



The

FermentOgram Editorial Board
Thomas Jeffries, Jeff Cary, Hans Blaschek,
and Joy Doran-Peterson

Spring, 2008

FERMENT OGRAM

FERMENTATION AND BIOTECHNOLOGY THE DIVISION O NEWSLETTER THE AMERICAN SOCIETY FOR MICROBIOLOGY

NOTES FROM DIVISION O CHAIR

Historically, our division has focused on the development of efficient fermentation processes for the production of antibiotics and other higher value compounds. We are now in an era in which fermentation technology is being called upon to produce commodity fuels and chemicals that have intrinsically much lower values.

This presents a special challenge. Not only must we produce much larger volumes at higher rates and in better yields, we must do so from substrates that are recalcitrant and highly heterogeneous.

We are at the beginning of an industry expansion that is unparalleled in history. Production of the targeted 36 billion gallons of ethanol per year, the majority of which is mandated to come from cellulose and hemicellulose, will require at least 300 billion gallons of annual fermentation capacity and the development of breakthrough enzyme and microbial catalyst technologies.

Today, however, we have tools for strain and process optimization that are unprecedented. Not only can we know the genetic sequence and transcript expression profile of virtually any microbe, we can also synthesize large DNA fragments, create completely new proteins recover products much more efficiently than was conceivable even a few years ago.

Just as the technology of our industry is changing, the expectations that the public vests in it are shifting as well. As responsible members of the scientific community, we must always be cautious about assertions and assuring about concerns.

The ASM Division of Fermentation and Biotechnology is in a position to make major contributions to the

science, technology and public education about the issues and opportunities that face us.

Please join with us in that effort.

Thomas Jeffries, Chair, Division O - 2008

THE DIVISION O BUSINESS MEETING



Please plan to attend the Division O Business meeting to be held after the Division O Symposium, Monday 6/2 from 11:45 – 12:30 PM. Lunch will be provided, so please plan to attend and bring your ideas for incoming officers and symposia for next year. Email Joy if you are planning to attend so that we may get a headcount joydoranpeterson@gmail.com Thanks!

THE DIVISION O MIXER ...

is not a separate event because ASM has combined all of the Divisions into one group. An additional fee has been added to our registration to support this effort. IF YOU ARE INTERESTED IN GETTING TOGETHER AS A DIVISION SEPARATELY FROM THIS JOINT MIXER ON TUESDAY EVENING, PLEASE EMAIL JOY ASAP. She has volunteered to find a way to get us together, most likely for a dinner. If there is enough interest, she will make it happen.

joydoranpeterson@gmail.com

JUST PUBLISHED: BIOENERGY

EDITORS: **Judy Wall**, Univ. of Missouri-Columbia; **Caroline S. Harwood**, Univ. Washington, Seattle; **Arnold L. Demain**, Drew University.

Given the limited supply of fossil fuels and the devastating effects of ever-increasing greenhouse gases, researchers have been committed to finding alternative fuel sources. Perhaps one of the least explored areas is bioenergy from microbes. In this landmark volume, world-renowned experts explore the possible contributions of microbes to the next generation of fuels. *Bioenergy* should inspire scientists, developers, and conservationists to see the potential of significant contributions from microbial biofuel production.

NOMINATIONS FOR 2009 CHAIR-ELECT

The Chairs of all ASM 27 scientific divisions are forming nominating committees to identify candidates to stand for election on the 2008 ballot for the position of chair-elect in each division. **To become a candidate, please contact Tom twjeffri@wisc.edu or Joy joydoranpeterson@gmail.com.** Chair-elect plays a key role in determining the scientific interests of division members and maintaining the highest quality of science within the division. Thank you. We have received one nomination, Dr. Prakash Masuraker, for Division O Chair-Elect for 2009.

PROPOSED SYPOSA FOR 2009

Please let Tom Jeffries twjeffri@wisc.edu or Joy Peterson know if you have suggestions for next year's symposia. The ASM planning committee usually requests these symposia titles in very early June of the year prior to the meeting. This is not a final list, but rather a chance to get symposia on the program list.

MEMBERSHIP STATISTICS

Year	MEMBERS		
	Primary	Secondary	Abstracts
2003	899	490	135
2004	879	498	120
2005	891	565	77
2006	829	435	91
2007	807	413	90
2008	947	746	90

NUMBER OF ABSTRACTS PRESENTED

YEAR	2002	2003	2004	2005	2006	2007	2008
ALL	2839	3628	3657	2916	3001	3500	3577
DIV.							
DIV. O	95	135	120	77	91	90	90

STUDENT TRAVEL GRANT APPLICATIONS

Division O usually has about 100 abstracts submitted for consideration for poster presentations at the ASM General Meeting. If a student will be presenting the poster there is an option that can be checked during the application process that requests the student be considered for an ASM Corporate Sponsor Student Travel Grant. If you want your student to be eligible for one of these travel grants there are seven criteria that

must be met. These criteria are as follows: (1) Student has to be the presenter; (2) Student must indicate desire to be considered; (3) Student must be an ASM member (confirmed from membership records); (4) Letter of recommendation from the department must be on file; (5) Student was not selected for a grant in the previous year; (6) Student must be in a recognized educational program. Post-Docs within one year of receiving their terminal degree are also eligible; and (7) Students in the Undergraduate Fellowship or Minority Undergraduate Fellowship Programs are not eligible.

If any of these criteria are not met the student is not eligible for the grant. Grants are allocated to each ASM division based on the number of qualifying applicants. This year Div.O was allocated four of these grants. The more abstracts that are submitted, the more chances we have for additional travel awards, provided the applicants have followed all the directions above.

Jeff Carey, FermentOgram Editorial Board

STUDENT PRESENTATIONS

S.K. BRANDON	Univ. of Georgia, Athens, G.A.
A.H. CHEUNG	California State Univ., Los Angeles, CA.
J-H. LEE	Univ. of Minnesota, St. Paul
H. CEOTTO	UFRJ/NULS, Rio de Janeiro, Brazil

DIVISION O WEBSITE

The site can be accessed through the ASM main webpage (www.asmta.org) under "Scientific Divisions" or directly at <http://www.asmta.org/division/o/> Please take a look at the website and send comments, suggestions, items for inclusion, etc. to Joy at jpetero@uga.edu or joydoranpeterson@gmail.com.

The site provides information such as Division Officers, a history of Division O by Arny Demain, membership profile, news of upcoming meetings and events, the FermentOgram, links of interest, and much more. We think you will find the Division O website quite informative and a useful tool for outreach to potential new members. This site will only be as good as the Division O membership makes it, so please be sure to visit the site and give me or any of the Newsletter editorial board members your feedback.

Thanks,
Jeff Cary and Joy Doran-Peterson, Editorial Board

**DIVISION O
FERMENTATION AND BIOTECHNOLOGY
OFFICERS**

CHAIR (2007-08): **Thomas W. Jeffries**
U.S. Department of Agriculture
Madison, WI
twjeffri@wisc.edu

CHAIR-ELECT: **Joy B. Doran Peterson, Ph.D.**
Department of Microbiology
University of Georgia, Athens
jpeterso@uga.edu or
joydoranpeterson@gmail.com

COUNCILOR: **HANS BLASCHEK, Ph.D.**
Professor, Food Science
University of Illinois
blaschek@uiuc.edu

**ALTERNATE
COUNCILOR:** **Jeffrey W. Cary**
USDA, ARS, Southern Regional
Research Center
New Orleans, LA
jcary@srrc.ars.usda.gov

DIVISION O MEETING DETAILS

TOPICS AND SESSIONS OF INTEREST THE 2008 DIVISIONAL LECTURE

Dr. Lee Lynd will deliver our Division O Lecture.

2008 DIVISION O SYMPOSIA Symposium 014/O

**Monday, June 02, 2008 8:00-10:30 am
153A**

**Genomic Expression Analysis of Stress Tolerance for
Ethanol and Butanol Production**

Conveners: T.W. Jeffries and J.B. Doran-Peterson

**Division O Lecture: Going Beyond The
Limits: Challenges In Renewable Fuels from
Lignocellulose L.R. Lynd; Dartmouth Coll.,
Hanover, NH.**

Utilization of Pentose-hexose Mixtures by
Saccharomyces cerevisiae: Integration of
Metabolic Engineering and Evolutionary
Approaches

J. Pronk; Delft Univ. of Tech., Delft, BC,
NETHERLANDS.

Expression Array Analysis of Stress Response by
Saccharomyces cerevisiae **Z.L. Liu**;
USDA/ARS/NCAUR, Peoria, IL.

Development of Advanced Microbes for the Next
Generation Biofuels and Chemicals **E.M. Green**;
Green Biologics, Ltd, Abington, UNITED
KINGDOM.

DIVISION O MEETING DETAILS

TOPICS AND SESSIONS OF INTEREST

Session 190

**Division Group 3: General and Applied
Microbiology.**

Estimating Microbial Diversity Using Genomic Data

Time: Tuesday 6/3/2008 2:30-5:00 pm 205 A.

Convener: Slava S. Epstein

Microbial Inventory on a Planetary Scale **J.M.
Tiedje**

The Long Record of Rare Biosphere **M.L. Sogin**

The Spectrum of Methods for Measuring Microbial
Diversity **J.A. Bunge**

Environmental Genomics **J.C. Venter**

Everything May Indeed Be Everywhere **S.S.
Epstein**

Session 001

Microbiology in the 21st Century: Genome, Pangenomes, and Systems Biology

From Sunlight to Renewable Energy: Harnessing Photosynthetic Bacteria; Timothy Donohue

Time: Sunday 6/01/2008 5:00-7:00 pm Seaport Exhibition Center

Session 118/O

O – Fermentation and Biotechnology

Microbial Developmental Regulation: Control of Diverse Biological Processes

Time: Tuesday 6/3/2008 8:00 – 10:30 PM 153 A

Convener: Jeffrey W. Cary, USDA, ARS, Southern Regional Research Center, New Orleans, LA; Ana M. Calvo, Northern Illinois University, DeKalb, IL

Extracellular Molecules That Influence Streptomyces Differentiation **J. Willey**, Hofstra University, Hempstead, NY.

From Structures to Superstructures: Assembly of *Bacillus anthracis* and *Bacillus subtilis* Spores **A. Driks**, Loyola University, Stritch School of Medicine, Chicago, IL.

VeA Regulates Morphogenesis and Natural Product Biosynthesis in Filamentous Fungi **A.M. Calvo**, Northern Illinois University, DeKalb, IL.

Regulation of Invasive Filamentous *Candida albicans* **C.A. Kumamoto**, Tufts University, Boston, MA

Identification of Transcriptional Regulatory Networks in the Pathogenic Parasite *Entamoeba histolytica* **U. Singh**, Sanford University School of Medicine, Stanford, CA.

2008 DIVISION O POSTER SESSIONS AT A GLANCE

Poster 072/O Fermentations and Bioconversions - I

Time: 6/02/2008 1:00 PM – 2:30 PM

Poster: 176/O. Genetics, Gene Expression and Protein Production

Time: 6/03/2008 1:00 PM – 2:30 PM

Poster 177/O. Proteomics, Microarray Analysis and Genomics

Time: 6/03/2008 1:00 PM – 2:30 PM

Poster 178/O. Emerging Technology and Instrumentation

Time: 6/03/2008 1:00 PM – 2:30 PM

Poster 245/O. Antibiotics, Antimicrobials and Mycotoxins

Time: 6/04/2008 10:30 AM – 12:00 PM

Poster 246/O. Animal and Cell Tissue Culture

Time: 6/04/2008 10:30 AM – 12:00 PM

Poster 285/O. Fermentations and Bioconversions - II

Time: 6/04/2008 1:00 PM – 2:30 PM

Poster 286/O. Microbial Based Industry and Biorefiners

Time: 6/04/2008 1:00 PM – 2:30 PM

Poster 341/O. Biocatalysts, Biotransformations and Bioremediation

Time: 6/05/2008 10:30 AM – 12:00 PM

***Thanks for reading the Fermentogram!
Please take a moment to do the following:***

- 1. Email Joy at jpeterso@uga.edu or joydoranpeterson@gmail.com IF YOU ARE INTERESTED IN GETTING TOGETHER AS A DIVISION SEPARATELY FROM THE JOINT MIXER! (Probably Monday night)***
- 2. Nominate someone for Chair-Elect for 2009***
- 3. Propose a session for Philadelphia ASM 2009***

Looking forward to seeing you in Boston!

Sincerely,

The Fermentogram Editorial Board

Thomas Jeffries, Jeff Cary, Hans Blaschek, and Joy Doran-Peterson