



Dr. Volker Magnus (1942–2009)

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It has been almost one year since Dr. Volker Magnus, an outstanding Croatian plant physiologist passed away on July 30, 2009.

Volker was born March 22, 1942 in Eckernförde, Germany. He came to Zagreb as Deutscher Akademischer Austauschdienst (DAAD) fellow to study experimental biology at the Faculty of Natural Sciences and Mathematics, University of Zagreb.

After obtaining a B.S. degree in 1967, he continued his education in Zagreb as a graduate student began to carry out research in the Tracer Laboratory, Department of Organic Chemistry and Biochemistry at Ruđer Bošković Institute. His M.S. thesis, completed in 1971, dealt with the isolation of indole-3-methanol from pea seedlings, a metabolite of indole-3-acetic acid (IAA). His thesis marked the beginning of his life-long interest in plant hormone auxins. Volker obtained a Ph.D. in the field of plant biochemistry in 1976.

Volker moved for postdoctoral training to Prof. Robert S. Bandurski's laboratory, Michigan State University, (Michigan, USA) in 1977. Combining his expertise in plant indoles with extensive knowledge of synthetic organic chemistry, he produced two stable deuterated forms of IAA, thus enriching the auxin field with its first quantitative GC-MS isotope-dilution based assay. Volker always maintained excellent contacts with colleagues abroad. He returned to Michigan State University in 1982 as a visiting scientist. In the period between 1991 and 1993 he worked in the Sandberg laboratory in Umea, Sweden, and then moved to Mark Brenner's laboratory at the University of Minnesota, Minneapolis, MN, until 1996.

Volker returned to the Ruđer Bošković Institute where he founded the Laboratory of Chemical Biology, at the Department of Molecular Biology, and remained for the duration of his career.

Volker was a scientist with interdisciplinary interests. As an excellent chemist and a passionate plant biologist, he collaborated with colleagues from divergent scientific fields and had a number of research interests.

Volker and his first Ph.D. student, Goran Lačan, synthesized a number of conjugate standards and identified endogenous glycosides in 120 different samples ranging from bacteria and fungi, to algae and plants. In addition to auxin conjugates, Volker was working on alkyl and halogen auxins derivatives with his Ph.D. students, Nebojša Ilić and Eduard Dolušić.

He collaborated for more than twenty years with Dr. Kojić-Prodić and her group on the structure/activity relationship of auxins. More than 50 indolic compounds were characterized structurally, and classified as active auxins, antagonists, or inactive compounds, based on different bioassays and modeling approaches.

More recently, Volker's interests became focused on advanced methods for auxin localization, in the production of a novel class of antibodies based on linking ring-aminoalkyl substituted IAA to proteins.

As a plant biologist, how he primarily identified himself, he was interested in plant physiology and hormonal regulation of plant growth and developmental processes. He collaborated with Prof. Sibila Jelaska, Biology Department, Faculty of Science, University of Zagreb, in testing indole-3-ethanol and its sugar conjugates in the embryonic cultures of pumpkin. For more than twenty years they taught a joint course entitled: »Mechanisms of Plant Development«, at the doctoral study of biology at the Faculty of Science. Collaborating with his close friend and colleague from student days, Dr. Nikola Ljubešić, and later with Dr. Mercedes Wischer, Volker was involved in research of plastids in different plant species. Working with his Ph.D student Branka Salopek-Sondi during the last decade, he became actively involved in research on the role of plant hormones in the regulation of postanthesis development of the Christmas rose (*Helianthus niger* L.) flower.

Auxin conjugates attracted Volker's attention during his entire scientific career. In the last few years, in collaboration with Prof. Jutta Ludwig-Müller from the Techni-

cal University of Dresden (Germany), he participated in research of structure, function, and regulation of auxin amidohydrolases, enzymes which hydrolyze amino acid conjugates of auxin.

Volker was a member of the Croatian Biological Society, Croatian Society of Plant Biology, and American Society of Plant Biologists. He was president of the Croatian Society of Plant Biology from 1997 until 2001. He was the creator of the most recent Statutes of the Society and of the Society's representative emblem: the flower of *Aquilegia kitaibelii*, an endemic Croatian plant residing in the mountains of Velebit and Plješivica. Volker was member of the Editorial board of *Acta Botanica Croatica* since 1998 responsible for plant physiology and biochemistry.

In 1986, he received an award by the foundation of Stanka and dr. Ljubiša Glišić, as one of the authors of a prestige research paper published in *Plant Physiology* (1985). In 1993, he was honored by a 'Certificate of Appreciation' from the United States Department of Agriculture, for particularly successful completion of the project Immunochemical methods for quantitative determination of the plant hormone, indole-3-acetic acid.

Volker was entirely dedicated to science until the very end of his life. Although retired since 2008, he was in the laboratory daily, participating in research, writing, and discussing problems with young colleagues. He published numerous scientific papers in the field of chemistry and plant physiology. He will be sincerely missed by all who knew him, particularly by his closest collaborators.