

## **LAUDATIO Oliver Werz WSA 2008**

The Dr. Willmar Schwabe-Award acknowledges outstanding results of pharmacological and/or clinical research in the field of medicinal plants and natural products; the prize is endowed with 10.000 Euro, a donation from Schwabe company.

The aim of the award is to motivate preferentially young scientists (about 40 years or younger) to resolve phytotherapeutical and phytopharmaceutical problems in an interdisciplinary approach, in order to support the evidence-based use of natural products.

This year the WSA is bestowed on Oliver Werz, University of Tübingen, Germany.

Dr. Werz, a pharmacist, started his biochemical and pharmacological research in the field of inflammation in 1992 as PhD student in the group of Professor Steinhilber at the University of Tübingen. Until 2000 he was most interested in the biochemistry and molecular pharmacology of 5-Lipoxygenase, the key enzyme in the biosynthesis of the proinflammatory leukotrienes. This period was filled with many discoveries in the cellular regulation of 5-lipoxygenase in collaboration with the group of the Nobel laureate Professor Bengt Samuelsson at the Karolinska Institute where Dr. Werz spent a two-years stay as a Post-Doc.

In the search of pharmacological inhibitors interfering with leukotriene biosynthesis and 5-lipoxygenase, Dr. Werz finally also approached Natural Products (NPs). As senior scientist at the Institute of Pharmaceutical Chemistry at the University of Frankfurt, Dr. Werz started around year 2000 to investigate selected anti-inflammatory NPs in general, addressing the elucidation of their underlying molecular mechanisms in cellular systems.

As we all know, for many compounds that are well recognized as effective inhibitors of inflammatory disorders, the molecular targets and the precise modes of action are often unknown. Knowledge of the molecular targets and modes of actions may also lead to new principles for pharmacological intervention with inflammatory processes and may reveal novel concepts for the development of anti-inflammatory drugs. Currently, the pentacyclic triterpenes boswellic acids from frankincense and the

acylphloroglucinols hyperforin from St. John's wort and myrtucommulone from myrtle are under investigation in the group of Dr. Werz.

One of his major scientific interest related to NPs are the boswellic acids, the active principle of frankincense. Frankincense, derived from *Boswellia* species, is frequently used in folk medicine to cure inflammatory diseases with an extremely long tradition especially in Ayurvedic Medicine (since about 400 years!). Scientific data from animal models of inflammation and from clinical trials with pilot character indicate a therapeutic value of frankincense in the treatment of chronic inflammatory and allergic disorders. However, until today frankincense preparations are not authorized as medicinal product and only dietary supplements or cosmetic preparations are available with undefined pharmaceutical quality. Nevertheless, there are strong efforts of pharmacists and biomedical researchers to push the approval of frankincense as medicinal product in the Western World.

Supported by grants by the Deutsche Forschungsgemeinschaft (DFG), Dr. Werz carried out detailed investigations regarding the molecular pharmacology of boswellic acids, thus, providing a biochemical basis for the effectiveness of frankincense preparations in vivo and in therapy. These findings have been published in 9 peer-reviewed papers by well-recognized international Journals. Altogether, the work of Dr. Werz provides a strong scientific basis and significantly substantiates the long-proposed efficacy of frankincense as remedy for the treatment of several diseases, and finally strongly supports the evidence-based use of frankincense preparations as natural products.

His contributions impressively show that natural compounds still play an important role in drug discovery and that it is possible to get interesting results with long-known natural products.

Brigitte Kopp  
President