basle, Switzerland, remaining there until 1963 when he was appointed director, subsequently vice-president, of chemistry research at the company's Nutley (New Jersey) facilities. In 1973, Arnold replaced Dr. Otto Isler as director of chemistry research at Roche's headquarters in Basle on Dr. Isler's retirement, and in 1976 returned to the USA as Chief of Natural Products at the National Institute of Diabetes & Digestive & Kidney Diseases (NIDDK) of the National Institutes of Health in Bethesda, MD. On his retirement from the NIH in 1991, Arnold was appointed an NIH emeritus scientist and continued to work at the NIH as a visiting scientist.

Arnold's research interests were broad with an emphasis on the synthesis and study of biologically active natural products, particularly alkaloids, in therapeutic areas such as malaria, neurodegenerative disorders,

and cancer. In addition, he placed great emphasis on the importance of enantiomerically pure drug substances (fondly known at Roche as Brossi's rule.) He was an author on over 400 publications and patents.

In Nutley, Arnold directed not only chemistry but also at various times animal health research and microbiology, thus taking on a heavy burden of administration and management. However, despite this, his passion for chemistry did not wane and he was able to supervise a personal laboratory concerned with the chemistry of alkaloids. As an administrator and manager with charisma, Arnold was nonpareil. He fostered an atmosphere that was highly conducive to doing outstanding research and took a keen interest in the personal lives and work of all his scientists irrespective of their position, always ignoring the hierarchy and bureaucracy typical of large corporations. Under his leadership, organic chemistry flourished at Roche (Nutley) with, to give but a few examples, the chemistry of benzodiazepines, the discovery of proline-catalyzed enantioselective reactions, the synthesis of quinine, steroids and vitamins, the chemistry of indoles and polyether antibiotics.

During his tenure at the NIH, Arnold continued his research on alkaloids with an emphasis on neurodegenerative diseases, and was able to attract many eminent scientists to work in association with him, including the late Professor Nelson Leonard who joined him as a Fogarty-Scholar-in-Residence (1989-1990). In keeping with his life-long interest in international cooperation, Arnold actively directed the research of over 40 post-doctoral scientists from 17 countries.

Arnold held a number of academic positions, among them were research professor at the School of Pharmacy, University of North Carolina, adjunct professor of chemistry Georgetown University, faculty member Residential School of Medicinal Chemistry, Drew University (Madison, NJ), and adjunct professor at the National Institutes of Pharmaceutical Research and Development, Beijing.

Arnold was a member of the Advisory Board of Organic Syntheses, Inc. and was the Editor-in-Chief of Volume 53. He initiated a close, continuing relationship between Roche and Organic Syntheses, Inc in which many procedures were checked at the Nutley facilities. He was Editor-in-Chief for volumes 21-40 and co-editor for volumes 41-45 of *The Alkaloids*, and was on the editorial board of *Heterocycles* for which a special issue (volume 39, issue 2) was published in his honor.

He was a member of the Steering Committee on Malaria for the World Health Organization in Geneva (Switzerland), and was a founding

member in 1966 of the biennial Mona Symposia on Natural Products, University of the West Indies (Jamaica), for which the 1994 symposium was held in his honor. In addition, he was an advisor for Plantaceutica, Inc, Research Triangle Park (North Carolina) and Advance Biofractures, Inc., Lynbrook, NY.

In recognition of his achievements, Arnold received many awards and honors, including the Alfred Burger Award for Medicinal Chemistry of the American Chemical Society (1991), the Charles Mentzer Prize of the French Society of Medicinal Chemistry (1989), the Hamis Medal of the Czechoslovak Chemical Society (1989), and the Medal of Merit from Palacky University, Czech Republic (1994). He was the recipient of honorary doctorates from Bowdoin College (Maine, 1984) and Adam Mikiewicz University, Poznan, Poland (1993). He was an honorary member of the Swiss Chemical Society, the Pharmaceutical Society of Japan, the American Society of Pharmacognosy, the Polish Chemical Society, and a Fellow of the American Association for the Advancement of Science.

Arnold was a true ambassador for chemistry, and although he prized individuality, he had the unique ability to foster cooperation and collaborations among scientists of very different disciplines, to which his numerous collaborative publications attest. At scientific meetings, in the work place, at his home, as well as at various social functions, Arnold's conviviality, energy, and pleasant personality invariably created an inspiring atmosphere for everyone to excel at whatever they do. He left an indelible mark on our science and on all who have had the good fortune to have met him.

Among his many hobbies and interests Arnold was an avid fisherman, bridge player, mushroom collector, and gourmand.

Arnold was predeceased by his wife, Hanni, of 49 years in 1999, and is survived by his son Mario, daughters Angela Kindhauser and Franca Alpin, five grandchildren, and two great-grandsons.

Gabriel G. Saucy
Percy S. Manchand