PERGAMON

Phytochemistry 61 (2002) 727–728

PHYTOCHEMISTRY

www.elsevier.com/locate/phytochem

Announcement

The Phytochemical Society of Europe—Pierre-Fabre Award for Phytochemistry 2002

Dr. Wolfgang Eisenreich

The Committee of the Phytochemical Society of Europe and Pierre-Fabre Laboratories are pleased to announce that the recipient of this Award for 2002 is Dr. Wolfgang Eisenreich (School of Organic Chemistry and Biochemistry, Technical University of Munich, Munich, Germany) for his outstanding contribution to plant metabolism. Dr. Eisenreich was presented with the Award by Dr. Georges Massiot of Pierre-Fabre Laboratories at the meeting of the PSE on Stable Isotope Techniques for the Analysis of Plant Metabolism at Nantes, France, on 10 July 2002.

Wolfgang Eisenreich studied Chemistry at the Technical University of Munich (TUM), Germany, graduating in 1987. During his doctoral studies at the TUM (1988–1990), he was introduced to natural product chemistry by Professor Adelbert Bacher, with whom he worked on the biosynthesis of vitamins and cofactors (deazaflavin F420, methanofuran, methanopterin, cobamide) from methanogenic bacteria. The pioneering contribution of this work was recognised by the award of the Hans-Fischer Prize in 1991. In 1989, while still continuing his doctoral studies, he joined a research team at the Procter & Gamble Company (Schwalbach, Germany and Brussels, Belgium) where he studied the effect of the natural clay, bentonite, on the softening effect of washing agents.

In 1991, Wolfgang Eisenreich was recruited by the TUM where he is now responsible, among other activities, for NMR spectroscopy. Stimulated by and involved in the many projects of the Bacher group, Dr. Eisenreich has established over the last 10 years a highly effective team in the field of biosynthesis research, which has been responsible for developing important novel techniques. His team has made major contributions to the elucidation of pathways of central importance to metabolism, notably the deoxyxylulose-5-phosphate (''alternative'' non-mevalonate) isoprenoid pathway. It was within this context that Dr. Eisenreich developed his concept of retrobiosynthesis. This important approach avoids many of the pitfalls that have hampered earlier biosynthetic research with stable isotopes. Moreover, Dr. Eisenreich established the structures of the products of the IspDEFGH proteins of the non-mevalonate isoprenoid pathway, now known to provide the building blocks for the vast majority of more than 25,000 known plant terpenoids.

His interest in plants was stimulated by the Naturwissenschaftlicher Verein für Schwaben, when he participated in many field expeditions to the Bavarian Alps. Subsequently, he has elucidated the biosynthetic origin of many plant metabolites and he has studied in detail the reaction mechanisms involved in their forma-

PII: S0031-9422(02)00492-2

tion by using novel sophisticated NMR analysis in conjunction with advanced labelling techniques. Important contributions to understanding the biosynthesis of gallic acid, loganin, chelidonic acid, anthraquinones, taxol, humulone, thiophenes, DIMBOA, verrucosanol, trachelanthic acid, essential oils, auxin, amarogentin, cannabinoids, and hyperforin have all been made by novel labelling and evaluation strategies.

Dr. Eisenreich also determined the biosynthesis of the lipase inhibitor, lipstatin, which is a major drug for the treatment of severe obesity, a life-threatening hazard in industrialised societies.

More recently, Dr. Eisenreich has applied NMR spectroscopy to proteins, again in highly innovative ways. Specifically, he has been able to elucidate the mechanism of the plant photoreceptor, phototropin, by NMR studies under light and dark conditions with a recombinant receptor domain loaded with various isotopomers of the chromophore, FMN. These pioneering studies have established that illumination of the receptor protein causes the addition of the thiol group of a cysteine residue to the 4a position of the flavin chromophore.

In the 15 years since his graduation, Wolfgang Eisenreich has published more than 100 scientific papers, many of them in *PNAS, J. Biol. Chem., J. Amer. Chem. Soc., J. Org. Chem.* and *Eur. J. Biochem.* A considerable number of important articles on plant metabolism have appeared in *Phytochemistry*. The majority of his publications have involved co-authors and partners in other laboratories, who have made significant contributions to the many fruitful projects mentioned above. We wish Dr. Eisenreich every success in all his endeavours.

Dr. Eisenreich can be contacted at wolfgang.eisenreich@ch.tum.de

Richard Robins
Phytochemical Society of Europe
Georges Massiot
Pierre-Fabre, Laboratories