
Foreword

That carbohydrates are molecules of immense biological importance is now without question. Over the past thirty years, an increasing number of biological roles have been ascribed to carbohydrates, and these now include processes ranging from egg fertilization to bacterial and viral infection to inflammation to the metastasis of cancer. Despite the impressive advances made in recent years in the area of glycobiology, a molecular-level understanding of the role of carbohydrates in biology is, in many cases, lacking. In addition, although some carbohydrate-based drugs and vaccines have entered clinical trials or are used in the treatment and prevention of disease, in general, the potential of carbohydrates as novel drugs has yet to be realized. Critical to future advances in this area is synthetic carbohydrate chemistry, which can provide compounds for use as tools for biochemical studies or in the generation of novel vaccines or finally as lead compounds for new therapeutic agents.

Since its inception in 1965, *Carbohydrate Research* has had a long history of publishing advances in the synthesis of carbohydrates, oligosaccharides and related analogs. In view of this, the Editors and Editorial Board of *Carbohydrate Research* chose to solicit papers for a special thematic issue on synthetic carbohydrate chemistry. These efforts led to the collection of papers in this issue, the publication of which is timed to coincide with the XXIII International Carbohydrate Symposium and

associated Satellite Meeting on Synthetic Carbohydrate Chemistry to be held, respectively, in Whistler and Vancouver, British Columbia, Canada from July 22 to 28, 2006.

This issue contains 52 contributions, including 31 Full Papers, 15 Notes and 6 Perspectives, from scientists in 20 countries. As a quick perusal of the table of contents will reveal, a broad range of topics in synthetic carbohydrate chemistry area are represented in this issue, ranging from novel methodology to the total synthesis of oligosaccharides and other important carbohydrate-containing compounds to the use of carbohydrates in the preparation of other natural products.

With the pace of research in the broader area of carbohydrate science proceeding at a pace heretofore unseen, it is clear that the field of synthetic carbohydrate chemistry will flourish for many years to come. We wish to thank all of the authors whose work is reported here for their contributions and hope that this issue will further solidify the role of *Carbohydrate Research* as a venue for publishing important advances in synthetic carbohydrate chemistry.

Todd Lowary
Editor

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