



## **Gilbert S. Stoewsand**

October 20, 1932 – July 4, 2016

Professor Gil Stoewsand was 83 years old when he died, after a very productive academic career that spanned over 30 years, publishing 103 research manuscripts, 14 subject reviews and 13 book chapters. He served as major advisor for 7 graduate students and as minor advisor for 20 graduate students. He taught “Introductory Chemical Toxicology” from 1972 to 1983. He was Professor Emeritus of Toxicology in the Food Science Department of Cornell University where he began in 1967, doing research at the New York State Agricultural Experiment Station in Geneva and teaching in Ithaca.

Professor Stoewsand was born and raised in Chicago, Illinois. He earned his B.S. degree in 1954 in animal sciences from the University of California, Davis. He then served for 2 years in the Army during the Korean War as a volunteered draftee, in the Quartermaster Corps at Fort Richardson, Alaska. He was discharged with a Good Conduct Medal after his assignment. He returned to UC Davis for his M.S. degree which he completed in 1958 in Animal Sciences.

In 1958 Gil drove with his wife Ellen and his brother Darriel from California to Ithaca, NY to join Cornell University as a Research Associate in the Department of Poultry Science under the supervision of Professor of Nutrition Milt Scott. He started his Ph.D. program in animal nutrition and biochemistry while working, finishing his studies in December of 1963. His research focused on the stress that high protein diets produced in chicks, evidenced by changes in the cells of the adrenal glands and adrenal hormones. He then took a job as a Research Nutritionist at the Food Division, Nutrition Branch of the U.S. Army Natick Laboratories, thus he moved to Massachusetts with his wife and two daughters, who were born in Ithaca. Gil worked in several projects and became interested in food toxicology while involved in a study to evaluate if of a petroleum by-product, butanediol, could be used as a safe, food source of energy

for humans for a short amount of time, if agricultural areas were contaminated or destroyed due to war. His research showed that the by-product tested triggered problems in lipid metabolism when consumed.

Dr. Stoewsand left Natick in 1966 to become a Research Associate in the Institute of Experimental Toxicology and Pathology at Albany Medical College. He enhanced his toxicology knowledge by working with pharmacologists, pathologists, and reproductive toxicologists in several projects including the safety of the artificial sweetener cyclamates. A public presentation on laboratory animal nutrition in 1967 drew the attention of Dr. Willard Robinson, the head of the Food Science and Technology Department at Cornell's NYS Agricultural Experiment Station. Dr. Stoewsand was recruited to fill the position of Assistant Professor of food toxicology and specifically to work on the potential toxicity of hybrid grapes and wines.

Dr. Stoewsand was appointed Assistant Professor on September 1, 1967, promoted to Associate Professor with tenure in 1973 and became a full Professor in 1979. His first project was critical for the NY grape and wine industry: to determine if American grapes (*Vitis labrusca*) or hybrids bred from American grapes were toxic. A German viticulturist, Hans Breider, had published reports claiming that a compound present in American grape varieties caused malformations in chicks when hens were fed diets containing American or hybrid grapes, juices or wines. A newspaper columnist, Jack Anderson, published a column in The Washington Post on Jan. 13, 1971 based on Breider's work headlined "Wines Cause Deformities," that ran in 600 newspapers. As a result, wine retailers removed New York wines from their store shelves. Fortunately, Professor Stoewsand's four years of research categorically refuted this false claim, showing that American grapes did not cause malformations. In fact, he proved that the Breider's studies had used an experimental feed deficient in protein and B vitamins which caused the anatomical malformations. Professors Stoewsand and Robinson reported at the American Society of Enologists meeting in 1970 that Breider's chickens suffered from chronic and acute nutritional deficiencies due to their poor diet, not from being fed juice or wines from hybrid grapes. The results were published in a NYS scientific bulletin in January 1971, which was further validated by the U.S. Food and Drug Administration saying there was no cause for alarm. The Washington Post subsequently published a story on Dr. Stoewsand's research. The NY grape and wine industry were very grateful to him. The successful hybrid grape program at Cornell continued to grow and the NY wine industry prospered.

Professor Stoewsand research interests focused on the food safety and public health effects of natural components, additives and environmental contaminants in plant foods. With his graduate students, he investigated anti-carcinogenic compounds (organosulfur phytochemicals) present in cruciferous vegetables, utilizing animal models to study the interactions of diets containing Brussel sprouts, cabbage, broccoli or cauliflower and cancer.

He collaborated with Professor Don Lisk, Toxic Chemical Laboratory in Ithaca, to study the effects of disposing such wastes as fly ash and municipal sludge on crop lands. They found that heavy metals, such as cadmium, went from soil to leafy food plants like lettuce, cabbage or spinach, potentially causing serious health problems.

Twenty years after working on wine toxicity, Professor Stoewsand investigated the effect of the carcinogenic compound ethyl carbamate, which is naturally present in small amounts in wine. He discovered that ethanol and wine intake inhibited ethyl carbamate induced tumor development in liver and lungs of a certain strain of mice. He further assessed that the ethanol in wine acts as a competitive inhibitor that disrupts the metabolism of converting ethyl carbamate into a carcinogen.

Professor Stoewsand was recognized for his expertise by many organizations: he was a member of the Editorial Board of the Journal of Toxicology & Environmental Health from 1979- to 1994; a member of the Institute of Food Technologists Expert Panel on Food Safety and Nutrition from 1982 to 1985; a member of the Toxicology Study Section of the National Institutes of Health from 1975 to 1979; a member of the American Institute for Nutrition Ad Hoc Committee on Nutritional Standards from 1973 to 1978; a consultant for the National Library of Medicine Toxicology Information Program from 1977 to 1985.

Professor Stoewsand retired on August 30, 1995 and was granted Emeritus status on December 8, 1996. He continued to be active in the department, always open to provide advice to new faculty members with his collegial and friendly personality. He is survived by his wife, Ellen and his two daughters Corrine Stoewsand and Cathryn Vose.

*Written by Olga I. Padilla-Zakour and Randy W. Worobo*