Memorial Resolution for Professor Gilbert H. Koch

Professor Gilbert H. Koch, a true Wisconsinite, started working as a chemist in local industries as soon as he had obtained his B.S. degree in 1938. He continued his industrial employment while pursuing his M.S. degree. He also worked as a research Chemist at the Miller Brewing Company and concurrently served as an instructor at the UW-Extension Center. Many of his research contributions came while he was simultaneously on our faculty and working part time at Miller.

Professor Koch’s research efforts led to several important contributions to the art of brewing. He investigated calcium oxalate formation in bottled beer and assisted with the development of new analytical methods to measure the amount of oxalate and other naturally occurring biochemicals found in beer. Oxalates, if not controlled, lead to small precipitates that make the beer cloudy on standing. This research was important because it permitted the increase of the shelf life of beer. His most significant contribution, however, was the discovery that isohumulones are responsible for the formation of the skunky odor of light-struck beer. He received and assigned to Miller US Patent (No. 3,044,879) in July 1962. This patent describes a process by which the isohumulones can be removed from beer. The chemical process, known as hydroboration, resulted from a insight of Professor Koch and was for many years the basis for marketing Miller Beer as the "Champagne of Bottled Beers" in clear bottles. Other brewers have continued using brown bottles which protects the beer and its isohumulones somewhat from degradation by light during storage.

It is clear from brief memoirs, which Professor Koch wrote some years ago, that his discovery was stimulated by concurrent teaching and research activities. The idea of using the then-novel borohydride reagent to solve the "skunky" odor problem occurred to him while he was lecturing about the reagent to his biochemistry class.

Professor Koch was a dedicated teacher of biochemistry, as well as a much liked and admired colleague in the Department of Chemistry. He enjoyed teaching students biochemistry and it showed in his classroom presentations as well as in his interactions with students. He spent countless hours in his office working to improve his biochemistry course, as well as the laboratory textbook titled "Biochemistry Laboratory Manual," which he co-authored with Dr. Frank Strong. This book was used in many undergraduate biochemistry laboratories throughout the USA. Although Professor Koch taught a rigorous course in nursing biochemistry, he interacted often with nurses and doctors to incorporate modern uses of biochemistry, employed in hospitals, to keep the nursing students interested in the subject. He took the same approach to the later revisions of his textbook. In his latter years, as his eyesight began to fail, his wife Gertrude would read the text galleys to him over and over to correct typing errors from the editors office.

Professor Koch was an amiable colleague who shared his knowledge and research equipment with all who needed it. He was always ready to help younger faculty members in the Department get started in research and teaching. His advice was always as contemporary as it was helpful. Although his Ph.D. degree from UW-Madison was in biochemistry, he was also a fine organic chemist who bridged the gap between biology, organic chemistry and biochemistry.

As his research efforts lessened in the later years, he searched the Department for those who
could use his laboratory equipment the most effectively. Over the years he helped young
research groups to get started and always gave equipment to those who needed it. It was his love
for biochemistry, teaching and his genuine desire to help others that so endeared him to his
colleagues. Dr. Koch is survived by his loving wife, Gertrude, his children David, Paul,
Kathleen and Linda, and 12 grandchildren. His kindness and generosity will surely be missed.

J.M. Cook
C.F. Shaw