

Vladimir Prelog in 1995 in his office at the Zurich Federal Institute of Technology (photograph by Istvan Hargittai). Prelog is holding a gold-plated model of the backbone of tRNA (transfer ribonucleic acid) molecule. According to private communications from Alex Rich and Jack Dunitz to Istvan Hargittai in 1998, when Prelog was given this model, he exclaimed, "God's signature!"

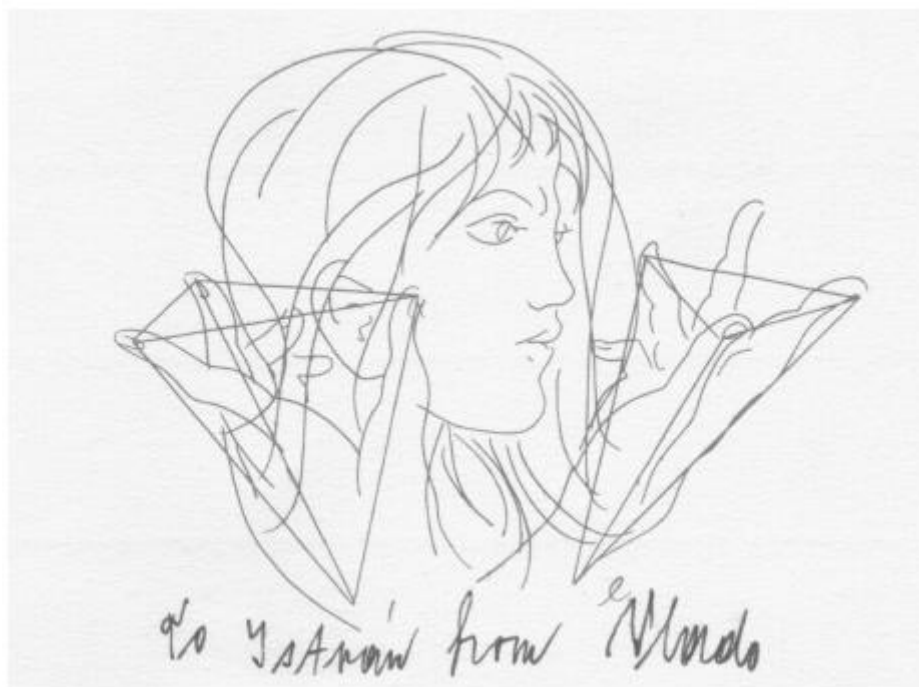
Prelog Centennial: Vladimir Prelog (1906–1998)^a

István Hargittai and Balazs Hargittai



Vladimir Prelog in his office at ETH Zurich in 1995 (photo by I. Hargittai).

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Prelog's familiar *ex libris* by Hans Erni with an inscription to one of the authors.

Vladimir Prelog was “the founder of modern stereochemistry, it was he who initiated and intellectually invigorated the current renaissance of this field ...” So wrote Kurt Mislow [1] in 1998, the first recipient of the Vladimir Prelog Medal and the first Prelog lecturer at the Swiss Federal Institute of Technology (ETH Zürich) in 1986. Among his many achievements we mention here only a few following Mislow [1]. Prelog was the first who employed conformational analysis to rationalize the physical and chemical properties of medium-size-ring compounds. He made generalized observations concerning the steric effects in Grignard reactions. Together with Robert Cahn and Christopher Ingold, he proposed a terminology to specify the configuration of stereoisomers (the CIP system), and, together with William Klyne, a terminology to describe steric relations across single bonds. He did fundamental work on novel types of stereoisomers.

Prelog's innovations in nomenclature became popular and he often worked them out in unison with other luminaries of organic chemistry. At the end of 1953, beginning of 1954, an identical Note appeared in *Nature* and in *Science* concerning the nomenclature of bonds in cyclohexane [2]. Of the four authors of the Note—Barton, Hassel, Pitzer, and Prelog—three would eventually win the Nobel Prize in Chemistry. Prelog's Nobel Prize came in 1975 and it was shared with John Cornforth. Prelog's citation said, “for his research into the stereochemistry of organic molecules and reactions.”

According to Cornforth [3], Prelog “stood out from among his contemporaries ... because he asked better questions and analyzed problems with greater clarity.” Cornforth also noted that “Stereochemistry was the love of his life: he pursued it in many guises, devised rules for it, illuminated every aspect of it that he touched.”

As Mislow noted [1], natural products chemistry was Prelog's first love and he remained true to it to the end of his days. However, his interest did not include proteins

and nucleic acids. This is why one of his most brilliant disciples, Albert Eschenmoser [4] gently provoked him by saying, “Vlado, every year during which we did not work on DNA was a wasted year.” Prelog did not rush to give an answer, but when he did, he put it in writing because he realized its importance for science history:

Zurich, October 3, 1995

Dear Albert

For some time you have prodded me to tell you, why the great Leopold [Ruzicka] and I did not recognize, in a timely fashion, that the nucleic acids are the most important natural products, and why did we waste our time on such worthless substances as the polyterpenes, steroids, alkaloids, etc.

My light-headed answer was that we considered the nucleic acids as dirty mixtures that we could not and should not investigate with our techniques. Further developments were, at least in part, to justify us.

As a matter of fact, for personal and pragmatic reasons, we never considered working on nucleic acids.

Yours
Vlado

In 1995, one of us recorded a conversation with Vladimir Prelog [5], in which he talked about his family background, youth, studies, about his interests, and sprinkled his narrative with anecdotes about which he was famous. His room was full of memorabilia of stereochemistry and chirality in particular. The most conspicuous was a series of Hans Erni’s drawings, one of which became Prelog’s *ex libris*. A peculiar feature of this drawing is that the two hands of the youth appear as if they were turned around, inverted. In a version of Erni’s drawings, however, the two hands appeared to be non-inverted, being parallel. In the familiar version, the two hands can be imagined as a result of the two arms being crossed.

References

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3. Cornforth, J. Chem. Intelligencer 1998, 4(3), 50.
4. Hargittai, I. Albert Eschenmoser. In I. Hargittai, Candid Science III: More conversations with famous chemists. Imperial College Press: London, 2003, pp. 96–107.
5. Hargittai, I. Vladimir Prelog. In I. Hargittai, Candid Science: Conversations with famous chemists. Imperial College Press: London, 2000, pp. 138–147.