

## Targeting cancer with sugar-powered immunotherapy

Over the last few decades, researchers tinkering with molecules that turn an immune cell on and off have created a revolutionary approach to fighting cancer. Instead of taking aim at the tumor directly, this new class of medicines harnesses the patient's own immune cells to tackle the disease.

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[A] few companies are venturing into a new frontier—glycobiology, the science of the sugars that stud the surface of cells. Sugars act like switches and knobs that control where and when a cell's biological machines, proteins and lipids, do their jobs. Yet for all their fine-tuning finesse and power, sugars are [highly complex](#) molecules that have often eluded a deeper understanding of their workings because they are so hard to study in the lab.

Recently, though, the science has caught up and biotech companies have begun to build on these findings to develop anti-cancer drugs. [On November 26] at an American Association for Cancer Research meeting in Miami, Palleon Pharmaceuticals, a Massachusetts startup, unveiled new data from experiments in rodents on a profoundly different set of checkpoint blockers that target sugars.

These experimental drugs work by interfering with complex sugars called glycans that coat the surface of tumor cells and let them pass unnoticed by the otherwise vigilant immune system. It's an "underappreciated mechanism of immune evasion," says [researcher] Michael O'Dwyer.

**Read full, original post:** [The Biology of Sugars Points to a Sweet Strategy for Treating Cancer](#)