



華美化學與化工學會
Chinese-American Chemical Society
(CACCS)

Chinese-American Chemical Society Event
at
240th American Chemical Society National Meeting
(Fall 2010 ACS Annual Meeting)

Monday, August 23, 2010

Social Hours
5:30 - 6:30 PM

Open to all ACS meeting Attendees (Same location as banquet. Free of charge)

Banquet and Keynote
6:30 - 9:00 PM

China Pearl Restaurant
9 Tyler Street
Boston, MA 02111-1947
(617) 426-4338

<http://www.chinapearlrestaurant.com/>

Tickets Available at ACS Registration, \$33/Person

Keynote Speech

Synthesis and Biomedical Applications of Complex Glycoconjugates

Zhongwu Guo, Ph.D.

Professor, Department of Chemistry
Member, Barbara Ann Karmanos Cancer Institute
Wayne State University
Detroit, MI 48202, USA

Keynote Speech

Synthesis and Biomedical Applications of Complex Glycoconjugates

Zhongwu Guo, Ph.D.

Professor, Department of Chemistry
Member, Barbara Ann Karmanos Cancer Institute
Wayne State University, Detroit, MI 48202, USA

Abstract

Although the first professional training I formally received was pharmacy, I was fascinated by chemistry. Then, I obtained a Ph.D. degree in organic chemistry working on organometallics. When I was still a graduate student, carbohydrate research started to boom. The sweetness of carbohydrates and the important roles they play in biological and pathological processes lured me into this fertile field. However, currently carbohydrate research lags far behind protein and nucleotide research, due largely to their complex structure and difficult synthesis. To facilitate access to carbohydrates, glycopeptides and other glycoconjugates, our laboratory has long been working on developing novel synthetic methodologies. In the process, we have also developed strong interests in applying synthetic glycoconjugates to probing fundamental biological issues. This presentation will focus on our recent effort in developing new carbohydrate-based cancer vaccines, synthesis of glycosylphosphatidylinositols (GPIs) and GPI-linked peptides/proteins, and use of synthetic GPI conjugates to explore cell surface GPI anchorage.

Biography

Zhongwu Guo received his Pharmacy Degree and MS degree in medicinal chemistry from the Second Military Medical University, China in 1984 and 1987, and his Ph.D. degree in organic chemistry from the Institute of Organic Chemistry, Polish Academy of Sciences in 1991. After finishing a postdoctoral fellowship in the State Key Laboratory of Bioorganic Chemistry, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences in 1994, Dr. Guo was appointed Assistant Professor and promoted to Associate Professor at the same institution and in the same year. He was a RIKEN fellow in Japan from 1996 to 1997 and Assistant Research Officer at the Institute for Biological Sciences, National Research Council of Canada from 1997 to 1999. Dr. Guo was appointed tenure-track Assistant Professor of Chemistry at Case Western Reserve University in 1999 and promoted to Associate Professor with tenure in 2004. Dr. Guo has been Professor of Chemistry at Wayne State University since 2005 and Visiting Professor at the Second Military Medical University since 2009.

Dr. Guo's research interests are in chemical and chemoenzymatic synthesis of natural products, particularly oligosaccharides, glycopeptides, glycolipids and other glycoconjugates of biological significance, new synthetic methodology development, glycobiology and glycoimmunology. Dr. Guo is a leading expert in the fields of carbohydrate chemistry, cancer vaccine development and glycosylphosphatidylinositol-anchored protein and glycoprotein research. Dr. Guo has published more than 100 papers, 1 book, and 3 patents. He is the recipient of several international awards, including the Alexander von Humboldt Foundation Fellowship of Germany (1996), Research Innovation Award of Research Corporation of US (2000), and New Investigator Award of the ACS Carbohydrate Division (2005). He serves as a member on the Editorial Board of "Journal of Carbohydrate Chemistry" and "Current Organic Synthesis".