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Education

Ph.D., Life Science, National Defense
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M.S., Biological Science and Technology,
National Chiao Tung University, Taiwan

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Research

Glycosylation plays a crucial role manipulating post-translational modification of more than 90% of proteins in eukaryotic cells. Glycans expressed on cell surface have participated in many recognition phenomena by interacting with their corresponding proteins or receptors. Hence, our research interests focus on exploring interactions between glycan binding proteins with specific oligosaccharides. We have developed two high-throughput carbohydrate microarray platforms and applied to investigate glycan binding profiles of lectins, antibodies, proteins, as well as viral particles. The carbohydrate recognition preferences of influenza clinical isolates and Enterovirus 71 are also surveyed. In addition, we are interested in the relationship between tumorigenesis with the regulation and expression of glycosyltransferases, as well as cell surface glycan structures. The carbohydrate tumor markers of oral cancer and colon cancer initiating cells are now investigated