

# New way to modify sugar molecules is found

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A strategy for modifying complex sugar molecules developed by University of Oklahoma scientists reportedly might improve some scientific studies.

The scientists say their new technique could dramatically increase the ease and speed with which researchers tackle issues relating to tumor detection and the pathology of infectious diseases.

Researchers note what a protein "wears" can dramatically alter how it is recognized, and many proteins modify their appearance by the addition of elaborate sugars.

Such sugars play an important role in cell communication, serve as docking pads for bacteria or viruses, or provide clinically useful markers for cancer detection.

From this, the rapidly growing field of glycomics has emerged, exploring which proteins are modified with which sugars, and the implications of such modifications.

This often involves synthesizing different sugars and examining how they interact with different proteins. But that is a tedious process, limiting the efficiency and scale of glycomic experiments.

Richard Cummings and colleagues found a highly efficient chemical process for rapid generation of modifiable sugar molecules. Sugars thus prepared are linked with a fluorescent molecule, making them easier to

detect, and assemble onto arrays for high-throughput analysis.

The research is detailed in the November issue of Nature Methods.

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