



TECHNOLOGY

Novel Pseudo-Peptides and Method of Synthesis with Applications in Bioremediation and Biotechnology

OVERVIEW

Background

Synthetic biology enables researchers to design biologically active molecules that have wide-ranging applications in the pharmaceutical and chemical industries as a potential drug candidate or a precursor to creating other economically or biologically important compounds. Unnatural amino acids (UAAs) are chemically synthesized or naturally occurring non-proteinogenic amino acids. The incorporation of unnatural amino acids into proteins to generate proteins with novel biochemical and biophysical properties has emerged as a powerful tool for studying protein structure and function, as well as designing new proteins.

Innovative Technology

Researchers at the University of Maryland have developed a novel method of synthesizing unnatural amino acids or pseudopeptides using a recombinant enzyme. Using different variants of this recombinant enzyme, the researchers are able to produce a variety of these unnatural amino acids. The applications for these unnatural amino acids vary from clinically useful medicines and bioremediation.

APPLICATIONS

1. Used to make clinically useful medicines, pharmaceuticals, nutraceuticals, industrial products and biotechnology tools
2. Bioremediation

ADVANTAGES

1. Easy to manufacture and scale up
2. Easy to manipulate

CONTACT INFO

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Additional Information

INSTITUTION

University of Maryland, College Park

PATENT STATUS

Patent(s) pending

LICENSE STATUS

Contact OTC for licensing information

CATEGORIES

- Biomaterials

EXTERNAL RESOURCES

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