



Max Tishler

October 30, 1906 - March 17, 1989

Max Tishler combined, to an exceptional degree, excellence in two seemingly diverse areas. He was a giant in advanced and sophisticated medicinal chemistry research and an administrator with a remarkably inspirational gift for teaching and academic leadership. On the one hand, Tishler pioneered the round-the-clock system for pressure research at Merck. Later, he became the quintessential undergraduate and graduate mentor at Wesleyan University. A distinguished career in industry culminated as President of Merck, Sharps & Dohme Research Laboratories. Tishler was Editor-in-Chief of Volume 39 of *Organic Syntheses*, which was published in 1959.

Max Tishler was born in Boston on October 30, 1906. He received the B.S. in 1928 from Tufts College, and the M.A. from Harvard in 1933 while working part time as a pharmacist. The Ph.D. degree was awarded in 1934 by Harvard. After scientific collaboration with E. P. Kohler and J. B. Conant, he joined Merck & Company, Inc. Research Laboratories in 1937. After retiring from Merck, Dr. Tishler was appointed Professor of Chemistry at Wesleyan University in Middletown, Connecticut (1970-1972); University Professor of Sciences (1972-1975); and Emeritus (1975 -1989).

Dr. Tishler published more than 100 scientific papers and is cited as an inventor on more than 100 United States patents. A partial list of research contributions include development of processes for the commercial production of vitamin B₆, vitamin K, vitamin E, penicillin, streptomycin, and cortisone.

Dr. Tishler was very active in the American Chemical Society, serving for many years on the Board of Directors and as President in 1972. He received the Priestley Medal of the ACS in 1970. He was a member of the National Academy of Sciences. Tishler received an honorary SaD. from Tufts University in 1956 and a D.Eng. from Stevens Institute of Technology in 1966. In 1987, he received the National Medal of Science.

An anecdote illustrates Tishler's drive. The total synthesis of cortisone, as devised by Lewis Sarrett, comprised approximately 30 steps and required weeks of intense and

painstaking effort. Max was in charge of the first commercial production of cortisone in the pilot plant. One of the final steps is the isomerisation of a double bond into conjugation with the 3-ketone function with the formation of a 2,4-dinitrophenyl hydrazone, causing the development of a brilliant, scarlet color. Tishler was inspecting the first production run. To his horror, he spotted a bright-red liquid leaking near the vessel. "I hope that's blood!", he exclaimed. Actually, Max was very concerned for individuals, beneath a rather formidable exterior.

A story of my contacts with Max Tishler after my Merck days is worth recounting. My MIT group was busily preparing 100-gram quantities of penicillamine for use in our penicillin synthesis program. A Professor of Chemical Medicine at Harvard, Dr. Charles Davidson, and a British medical colleague requested a sample of penicillamine for their experimental program relating to sequestering copper ion. About one year later, my MIT telephone started jumping off the hook, frantic telegrams arrived, and one anxious visitor was at my door. It seems that an article had appeared in the British medical Journal, *Lancet*, reporting that penicillamine was very helpful in the symptomatic treatment of Wilson's Syndrome, a disorder characterized by the accumulation of cupric ion in the brain. In a footnote, "Prof. John C. Sheehan of MIT" was credited with furnishing the penicillamine. The visitor at my office was offering to pay almost any price since his son suffered from the disease. I told him that not only could I not sell the compound, but I could not even give any away, even to his physician, since it was not approved by the FDA.

I telephoned Max Tishler, outlined the situation, and he said he would call back. that afternoon. Max contacted the Merck Medical Department, who stated that Wilson's Syndrome was a rare condition affecting only about 50 to 100 patients a year, and was terminal. However, Max was able to launch a crash program to prepare penicillamine at Merck and get quick FDA approval under the "orphan disease" category, in spite of the unpromising commercial outlook.

He is survived by his wife, Elizabeth (Betty) Tishler (married in 1934) and two sons - Peter Vermeer Tishler and Carl Lewis Tishler.

John C. Sheehan
June 4, 1990