

ABO 2014 Conference

Monday, September 29nd

8:30 am - 4:00 pm: **Tour – Diversity and Commercial Potential of Algae – Lectures & Lab Tours at Scripps Institution of Oceanography:** Tryg Lundquist, CalPoly San Luis Obispo

Tuesday, September 30th

9:00 am - 10:15 am **Producers Panel II "Crossroads for Commercialization" : Martin Sabarsky**, CEO, Cellana

3:00 pm - 4:30 pm: **Cultivation 1: Carbon Capture and Open Pond Algae Cultivation:**
B.A.Black, National Renewable Energy Laboratory
Dynamic Lipid Component Distribution and Elemental Composition in Two Algal Strains, Informing Strain and Process Improvement Strategies

Large-Scale Cultivation: Valerie Harmon, Cellana LLC
As Easy as "ABC" – "Always Be Commercializing:" Cellana's Multi-Product, Biorefinery-Based Business Model for the Profitable Commercialization of Biofuels, Feed & Food, and Nutraceutical Products Today, Tomorrow, and in the Future

5:00 pm - 6:30 pm **The Omics of Algal Biofuels: Haifeng Geng**, Sandia National Laboratory
Mapping the Microbiota Stability Landscape in Outdoor Algal Culture Systems

Innovative Harvesting and Extraction Technologies: Tao Dong, National Renewable Energy Laboratory
Diluted Acid Pretreatment for an Integrated Microalgae Biorefinery to Produce Lipid- and Carbohydrate-Based Biofuels

YenJung Lai, Arizona State University – Tempe
*Superior FAME Recovery from *Scenedesmus* sp. through Pulsed Electric Field Pre-Treatment*

Xuezhi Zhang, Arizona Center for Algae Technology and Innovation, Arizona State University
Progress and Perspectives of Large Scale Algae Biomass Harvesting: A Case Study at the ATP3 Testbed

Algal Products: Mark Edwards, Arizona State University
Nutrients by Special Delivery: Superior Algal-Based, Functional Foods, Feed and Medicines

Wednesday, October 1st

- 8:30 am - 10:00 am** **Conversion of Lipids and Biomass into Fuels: Ryan Davis**, Sandia National Labs
The ABLE Process: Algal Biochemical Liquefaction to Energy
- 10:30 am - 12:00 pm** **Photobioreactor Developments:** Panel Chair: **John McGowen**, Arizona State University
Eugene Roebroek, Lgem
GemTube™ Two-Phase Tubular Photo-Bioreactors for Commercial Mass Cultivation of Micro-Algae
John McGowen, ATP3
Performance Evaluation of the Helix Tubular Glass Photobioreactor for High Quality Inoculum Production
Nikolaos Katsikis, SCHOTT North America
Boost for Light Utilization in Tubular Photobioreactors Via Optimized Tube Design
Nuno Coelho, A4F
ALGAFARM - Industrial Production of Chlorella
Stefan Matthes, GICON GmbH
Process Development for the Production of Microalgae Biomass Using a Novel Photobioreactor with Integrated Temperature Control and Biomimetic Design
- 1:30 pm - 2:00 pm** **Algae Foundation and Technical Standards Update: Lieve Laurens**, Senior Scientist, National Renewable Energy Laboratory
Driving towards a Common Language for Algal Biomass for Biofuels and Bioproducts: High Impact of Data and Method Harmonization
- 2:00 pm - 3:15 pm** **DOE Bioenergy Technologies Office: Report from Project Performers:**
Tryg Lundquist, Associate Professor, California Polytechnic State University

Thursday, October 2nd

- 8:30 am - 10:00 am** **Cultivation and Ecology: Charles O'Kelly**, Cellana, LLC
Know Your Enemy: Cellana's Successful Strategy for Dealing with Contaminants in Algal Mass Culture
- Modeling a Sustainable Algae Industry: Ryan Davis**, National Renewable Energy Laboratory
Techno-Economic Analysis for a Novel Route to Algal Biofuels via Biochemical Processing: Process and Cost Targets Towards Achieving Viability
- Ron Pate**, Sandia National Laboratories
System Overview and Preliminary Assessment of the Production of Biofuels

from Chemical, Biochemical, and Thermochemical Processing and Conversion of Benthic Polyculture Biomass Produced by Algal Turf Cultivation

Commercial Technology Development: Albert Vitale, Commercial Algae Management, Inc.

Commercializing Dewatering and Extraction Processes for Algae Biomass

Thomas Dempster, Arizona State University

Algae Test-Bed Public Private Partnership (ATP3): Opportunities to Engage in Open Collaborative Testbed Network Activities

10:30 am – noon

Algal Strain Development: Jianping Yu, National Renewable Energy Laboratory

Metabolic Network Plasticity in an Ethylene-Forming Cyanobacterium Synechocystis 6803

Cultivation 2: Wastewater and Nutrient Recycle: Panel Chair: **Halil Berberoglu**, The University of Texas at Austin

Todd Lane, Sandia National Laboratories

Major Nutrient Recycling for Sustainable Algal Production

Halil Berberoglu, The University of Texas at Austin

Nutrient Mass Transport and Limitation in Attached Cultivation of Algae

Milton Sommerfeld, Arizona Center for Algae Technology and Innovation

Effectively Utilizing Concentrated Nutrient Sources from Anaerobic Digesters and Dairy Lagoons for Algae Cultivation

Ruth Spierling, California Polytechnic State University

Nutrient and Water Recycling in Wastewater-based Algae Biofuel Production

Financing Algae Projects: Martin Sabarsky, Cellana LLC

A Brand ReNew™ Day for the Algae Biomass Industry: Multi-Product Biorefineries That Combine Economic Sustainability With Environmental Sustainability

