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.