

Establishment of a Next Generation Biomanufacturing Platform with Microorganisms

R&D Project Title (Registered) : Development of DBTL Technologies for Bioengineering to Pioneer Diverse Microbial Functions

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Summary :

In this project, we strive to mitigate greenhouse gas emissions and ensure a sustainable energy supply by the development of a cutting-edge biomanufacturing platform based on the unique and diverse physiology of microorganisms.

Our project specifically focuses on three core areas:

1. Establishing a 'basic cells' library, each equipped with a diverse array of molecular tools essential for biomanufacturing.
2. Identification and engineering novel, unique functions of non-model microorganisms.
3. Advancing the next generation "Design-Build-Test-Learn (DBTL) technologies to engineer microorganisms.

By tackling these challenges, we will streamline the process development timeline, expand the repertoire of bio-based products, broaden the entry of new ventures in the relevant field, and facilitate the growth of a sustainable bioeconomy.

Mitigation of greenhouse gas emissions by a cutting-edge biomanufacturing platform with engineered microorganisms

Challenge 1

Establishment of a '**basic cells**' library, each equipped with molecular tools essential for biomanufacturing

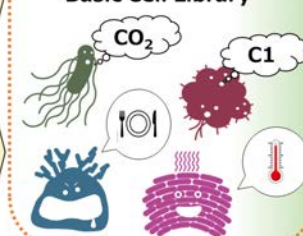
Challenge 2

Identification and engineering of **novel, unique functions of non-model microorganisms**

Challenge 3

Advancing **the next generation 'Design-Build-Test-Learn (DBTL)'** technologies

Establishment and expansion of 'Basic Cell Library'



Streamline the process development timeline !

Expand the repertoire of bio-based products, Broaden the entry of new ventures, and Facilitate the growth of a sustainable bioeconomy

