

## Preface

How are organic synthesis, X-ray analysis, photo-excitation, alkaloids, catecholamines, frog venoms, protein cleavage, DNA-breakdown, metabolic enzymes, receptors, ion channels and the Black Forest near Freiburg related? The answer is through Dr. Bernhard Witkop. He is an creative and insightful investigator and mentor who has greatly extended the scope of organic chemical approaches to the fascinating frontier of biological and medical sciences.

"Both medical chemistry as well as biochemistry have their roots and origin in organic chemistry. Chemists, who were pioneers and torch-bearers that come to our mind in this respect, are Emil Fischer (1852-1919), and Heinrich Wieland (1877-1957). Wieland's great merit is to cojoin "The Two Cultures", viz. organic chemistry and biological chemistry."<sup>1)</sup>

Witkop became Wieland's disciple and he is the "real" successor of Wieland both with his achievements as well as his scientific approach. Witkop first worked in Munich, Germany, then at Harvard, Boston, and then for most of his career at NIH, U.S.A. At the Meeting of the German Chemical Society, in Munich (1977), Witkop delivered an impressive commemorative lecture "Heinrich Wieland Centennial : His Life Work and His Legacy Today"<sup>2)</sup> presenting Wieland's work and his disciples.

Not only a distinguished scientist in bioorganic chemistry, Witkop is also a highly talented philosopher influenced by European intellectual luminaries. In "Mind over Matter or Thoughts Over Molecules",<sup>3)</sup> he described "The enduring aim of scientist, as with ever-improving tools he explores the miracles of the micro- and macrocosmos, is to explain 'how the world is'. The role of the philosopher, whose laboratory is the world and whose tool is an ever-questing mind, is to explain 'why the world is'".

It is a great pleasure to publish a special issue of Heterocycles on the occasion of Dr. Witkop's eighty-first birthday. Together with all the co-workers, and disciples(弟子 deshi), myself one of them, of our towering teacher (先生 sensei or 恩師 onshi), I am grateful to Mr. Koichi Kametani, President of the Institute, and Professor Keiichiro Fukumoto, Editor, for this memorial publication. Finally, I would like to thank Dr. John W. Daly, a "representative" of Witkop's many disciples, for elaborating a valuable review of Witkop's scientific career.

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### References

- 1) B. Witkop : "Tribute to Heinrich Wieland" yet unpublished to my knowledge.
- 2) B. Witkop : *Angew. Chem., Int. Ed. engl.*, 1997, **16**, 559 - 572.
- 3) B. Witkop : "Mind over Matter" *The Israel Academy of Sciences and Humanities*, 1989.