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AREA(S) OF FOCUS:

Exploiting protein systems found in nature to engineer novel materials

The Jewett lab focuses on advancing synthetic biology research in support of planet and societal health. The key idea is to make biology easier to engineer by gaining fundamental mastery of cellular processes.

KEY RESEARCH AREAS:

***In-vitro* glycosylation**

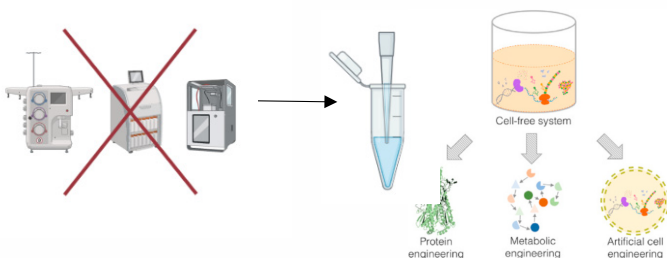
Expand glycoengineering toolkit to explore a new era of therapeutics and vaccines that better mimic human biology.

Ribosome engineering

Establish a cell-free ribosome construction platform (iSAT) to allow rapid, inexpensive protein manufacturing.

Cell-free metabolic engineering

Inexpensive cell-free approach to rapidly develop biosynthetic products like fuels and materials without the need for large bioprocessors and waste.



ENTREPRENEURIAL SUCCESS:



STEMLOOP

Stemloop creates sensors that function outside of a cell, which enable rapid, sensitive, and specific target analyte detection.

First product: μ Sense™

- Quickly test lead levels in water to tackle America's water crisis.



A leader in cell-free protein synthesis technology
Raised \$15 million before acquisition by Resilience Inc. (2021).



Developer of cell-based technologies for drug discovery and biosynthetic production. Raised \$5 million.



Educational kit for supporting in-classroom education about engineering, biology, and human health with fluorescent readouts.