

The Life and Legacy of Valium Inventor

Leo Sternbach

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**GOOD
CHEMISTRY**

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Thoughts and Reflections on Dr. Sternbach and His Work

Dr. Armin Walser, chemist and Sternbach associate and inventor of the injectable sedative Versed

The well-being of his subordinates was always a concern and high priority for Sternbach. While working under his direction, I got to appreciate his many admirable qualities, such as his sense of humor, his contagious optimism and good mood, his modesty and openness. I was particularly impressed by his skill in solving chemistry problems without the now-standard spectroscopic tools. For managers of pharmaceutical research, it is also interesting to emphasize that Sternbach made his big discovery by working on his pet project without the approval of his boss. He knew that Lady Luck had been extremely good to him, not only with the discovery of the benzodiazepines. Nobody seemed to envy him, because he was so well liked and such a nice guy. He liked to share his success with his friends and co-workers. He loved parties and enjoyed food and drink, giving little thought to the calories or the cholesterol content. If I recall correctly, a vodka martini and olive was his favored cocktail and the meat had to be laced with fat. He enjoyed playing Santa at Christmas parties and getting hugged by female admirers. And bridge was his favorite game, beside the stock market.

Dr. Milan Uskokovic, chemist and Sternbach associate, inventor of the vitamin D metabolite Rocaltrol (used by patients with chronic renal failure), and fellow member of the New Jersey Inventors Hall of Fame

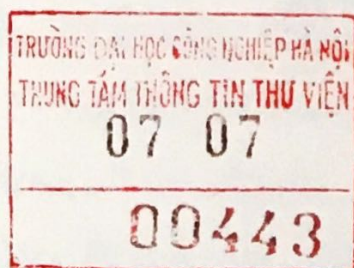
By the early 1940s there was a significant migration of European organic medicinal chemists to America in search of opportunities in the rapidly growing field of pharmaceutical research. Leo Sternbach was an outstanding example in this newborn age. In a matter of a year or two after his coming to Roche in Nutley, he accomplished the monumental task of achieving the first total synthesis of the vitamin biotin. His synthesis is still practiced today, almost 60 years later, and is frequently cited as one of the most significant events of natural products synthesis. But that was just the beginning of his growth as a medicinal chemist. He decided to reexamine the chemistry of his student period in Poland and resurrected the benzodiazepines into the most significant series of drugs to combat anxiety, at that time a newly defined mental disorder. He became a grand master of modern medicinal chemistry. He also became a lasting example to all scientists at Roche up to the present time.

Dr. Pius Wehrli, chemist and Sternbach associate, and holder of 17 U.S. patents

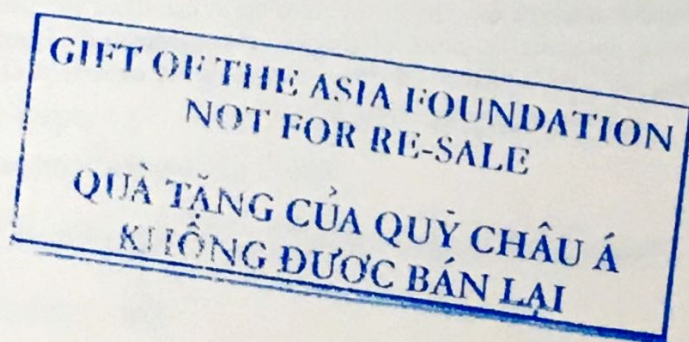
Leo Sternbach was an extremely well-trained organic synthesis chemist with a keen ability to observe reactions and draw conclusions based on them. One of his outstanding qualities was his persistence. "Try until you succeed" must have been one of his fundamentals. A truly scientific achievement was his total synthesis of the vitamin biotin. The fact that after over 50 years his process is still commercially used and has not been replaced by a different approach speaks for itself. This is virtually unheard of in synthetic organic chemistry. Dr. Sternbach was well aware that you cannot whip up success at will. It will come at its own pace and often at unexpected moments. The road is full of surprises and predictions are often difficult. Chemistry, and science in general, needs in a certain sense a nonpush atmosphere. That is not to say that chemistry is not pushed, but the push of the true chemist comes from within, and that is what Dr. Sternbach personified.

Good Chemistry

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Valium Inventor Leo Sternbach



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Medical writer Bill Breckon worked closely with the four distinguished experts to compile the sections of the book covering the medical and social impact of the benzodiazepines.

Part I

The Biography of Leo Henryk Sternbach

Chapter 1

A Cure for Troubled Souls

Librium is famous, and Valium even more so. Their discovery 40 years ago opened up undreamed-of opportunities for the medical and pharmaceutical worlds. Both medications exhibit the characteristic effects of the benzodiazepines: They are anxiolytics, anticonvulsants, muscle relaxants, and tranquilizers. No previous drugs treated such a range of indications.

The man who discovered the benzodiazepine group of active substances is Leo Henryk Sternbach. His work heralded the start of a new era in research and therapeutics.

The list of Sternbach's extraordinary achievements includes 125 publications, 230 U.S. patents, the Carl Mannich Medal of the German Pharmaceutical Society, the Chemical Pioneer Award of the American Institute of Chemists, induction into the New Jersey Inventors Hall of Fame, and honorary doctorates from the Johann Wolfgang Goethe University, Frankfurt am Main, the University of Vienna, and Centenary College, Hackettstown, New Jersey. *US News & World Report* numbers Sternbach among the 25 most important people of the 20th century, along with Louis Armstrong, Levi Strauss (the inventor of blue jeans), Frank McNamara, (the creator of credit cards), and Charles Houston (the brilliant lawyer who wanted justice for all).

Librium has an international reputation, and Valium is even more widely known. Sternbach, in contrast, has lived his life in the shadow of anonymity. It is a life that should have piqued the curiosity of poten-