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### Announcement

## The Phytochemical Society of Europe—Pierre-Fabre Award for Phytochemistry 2001



Professor Robert J. Nash

The Committee of the Phytochemical Society of Europe and Pierre-Fabre Laboratories are pleased to announce that the recipient of this Award for 2001 is Professor Robert J. Nash (IGER and Molecular Nature Ltd, Aberystwyth, Wales) for his outstanding contribution to the isolation and characterisation of very polar polyhydroxyalkaloids. Professor Nash was presented with the Award at the meeting of the PSE on Lead Compounds from Higher Plants at Lausanne, Switzerland, on 14 September 2001.

Robert Nash studied Botany/Zoology at the University of Reading, UK, graduating in 1980. His introduction to plant phytochemistry could hardly have been better: a third year project on UV patterns in *Potentilla* with none other than Professor Jeffrey Harborne. The fact that this work was published (*Biochem. Syst. Ecol.* 12, 315, 1984) indicated even at this early stage the quality of his research. His doctoral studies (1990–1993) were carried out at King's College, London, and the Royal Botanic Gardens, Kew, on Secondary Compounds in Leguminosae and Cycadales, under the no less illustrious supervision of Professor Arthur Bell. During this period, Robert first began to study polyhydroxyalkaloids, interesting himself in their isolation, structural characterisation, synthesis and biological activities (*Tetrahedron Lett.* 26, 3127, 1985). Robert stayed a further 10 years at the Jodrell Laboratories in Kew and it was during this time that he established his reputation in this field, working variously on NERC

and MRC post-graduate fellowships. Notably, he developed chromatographic methods specifically adapted to these highly polar alkaloids, using a combination of ion-exchange and HPLC for isolation and derivatization-GC for characterisation. Probably the best-known discovery during this period is castanospermine, isolated from the fruit of the Morton-Bay Chestnut, *Castanospermum australe* (*J. Chem. Soc. Chem. Commun.* 11, 738, 1985), and found to have potent anti-viral properties. The anti-glycosidase activity of castanospermine and many other polyhydroxyalkaloids, which can be considered as sugar-mimics, was also established during this period.

Never one to sit all day in the lab 'collecting compounds', Dr Nash was involved in a number of field expeditions to Central America, both collecting potentially interesting species and conducting ecological surveys of fragile environments. This led to further overseas roles, as co-leader of the Maya ICBG chemistry programme (Mexico), as ODA consultant in India and as a Royal Society visiting scientist in Japan. In the UK, meanwhile, he became interested in the sequestration of polyhydroxyalkaloids in insects, stimulated by numerous enquiries from Miriam Rothschild!

In 1993, Dr Nash was recruited by the Institute of Grassland and Environmental Research (IGER) at Aberystwyth, Wales, to head-up a new natural products group. Here, while continuing actively to study polyhydroxyalkaloids, Dr Nash widened his research

interests to examine anti-microbial agents, toxins and metabolic disorders, including inevitably BSE. However, a careful read through his publication list for this period shows that the polyhydroxyalkaloids would not go away, cropping up frequently as toxins and as the agents responsible for metabolic disorders. Soon, it became apparent that compounds such as the calystegines, originally associated with highly toxic plants such as the thorn apple, *Datura innoxia*, occurred even in food-plants such as potato (*ACS Symposium Series*, 745, 129, 2000).

Recognising that long-term research needs to be both adequately funded and focussed, Dr Nash established a strong link with Xenova Discovery Ltd in the late 1990s. This evolved into the creation of Molecular Nature Ltd in 1999 as a spin-off company from IGER. The company's core business is the production of libraries of pure natural products, notably from British and European plant species. It is hardly surprising to find that water-soluble natural products and glycosidase assays/inhibitors are a speciality!

Professor Nash continues his work in natural product discovery, pursuing an interest not only in isolating compounds but also in understanding their role in nature and their potential value in disease treatment. Since 1984 he has authored over 115 scientific publications. The majority of these have involved several co-authors, whose specific expertise has been called on to bring the work to fruition. Dr Nash was appointed as Visiting Professor at the University of Strathclyde, Department of Pharmaceutical Sciences in 2000, indicating his commitment to inducing good graduates into natural products research in the future. We wish Professor Nash every success in all his endeavours.

Professor Nash can be contacted at [robert.nash@molecularnature.com](mailto:robert.nash@molecularnature.com) or via the web site <http://www.molecularnature.com>

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