

Po-Shen Pan Guides Research Team: Tzu-Ching Chou and Others' Paper Featured on Cover of International Journal

Campus focus

Associate Professor Po-Shen Pan's team from the Department of Chemistry, along with Professor Jyh-Chiang Jiang's team from the National Taiwan University of Science and Technology, completed a paper titled “The use of multicomponent reactions in the development of bis-boronic acids for the detection of β -sialic acid.” It was featured on the cover of the international journal “Organic & Biomolecular Chemistry” on February 28. The journal is ranked in the top 25% of Q1 journals with an impact factor of 3.26.

Dr. Pan explained that many studies have shown a close correlation between the concentration of sialic acid in the blood and the likelihood of patients developing neurodegenerative diseases and cancer. Detecting abnormalities in sialic acid concentration early on has become a crucial factor in the early detection of these diseases. “The unique bis-boronic acid molecules developed in this study can detect sialic acid molecules. In the future, there is a possibility to further develop them into tools for detecting sialic acid.”

This study is related to a patent previously obtained by the research team, which won a gold medal at an invention exhibition. It serves as an extension of that patent. Dr. Pan plans to seek assistance from the Research and Development Office to apply for derivative patents and form a portfolio to attract technology transfer from companies. It is worth mentioning that the initial drafting of this paper was completed by an undergraduate student, “demonstrating that with appropriate encouragement, allowing students to try new things they have never done before, undergraduate students can demonstrate remarkable potential.” Helping students achieve their desired results gives him a great sense of accomplishment.



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Simple Recipe for

β -Sialic Acid Molecular Probe



● B(OH)₂

Ingredients
Amine
Aldehyde
Carboxylic acid
Isocyanide

Cook time 15 min	Temperature 60°C
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 ROYAL SOCIETY
OF CHEMISTRY

PAPER

Po-Shen Pan *et al.*

The use of multicomponent reactions in the development of bis-boronic acids for the detection of β -sialic acid

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