GECCO: A Genetic Engineering Method for Introducing Reactive Amino Acids into Proteins

Tech ID: 34431 / UC Case 2019-164-0

TECHNOLOGY DESCRIPTION

Scientists at UCSF have developed a groundbreaking method to enhance protein functionality by selectively introducing highly reactive amino acids, dehydroalanine (Dha) and dehydrobutyrine (Dhb), directly into proteins. This innovative strategy, called Genetically Encoded Chemical Conversion (GECCO), uses proximity-enabled reactivity to convert natural amino acids into reactive residues within living cells, bypassing the need for chemical treatments. GECCO has demonstrated proof-of-concept success in laboratory settings with applications in protein engineering, glycoprotein synthesis, and biochemistry research.

STAGE OF DEVELOPMENT

Proof-of-concept

RELATED MATERIALS

- Genetically Introducing Biochemically Reactive Amino Acids Dehydroalanine and Dehydrobutyrine in Proteins - 05/15/2020

PATENT STATUS

Country	Type	Number	Dated	Case
European Patent Office	Published Application			2019-164
Patent Cooperation Treaty	Reference for National Filings	WO2020/206341	10/08/2020	2019-164

Additional Patent Pending

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OTHER INFORMATION

CATEGORIZED AS

- Medical
  - New Chemical Entities, Drug Leads
  - Other

RELATED CASES

2019-164-0