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 Poduce 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
John McGowen, ATP3
Performance Evaluation of the Helix Tubular Glass Photobioreactor for High Quality Inoculum Production

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 InnovationEffectively *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