

Memorandum of Understanding

between

**The Regents of the University of California, as Management and Operating
Contractor for
Lawrence Berkeley National Laboratory**

and

Delft Advanced Biorenewables, The Netherlands

Concerning Collaboration in the Field of Fermentation and Product Recovery Process Development and Scaling

This Memorandum of Understanding (MOU) is between The Regents of the University of California (The Regents), in its capacity as the manager and operator of the Lawrence Berkeley National Laboratory (LBNL) and Delft Advanced Biorenewables, The Netherlands.

LBNL is a U.S. Department of Energy (DOE) National Laboratory managed and operated by The Regents pursuant to DOE Contract No. DE-AC02-05CH11231. Delft Advanced Biorenewables is a small business.

The Regents and Delft Advanced Biorenewables are collectively herein referred to as the "Participants" or individually as a "Participant."

1. Objective

The Participants intend to explore potential future collaboration in the field of Fermentation and Product Recovery Process Development and Scaling.

2. Proposed Areas of Collaboration

The Participants intend to collaborate in one or more of the following areas:

- A. Integrated fermentation and product recovery process development for the production of bio-based chemicals and fuels
- B. Data analysis, techno-economic analysis, and in-process control development for integrated fermentation bioprocess and product recovery
- C. Process verification and scaling with potential third parties such as academic, National Lab, and industrial researchers

The scope of above activities and cooperation may be changed or extended to other areas by mutual written consent of the Participants.

3. Proposed Forms of Collaboration

The Participants expect to collaborate through mutual visits, the exchange of publicly available information, exchanges of researchers and experts, training and planning for potential future joint research, with any future collaborative research to be undertaken only pursuant to an appropriate written agreement therefor.

4. Proposed Mechanisms of Collaboration

- a. To administer the implementation of this MOU, each Participant should designate one or more principal coordinators to be in charge of the collaboration, through whom all requests and plans of that Participant should be made.
- b. The principal coordinators may hold meetings when necessary to discuss matters related to collaboration under this MOU.
- c. The principal coordinator for The Regents is Todd Pray, Program Head of the Advanced Biofuels and Bioproducts Process Development Unit (ABPDU). The principal coordinator for Delft Advanced Biorenewables is Jan Willem Klerkx, Chief Commercial Officer.

5. Commencement, Modification and Discontinuation

- a. Cooperative activities under this MOU may commence upon signature of the Participants and continue for a five (5) year period, unless discontinued in accordance with paragraph b of this Section, or extended in accordance with paragraph c of this Section.
- b. The Participants may discontinue this MOU at any time by mutual written consent. Alternatively, a Participant that wishes to discontinue its participation in this MOU should endeavor to provide at least thirty (30) days written notice to the other Participant.
- c. This MOU may be modified or cooperative activities hereunder extended for additional periods by mutual written consent of the Participants.

6. Exchange of Information

The Participants do not anticipate the exchange of any business-confidential information or the creation of intellectual property. If the Participants determine that a particular activity may lead to the exchange of business-confidential information or the creation of intellectual property, they should consult with each other and make appropriate written agreements therefor.

7. General Provisions

- a. This MOU does not create any legally binding obligations between the Participants.
- b. Each Participant should conduct the activities contemplated by this MOU in accordance with all applicable laws, regulations and other requirements to which it is subject, including by way of illustration and not by way of limitation, export control laws; environmental, health and

safety laws and regulations; and international agreements to which its Government is party.

- c. The conduct of cooperative activities contemplated by this MOU is subject to the availability of funding, personnel, and other resources.
- d. Each Participant is to be responsible for the costs it incurs in participating in cooperative activities under this MOU.

Signed in duplicate:

FOR THE REGENTS OF THE
UNIVERSITY OF CALIFORNIA:

By: Michael Witherell

Name: Michael Witherell
Director, Lawrence Berkeley

Title: National Laboratory

Date: 18 April 2019

Place: Berkeley

FOR DELFT ADVANCED
BIORENEWABLES

By: Kirsten Steinbusch

Name: Jan-Willem Klerkx

Title: Executive
~~Chief Commercial~~ Officer

Date: 29 April 2019

Place: Delft, NL