



NREL-AFOSR Workshop
Algal Oil for Jet Fuel Production
February 19-21, 2008

February 19, 2008

- 7:30 Continental Breakfast
- 8:30 Introduction and Goals – Al Darzins, National Renewable Energy Laboratory, Walt Kozumbo, Air Force Office of Scientific Research
- 9:00 Overview: Algae oil to biofuels – John Benemann, Benemann Associates
- 9:30 Aquatic Species Program (ASP): Lessons learned – Eric Jarvis, National Renewable Energy Laboratory
- 10:00 Break
- 10:30 Bioprospecting for algae - Juergen Polle, Brooklyn College
- 11:00 The Role of Culture Collections - Jerry Brand, University of Texas - Austin
- 11:30 Sequencing of algae genomes - Ginger Armbrust, University of Washington
- 12:00 – 1:30 Lunch break (on own)
- 1:30 Algal model systems – Steve Mayfield, The Scripps Research institute
- 2:00 Algal growth and physiology - Dick Sayre, The Ohio State University
- 2:30 General biochemistry of lipid pathways- Wayne Riekhof, National Jewish Medical and Research Center
- 3:00-3:30 Coffee break
- 3:30 Triglyceride pathways and oil accumulation in algae - Christoph Benning, Michigan State University
- 4:00 Growing algae in open ponds - Ami Ben-Amotz, National Institute of Oceanography (Israel)
- 4:30 Informal presentation by Jonathan Trent, National Aeronautics and Space Administration, Title: "Wind, Sea and Algae"
- 4:45 Announcement by Keith Cooksey on the Steering Committee for an incipient algae association
- 5:00 - 6:00 Discussion
- 6:00 -7:00 Banquet Dinner
- 7:00 Keynote address: James Sears, A2BE Carbon Capture, LLC
Title: Strategic Road to Commercialization- Food and Fuel from Algae



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7:30 Continental Breakfast

8:30 Production of algae in conjunction with wastewater treatment – Tryg Lundquist, California Polytechnic State University

9:00 Closed photobioreactors - Qiang Hu, Arizona State University

9:30 Power plant emissions to biofuels, Xiaolei Sun, Arizona Public Service

10:00 Development of algae genetic tools – Mark Hildebrand, Scripps Institute of Oceanography

10:30-11:00 Break

11:00 Algal Photosynthesis- Charles Dismukes, Princeton University

11:30 Technoeconomic analysis of oil production - Byard Wood, Utah State University

12:00 Biosafety, environmental and regulatory issues – Rachel Lattimore, Arent Fox, LLP

12:30 – 1:45 Lunch Break (on own)

1:45 -3:15 Breakout Groups A, B, C

A. Strain Research I – Isolation, selection, and characterization

Discussion Lead: Juergen Polle, Brooklyn College

B. Cultivation research – Growth requirements, systems engineering

Discussion Lead: Tryg Lundquist, California Polytechnic State University

C. Photosynthesis research – Efficiency, fundamental biology

Discussion Lead: Maria Ghirardi, National Renewable Energy Laboratory

3:15 – 3:30 Coffee Break

3:30 – 5:00 Breakout Groups D, E, F

D. Strain Research II- Lipid pathway analysis, genetic/molecular tools

Discussion Lead: Steve Mayfield, Scripps Research Institute

E. Process research – Harvesting, extraction, lipid upgrading

Discussion Lead: David Brune, Clemson University

F. Technoeconomics – Life cycle analysis, production costs, impact of co-products

Discussion Lead: Byard Wood, Utah State University

6:00 Dinner on own





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8:00 Breakfast on own

8:30 – 10:00 Wrap up with Breakout leaders

10:00-10:30 Break

10:30 – 12:00 Write up

Lunch on own/Departure

