Multistrain Population Control Systems and Methods in Bacteria

Tech ID: 29670 / UC Case 2018-375-0

BACKGROUND

Microbial ecologists are increasingly turning to small, synthesized ecosystems as a reductionist tool to probe the complexity of native microbiomes. Concurrently, synthetic biologists have gone from single-cell gene circuits to controlling whole populations using intercellular signaling.

TECHNOLOGY DESCRIPTION

Researchers from UC San Diego have developed methods, systems, kits, and compositions for culturing bacterial cells, and more particularly for multi-strain ecosystems, including a quorum-regulated multi-lysis system. The system can ensure specific delivery of a therapeutic protein(s) via engineered strains and may also be engineered to output specific profiles of therapeutic proteins to the disease site.

STATE OF DEVELOPMENT

Currently in the working research prototype stage

INTELLECTUAL PROPERTY INFO

The invention has a patent pending and is available for licensing and/or sponsored research.

PATENT STATUS

Country	Type	Number	Dated	Case
Patent Cooperation Treaty	Published Application	WO 2019/237083	12/12/2019	2018-375

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OTHER INFORMATION

KEYWORDS

Cell culture, engineered bacteria, lysis, quorum sensing, gene circuit, intercellular signaling

CATEGORIZED AS

- Materials & Chemicals
  - Biological
- Medical
  - Delivery Systems

RELATED CASES

2018-375-0

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