

The Roy L. Whistler International Award in Carbohydrate Chemistry 2014

The International Carbohydrate Organization is delighted to announce that the Roy L. Whistler International Award in Carbohydrate Chemistry for 2013 has been awarded to Professor Geert-Jan Boons, Franklin Professor of Chemistry at the Complex Carbohydrate Research Center (CCRC), University of Georgia, USA.

In 1984, the International Carbohydrate Organization established the Award in honour of Professor Roy L. Whistler, to recognize scientists 'who have made contributions of excellence in carbohydrate chemistry and biochemistry and with promise of continuing significant contributions'. The Award is recognized with a plaque, a cheque for US \$20,000, and an invitation to present the opening lecture at the International Carbohydrate Symposium (ICS). The next ICS will be held in Bangalore, India from January 12 to 17, 2014.



Geert-Jan Boons (1962) studied chemistry at the State University of Leiden (Netherlands), and obtained his PhD degree in Synthetic Chemistry in 1991. After appointments as a Postdoctoral Fellow at Imperial College (London, UK) and as Professor of Chemistry at the University of Birmingham (UK), he moved to the USA in 1998 to join the faculty at the CCRC, where he was appointed Franklin Professor of Chemistry in 2004.

The carbohydrate research activities of Boons are focused on the development and application of synthetic methods for efficient carbohydrate assembly, to investigate the roles of glycans and glycan binding proteins in complex biological systems. He has been a pioneer in the development of convergent strategies for the assembly of complex oligosaccharides. In particular, he is known for development of orthogonally-protected building blocks that can be used flexibly and iteratively for the preparation of diverse classes of oligosaccharides. He has also made a significant contribution to development of bio-orthogonal methods for labeling glycans of living cells. His methods have been widely adopted by the international carbohydrate chemistry community, and as a result, he has had a major impact on the current state of the art in chemical synthesis of carbohydrates and glycoconjugates.

In recent years Prof Boons has utilized his skills to develop unique chemical tools to study diverse biological problems. Notably, his group has synthesized a diverse library of heparan sulfate oligosaccharides that have been used to identify inhibitors of BACE-1, a key protease in the development of Alzheimer's disease. He developed a strained ring dibenzocyclooctyne (DIBO) reagent for copper free coupling to azides that is now commercially available for use by the research community. One of the most promising of his biological ventures is the design of a conjugate vaccine of a glycopeptide tumor antigen from Muc-1 that elicits robust production of antibodies capable of lysing tumor cells. This vaccine now entering formal preclinical analysis prior to human testing for treatment of breast cancer and other cancers that express the Muc-1 antigen.

Prof Boons has published over 200 papers, a book (Organic Synthesis with Carbohydrates), 4 edited books, 13 book chapters, and numerous patents, and over the years has received many honours, including the Horace Isbell Award from the American Chemical Society and the Carbohydrate Research Award for Creativity in Carbohydrate Science.

Melbourne, Australia, March 11, 2013
Associate Professor Spencer Williams
Secretary of the International Carbohydrate Organization (ICO)