

OBITUARY

Hans Zähler (7 June 1929–18 December 2008)

The Journal of Antibiotics (2009) 62, 287–288; doi:10.1038/ja.2009.36

Professor Hans Zähler passed away on 18 December 2008 at the age of 79 after a prolonged illness.

Hans Zähler was born on 7 June 1929 in Zürich, Switzerland. He studied agricultural science at the Eidgenössische Technische Hochschule (ETH) in Zürich from 1949 to 1953 and worked with Professor Ernst Gäumann at the Institut für Spezielle Botanik at ETH, finishing his doctoral thesis on phytopathology in 1954. From 1954 to 1958, he collaborated with Professor Leopold Ettlinger and Roger Corbaz at the same institute. Their aim was to screen microorganisms for new biologically active compounds and extend the screening from fungi to include actinomycete strains. This period marked the beginning of a very successful collaboration with Professor Vlado Prelog and Walter Keller-Schierlein from the Institute of Organic Chemistry at ETH in the isolation and structure elucidation of new compounds. About 20 000 actinomycete strains were tested to see if they produced antibiotics. Besides the identification of 1100 producers of known antibiotics, 20 new compounds were isolated. The structures of 10 were determined and published in the series 'Stoffwechselprodukte von Actinomyceten': narbomycin, angolamycin, nonactin, foromacindins, echinomycin, granaticin, megacidin, acetomycin, cinerubins and holomycin.

In 1958, Hans Zähler took responsibility for microbiological research in the group led by Professor Ettlinger, who was appointed to the professorship of bacteriology at ETH. Together with Ralph Hütter and Elisabeth Bachmann at the Institut für Spezielle Botanik and his colleagues Professor Prelog and Walter Keller-Schierlein from the Institute of Organic Chemistry, he intensified the search for new antibiotics. Although the number of strains tested in screening programs was reduced, new methods for isolating actinomycetes from soil samples were developed, new test organisms and cultivation methods for these strains were used, and new screening methods were devised. These methodological changes led to a change in the nature of the detected compounds and resulted in the isolation of numerous new substances; for example, actinomycin Z, actiphenol, acumycin, aranciamycin, boromycin, ferrichrysin, granaticin B, lankamycin, lankacidin, manumycin, naphthocyclinones, naphthomycin, scopamycins and venturicidin B. Hans Zähler's scientific success led to his habilitation in 1960.

During investigation into the optimization of ferrimycin production, it was observed that the antibiotic activity of ferrimycin could be reversed by cultures of other actinomycete strains. This antagonism was specific to ferrimycin; other antibiotics like streptomycin and the tetracyclines did not share this property, and this was the beginning of Hans Zähler's successful studies of iron-chelating metabolites—the siderophores—resulting in the industrial production of desferri-



ferrioxamine B, which was introduced on the market as Desferal in 1962 by Ciba (Basel, Switzerland).

In 1964, he moved from ETH Zürich to the University of Tübingen in Germany to a newly created Chair in microbiology. There he founded the Institute of Microbiology and continued his work on screening for novel secondary metabolites. The screening for iron-chelating compounds, for antibiotics that act exclusively on chemically defined media and for antibiotics that cause morphological changes in fungi, was continued successfully and was completed by a chemical TLC-based screening program. Further remarkable compounds were detected by Hans Zähler and his group, including, among others, avilamycins, bafilomycins, the nikkomycins, phosphinothricin, tetracenomycins and urdamycins. At the beginning of his career, he started the communication series 'Microbial Products of Microorganisms',

which, in July 1994, the year of his retirement, reached Part No. 269. Under his supervision, 145 students obtained their doctoral degree in the Institute of Microbiology at the University of Tübingen.

Hans Zähler was a member of the Editorial Board of *The Journal of Antibiotics* from 1972 until 1995 and will sorely be missed by his friends and colleagues in the microbiological community.

He married his wife, Hedi, in 1954 and they have four children and three grandchildren. We all wish to express our deepest sympathy to Hedi and her family.

Hans-Peter Fiedler
Institute of Microbiology, University of Tübingen, Germany