Arthur Vorwald would not have considered himself a toxicologist but, as an experimental pathologist with specialization in dust disease of the lung, he became a pioneer of the field. He was one of the first investigators to practice exposure of experimental animals to controlled dust aerosols in inhalation chambers, and numerous early discoveries, including competent description of the lung lesion in asbestosis and the first production of lung cancers in rats with beryllium, are associated with his name. His legacy is the present Department of Occupational and Environmental Health Sciences at Wayne State University, which he founded in 1954 and chaired for the next 14 years.

Arthur Vorwald commenced his professional career at the University of Chicago, where he earned his M.D. and Ph.D. in pathology while also functioning as instructional assistant. After internship at Henry Ford Hospital in Detroit and a National Research Council fellowship at Cambridge, England, he received an appointment in 1934 as staff pathologist of the Saranac Laboratory in upstate New York, a leading research institution of lung disorders at the time. His first interest was in tuberculosis, but he soon became intrigued by the synergism between tubercle bacilli and silica and came under the professional influence of Leroy U. Gardner, leading authority on dust diseases of the lung and director of the laboratory. During the late 1930s and early 1940s, Vorwald and his coworkers published extensively on pneumoconiosis and its relation to tuberculosis infection.

During World War II, Arthur Vorwald took time out to serve in the Medical Corps of the U.S. Navy, and became Director of the Medical Sciences Division of the Office of Naval Research in Washington. He also did a stint as Naval Medical Attaché at the U.S. Embassy in London. In 1947, at the sudden, untimely death of Dr. Gardner, he was invited to become the Director of the Saranac Laboratory, a post he held until 1954.

Vorwald’s investigative forte was animal experimentation, and in addition to chamber exposures, he also developed the short-cut technique to endotracheal injections. He followed his test animals for months or years posttreatment. In some cases, however, this was not quite long enough, and his 1951 study on asbestos missed the appearance of pulmonary tumors because his experiment was terminated too soon. When this became clear following the discoveries of Wagner, Gross, and others, he was determined not to make that mistake again, and his work with beryllium was indeed crowned with the first experimental production of pulmonary tumors with that substance.

At age 50, Arthur Vorwald stood at the pinnacle of his career as a leading expert of his field and recipient of numerous professional accolades including honorary degrees from Loras College and Hobart and William Smith College. In 1954 he received an invitation to organize a new department in the medical school of Wayne State University in Detroit: the Department of Industrial Medicine and Hygiene, soon to be renamed the Department of Occupational and Environmental Health, and later (under successor David Bassett) the Department of Occupational and Environmental Health Sciences. Due to Vorwald’s untiring efforts, his department became one of the largest grant-getters of the school. Vorwald himself developed quite a taste for “grantsmanship” so that proposal writing became one of his favorite occupations. Carcinogenesis from beryllium and from asbestos, health effects of urban air pollution, health effects of vehicular exhaust fumes, and hygienic study of selected radioisotopes were among the numerous large projects on the agenda of the department during the late 1950s and 1960s. The actual conduct of these studies typically devolved on subordinate staff, with publication put off until the various threads could be pulled together—a conclusion that all too frequently never came. Ability to delegate authority was not one of Vorwald’s many virtues, and this fact, combined with his very extensive travel engagements and multifaceted public service, eventually had its effect on departmental productivity. In the midst of various problems with the granting agencies and with the university administration, he suffered a severe stroke in late 1968, and lived thereafter in quiet retirement with his family in Green Bay, Wisconsin, until his death at age 70 in 1974.

These late difficulties should not obscure the fact that Arthur Vorwald was a seminal figure in the early history of occupational toxicology. His peers regarded him as an absolutely
first-class microscopic pathologist, and his contributions to the conduct of long-term inhalation experiments, associated animal hygiene, antibiotic prophylaxis, dust dissemination, and chamber-air monitoring practices were ahead of their time. He was also an excellent lecturer, renowned for the careful preparation of his presentations, including artful slides. Above all, he was a gentleman of the old school, with great charm, humor, and fatherly concern for the welfare of his staff. Even after a quarter of a century, his old associates still remember him with affection.