

History of Schircks Laboratories

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In 1971, I began to study organic chemistry at the University of Zurich. After completing my diploma thesis, I was able to choose a professor to advise my dissertation. I chose Professor Viscontini as an advisor because he synthesized natural products, and I knew that he had connections with professors at the Children's Hospital in Zurich.

There were already several publications on the synthesis of biopterin. But these approaches were tedious, produced small yields, and the biopterin was not pure enough. Shortly before I decided to do my doctoral thesis with Professor Viscontini, another doctoral student had tried in vain to find a better approach for synthesizing biopterin. So Professor Viscontini did not want to try it again and gave me another topic instead. I started to work on Professor Viscontini's project while at the same time trying to find a better method for producing biopterin. When Professor Viscontini came for a visit, I had to hide all the vessels with the intermediates for biopterin synthesis so he did not know I was working on it.

Biopterin can easily be recognized by its light-blue fluorescence. After half a year, I had synthesized a substance that was fluorescent light-blue and was identical to biopterin, which I had extracted from *Drosophila melanogaster*. Happily, Professor Viscontini was not angry with me for not having followed his instructions and agreed that I could further improve the synthesis of biopterin.

I completed my doctoral thesis in 1978. In the same year, tetrahydrobiopterin that I had synthesized during my doctoral thesis was administered to a tetrahydrobiopterin deficient patient for the first time. Their serum phenylalanine decreased within hours to normal levels. The results were published in a scientific journal. Following this, several physicians at PKU clinics asked for tetrahydrobiopterin.

However, I wanted to continue my studies and first spent a year and half in Austin, Texas as a postdoctoral fellow.

After my return in 1980 I set up my own company (Schircks Laboratories) in the Zurich area and started to sell tetrahydrobiopterin tablets all over the world. Publications on successful treatment with tetrahydrobiopterin in Germany, Japan and the USA followed.

Although we did not advertise, doctors from specialized PKU clinics read the publications and ordered tetrahydrobiopterin tablets from us.

We could not afford the money to get marketing authorization for the tetrahydrobiopterin tablets, but health authorities around the world approved the import of the tablets because there was no comparable registered product.

In 2007, Schircks Laboratories produced tetrahydrobiopterin tablets for the worldwide treatment of over 450 patients with tetrahydrobiopterin deficiency.

In 1999, it was found that a group of PKU patients also responded to tetrahydrobiopterin. Their phenylalanine hydroxylase had a slight imperfection.

There were several thousand patients worldwide with this congenital metabolic disorder. This led the company Biomarin to start clinical trials to get marketing authorization.

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Biomarin offered to partner with me, and I met two senior executives from Biomarin. But because I did not agree with their business philosophy the partnership did not work out.

In 2007, Biomarin got marketing authorization in the USA, while Merck received it for Europe in 2008.

Schircks Laboratories had to stop to selling tetrahydrobiopterin tablets, but we continued to produce and sell analogues of biopterin and folic acid. These compounds are important for diagnosis and research.

In 2011, I signed a consulting agreement with Dipharma and we now have a strong partnership.