

## Chung-Yi Wu Ph. D. Associate Research Fellow, The Genomics Research Center, Academia Sinica

### Education

|  |              |           |                        |
|--|--------------|-----------|------------------------|
| National Chiao-Tung University, Taiwan                       | B.S.         | 1994      | Chemistry              |
| National Chiao-Tung University, Taiwan                       | M.S.         | 1996      | Organic Synthesis      |
| National Chiao-Tung University, Taiwan                       | Ph.D         | 2000      | Organic Synthesis      |
| Institute of Chemistry, Academia Sinica, Taiwan              | Postdoctoral | 2001-2004 | Carbohydrate Chemistry |
| Department of Chemistry, The Scripps Research Institute, USA | Postdoctoral | 2004-2006 | Carbohydrate Chemistry |

### Positions and Employment

2011- Associate Research Fellow, Genomics Research Center, Academia Sinica

2006-2011 Assistant Research Fellow, Genomics Research Center, Academia Sinica

### Honors

2014 The David Y. Gin New Investigator Award, American Chemical Society.

2012 Academia Sinica Research Award for Junior Research Investigators.

2012 Career Development Award, Academia Sinica, Taiwan.

2012 Project for Excellent Junior Research Investigators Award, National Science Council, Taiwan

### Principal areas of research interest

My research program is focused on elucidating the role of complex oligosaccharides involved in a host of biological processes of medical relevance by employing glycan array created by synthetic chemistry. We are particularly interested in understanding the recognition events responsible for the interactions of oligosaccharides with pathogens and antibodies. To address these questions we are developing and applying techniques traditionally associated with the areas of organic synthesis, solid-phase chemistry, combinatorial chemistry, engineering and automation, analytical chemistry, biochemistry, enzymology, molecular biology, neurobiology, immunology and drug design.

The core interests our research program currently address the following areas:

#### **Total Synthesis of Biologically Important Oligosaccharides**

- Tumor-associated antigens
- HIV-related oligosaccharides
- Bacterial cell-surface antigens

#### **Development of Carbohydrate-based Vaccines**

- A fully synthetic *N. meningitidis* vaccine
- Synthetic cancer vaccines
- Synthetic HIV vaccine

#### **Carbohydrate Microarrays**

- For influenza virus and cancer detection