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GORDON RESEARCH CONFERENCES *frontiers of science*

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Nancy Ryan Gray, Ph.D.
Director

2007 GORDON RESEARCH CONFERENCE

on

Cellulases & Cellulosomes

FINAL PROGRESS REPORT

Department of Energy

DE-FG02-07ER64426

The Gordon Research Conference (GRC) on Cellulases & Cellulosomes was held at Proctor Academy from 7/29/2007 thru 8/3/2007. The Conference was well-attended with 124 participants (attendees list attached). The attendees represented the spectrum of endeavor in this field coming from academia, industry, and government laboratories, both U.S. and foreign scientists, senior researchers, young investigators, and students.

In designing the formal speakers program, emphasis was placed on current unpublished research and discussion of the future target areas in this field. There was a conscious effort to stimulate lively discussion about the key issues in the field today. Time for formal presentations was limited in the interest of group discussions. In order that more scientists could communicate their most recent results, poster presentation time was scheduled. Attached is a copy of the formal schedule and speaker program and the poster program. In addition to these formal interactions, "free time" was scheduled to allow informal discussions. Such discussions are fostering new collaborations and joint efforts in the field.

I want to personally thank you for your support of this Conference. As you know, in the interest of promoting the presentation of unpublished and frontier-breaking research, Gordon Research Conferences does not permit publication of meeting proceedings. If you wish any further details, please feel free to contact me. Thank you.

Sincerely,

*Mark Morrison
The Ohio State
University*

Cellulases & Cellulosomes

Proctor Academy
Jul 29-Aug 3, 2007

Name	Organization	Participation	NSF Support
D. WADE ABBOTT	UNIVERSITY OF VICTORIA	Speaker	
JARRETT J ADAMS	QUEEN'S UNIVERSITY	Poster Presenter	
WILLIAM S ADNEY	NATIONAL RENEWABLE ENERGY LABORATORY	Poster Presenter	
NINA ARO	VTT BIOTECHNOLOGY	Speaker	
DIPNATH BAIDYAROY	CODEXIS, INC.	Attendee	
BRIAN BARR	LOYOLA COLLEGE	Poster Presenter	
EDWARD A BAYER	WEIZMANN INSTITUTE OF SCIENCE	Speaker	
WILLIAM T BEESON	UNIVERSITY OF CALIFORNIA, BERKELEY	Attendee	
CLARISA M BEJAR	CARNEGIE INSTITUTION	Attendee	
JEAN-PIERRE BELAICH	CNRS-GLM, BIP-UPR 9036	Discussion Leader	
ALON A BEN DAVID	TECHNION, ISRAEL INSTITUTE OF TECHNOLOGY	Poster Presenter	
MARGRET E BERG	UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN	Poster Presenter	
ALISDAIR B BORASTON	UNIVERSITY OF VICTORIA	Poster Presenter	
JIM BRAINARD	NATIONAL RENEWABLE ENERGY LAB	Attendee	
JENNIFER M BRULC	UNIVERSITY OF ILLINOIS	Poster Presenter	
HARRY BRUMER	ROYAL INSTITUTE OF TECHNOLOGY	Speaker	
JONATHAN CASPI	WEIZMANN INSTITUTE OF SCIENCE	Speaker	
JAMIE H CATE	UNIVERSITY OF CALIFORNIA, BERKELEY	Attendee	
SETH CHITAYAT	QUEEN'S UNIVERSITY	Poster Presenter	
SHISHIR P S CHUNDAWAT	MICHIGAN STATE UNIVERSITY	Poster Presenter	
MICHAEL F CROWLEY	NREL	Poster Presenter	
DANIEL CULLEN	UNIVERSITY OF WISCONSIN-MADISON	Discussion Leader	
DEVIN H CURRIE	LYND LABORATORY, DARTMOUTH	Attendee	
MIRJAM CZJZEK	CNRS STATION BIOLOGIQUE DE ROSCOFF	Speaker	
HUMBERTO DE LA VEGA-HERNANDEZ	AGRIVIDA, INC.	Attendee	
STEVE DECKER	NREL	Poster Presenter	
RIAAN DEN HAAN	UNIVERSITY OF STELLENBOSCH	Poster Presenter	
HANSHU DING	NOVOZYMES, INC.	Attendee	
SHI-YOU DING	NATIONAL RENEWABLE ENERGY LABORATORY	Speaker	
DANIEL L DISTEL	OCEAN GENOME LEGACY	Poster Presenter	
ROY H DOI	UNIVERSITY OF CALIFORNIA, DAVIS	Discussion Leader	
MARIE K DONNELLY	CORNELL UNIVERSITY	Poster Presenter	
ALEXANDRU DUMITRACHE	RYERSON UNIVERSITY	Attendee	
ALEXANDRA FAGERSTRÖM	GENT UNIVERSITY	Poster Presenter	
ZHILIANG FAN	VIRGINIA TECH	Attendee	
HENRI-PIERRE FIEROBE	CNRS-BIP	Discussion Leader	\$ 775
CARLOS FONTES	UNIVERSIDADE TECNICA DE LISBOA	Speaker	\$ 775
MILANA FRAIBERG	TEL-AVIV UNIVERSITY	Poster Presenter	\$ 710
ESBEN P FRIIS	NOVOZYMES A/S	Attendee	
ELODIE GAULIN	UMR CNRS-UPA 5546	Speaker	\$ 775
HARRY J GILBERT	UNIVERSITY OF NEWCASTLE	Vice Chair	\$ 775
TRACEY GLOSTER	UNIVERSITY OF YORK	Speaker	\$ 775

KEVIN A GRAY	DIVERSA CORP	Speaker	\$ 775
PADMA R GUNDA	UNIVERSITY OF CALIFORNIA, BERKELEY	Attendee	
HENRIK HANSSON	SWEDISH UNIVERSITY OF AGRICULTURAL SCIENCES	Poster Presenter	\$ 775
VICTORIA S HARITOS	CSIRO ENTOMOLOGY	Attendee	
PAUL V HARRIS	NOVOZYMES, INC.	Poster Presenter	\$ 775
JESSICA L HATCH	SUNY ESF	Poster Presenter	\$ 90
BERNARD P HENRISSAT	UNIVERSITES AIX-MARSEILLE I&II	Speaker	
CHRIS M HILL	IOGEN CORPORATION	Attendee	
MIKE HIMMEL	NAT'L RENEWABLE ENERGY LABORATORY	Discussion Leader	
MASAO HIRAISHI	UNIVERSITY OF TOKYO	Poster Presenter	
JIONG HONG	VIRGINIA POLYTECHNIC INSTITUTE & STATE UNIVERSITY	Poster Presenter	
PHILIP HUGENHOLZ	DOE JOINT GENOME INSTITUTE	Speaker	
STEVEN W HUTCHESON	UNIVERSITY OF MARYLAND	Speaker	
DAVID HYNDMAN	PERFORMANCE PLANTS INC	Attendee	
KIYOHICO IGARASHI	UNIVERSITY OF TOKYO	Poster Presenter	
TAKUYA ISHIDA	UNIVERSITY OF TOKYO	Poster Presenter	
SADANARI JINDOU	TEL AVIV UNIVERSITY	Poster Presenter	
DOUGLAS B JORDAN	USDA-ARS	Poster Presenter	
HENNING N. JORGENSEN	UNIVERSITY OF COPENHAGEN	Poster Presenter	
HAMUTAL KAHEL-RAIFER	TEL AVIV UNIVERSITY	Poster Presenter	
SATOSHI KANEKO	NATIONAL FOOD RESEARCH INSTITUTE	Poster Presenter	
ALON KARPOL	WEIZMANN INSTITUTE OF SCIENCE	Poster Presenter	
BRIAN C KING	CORNELL UNIVERSITY, USDA	Poster Presenter	
NICOLE M KOROPATKIN	DONALD DANFORTH PLANT SCIENCE CENTER	Poster Presenter	
TANYA KRUSE	CERES, INC	Poster Presenter	
MICHAEL R LADISCH	PURDUE UNIVERSITY	Speaker	
RAPHAEL LAMED	TEL AVIV UNIVERSITY	Poster Presenter	
EDMUNDO A LARENAS	GENENCOR	Attendee	
WILLIAM G LATOUF	UNIVERSITY OF MASSACHUSETTS, AMHERST	Poster Presenter	
SUSAN B LESCHINE	UNIVERSITY OF MASSACHUSETTS AMHERST	Poster Presenter	
BENJAMIN LEVIE	WEYERHAEUSER	Attendee	
XIN-LIANG LI	USDA-ARS	Poster Presenter	
YONGCHAO LI	CORNELL UNIVERSITY	Poster Presenter	
LEE R. LYND	DARTMOUTH COLLEGE	Speaker	
SATOSHI MATSUOKA	UNIVERSITY OF CALIFORNIA, DAVIS	Poster Presenter	
JAMES F MATTHEWS	CORNELL UNIVERSITY	Poster Presenter	
FLORENCE MINGARDON	CNRS	Poster Presenter	
COLIN MITCHINSON	GENENCOR INTERNATIONAL INC.	Speaker	
MARK MORRISON	THE OHIO STATE UNIVERSITY	Chair	
MARK R NIMLOS	NATIONAL RENEWABLE ENERGY LABORATORY	Speaker	
ILIT NOACH	WEIZMANN INSTITUTE OF SCIENCE	Poster Presenter	
WATARU OGASAWARA	NAGAOKA UNIVERSITY OF TECHNOLOGY	Poster Presenter	
CHAD PAAVOLA	NASA AMES RESEARCH CENTER	Attendee	
ELSA L PETIT	UNIVERSITY OF MASSACHUSETTS, AMHERST	Poster Presenter	
BRETT I PLETSCHKE	RHODES UNIVERSITY	Poster Presenter	
XIANGHONG QIAN	COLORADO STATE UNIVERSITY	Poster Presenter	
ARTHUR J RAGAUSKAS	INSTITUTE OF PAPER SCIENCE AND TECHNOLOGY	Speaker	
BABU RAMAN	OAK RIDGE NATIONAL LABORATORY	Poster Presenter	
VERONIQUE RECEVEUR-BRECHOT	UNIVERSITE AIX-MARSEILLE I&II	Speaker	
KAZUO SAKKA	MIE UNIVERSITY	Poster Presenter	
MATS SANDGREN	SWEDISH UNIVERSITY OF AGRICULTURAL SCIENCES	Poster Presenter	

MARTIJN S SCHEFFERS	GENENCOR	Poster Presenter
BRIAN R SCOTT	IOGEN CORPORATION	Attendee
YUVAL SHOHAM	TECHNION-IIT	Discussion Leader
STEVEN P SMITH	QUEEN'S UNIVERSITY	Speaker
JUSTIN L. SONNENBURG	WASHINGTON UNIVERSITY SCHOOL OF MEDICINE	Speaker
HENRIK STALBRAND	LUND UNIVERSITY	Poster Presenter
ANNA M SUAREZ LARSSON	UNIVERSITY OF UPPSALA	Speaker
JUNJI SUGIYAMA	KYOTO UNIVERSITY	Speaker
HISABUMI TAKASE	KYOTOGAKUEN UNIVERSITY	Poster Presenter
CHANTAL TARDIF	CNRS	Attendee
LARRY E TAYLOR	NATIONAL RENEWABLE ENERGY LABORATORY	Attendee
TUULA TEERI	ROYAL INSTITUTE OF TECHNOLOGY	Speaker
JONATHAN TRENT	NATIONAL AERONAUTIC SPACE AGENCY	Attendee
TAKESHI TSUKADA	UNIVERSITY OF TOKYO	Poster Presenter
AMBER J VANDEN WYMELENBERG	UNIVERSITY OF WISCONSIN-MADISON	Speaker
KATIE WALLACE	IOGEN CORPORATION	Attendee
FALK WARNECKE	DOE JOINT GENOME INSTITUTE	Poster Presenter
R. ANTONY WARREN	UNIVERSITY OF BRITISH COLUMBIA	Discussion Leader
BRIAN J WATSON	UNIVERSITY OF MARYLAND, COLLEGE PARK	Poster Presenter
BRYAN A WHITE	UNIVERSITY OF ILLINOIS	Attendee
BILL WILLATS	UNIVERSITY OF COPENHAGEN	Speaker
DAVID B WILSON	CORNELL UNIVERSITY	Discussion Leader
KEITH D WING	E.I. DUPONT DE NEMOURS AND CO.	Attendee
ZHAOHUI XU	BOWLING GREEN STATE UNIVERSITY	Attendee
BIN YANG	UNIVERSITY OF CALIFORNIA, RIVERSIDE	Poster Presenter
ZHONGTANG YU	OHIO STATE UNIVERSITY	Attendee
VERONICA ZEPEDA	UC BERKELEY	Attendee
YI-HENG ZHANG	VIRGINIA TECH	Poster Presenter
HAITAO ZHANG	UNIVERSITY OF MARYLAND	Poster Presenter
TAO ZHANG	JOINT GENOME INSTITUTE	Attendee
VLADIMIR V ZVERLOV	TU MUENCHEN	Poster Presenter
Total NSF Support		\$7,000

Cellulose, a key component of the plant cell wall, comprises the most abundant source of organic carbon on the planet and its microbial degradation is of considerable biological and industrial importance. Indeed, the microbial degradation of cellulose and other plant structural polysaccharides is critical to the maintenance of the carbon cycle in terrestrial and marine microbial ecosystems, host invasion by several phytopathogens, and herbivore nutrition. While the enzymes that attack cellulose are already widely used in several biotechnology-based industries, the major future application of these biocatalysts is the conversion of plant biomass into bio-ethanol and other forms of energy. In that context, the 2007 Conference will present the latest breakthroughs in our understanding of the enzymology, structural biology and (meta)genomics underpinning the conversion of plant structural polysaccharides into fermentable sugars, both in natural and engineered processes. There is also an increased emphasis on the roles of other carbohydrate active enzymes in plant biomass conversion. The themes for the scientific sessions include: i) crystallographic and biochemical analyses of enzyme structure and function; ii) molecular mechanisms underpinning enzyme catalysis, processivity and specificity;

iii) functional and comparative analyses of carbohydrate binding modules and enzyme-substrate interactions; iv) directed evolution for the development of catalytically superior glycoside hydrolases; v) biophysical and structural analyses of native and chemically pretreated plant biomass and component polysaccharides; vi) genomics of specialist polysaccharide degrading microbes; vii) metagenomics and ecophysiology of plant biomass degradation in natural and engineered processes and; viii) enhancement of industrial bioprocesses by metabolic engineering and related approaches. While the Conference draws many of its participants from academia and government agencies, colleagues from industry have made many important and valuable contributions to the success of all the Conferences. This makes the Conference a truly interactive and productive venue for all sectors interested in the fundamental and applied sciences of cellulases, cellulosomes, and other carbohydrate active enzymes.

SUNDAY

2:00 pm - 11:00 pm	Arrival and Check-in
6:00 pm	Dinner
7:30 pm - 7:45 pm	Welcome / Introductory Comments by GRC Site Staff, Chair and Vice-Chair
7:45 pm - 9:30 pm	SETTING THE STAGE, MATCHING ENZYME AND SUBSTRATE
	Discussion Leader: Douglas Eveleigh (Rutgers University, USA)
7:45 pm - 8:15 pm	Tuula Teeri (KTH, Sweden) "Understanding Plant Cell Walls: Towards Improved Biomass Conversion and New Materials"
8:15 pm - 8:25 pm	Discussion
8:25 pm - 8:55 pm	Edward Bayer (Weizmann Research Institute, Israel) "Cellulosomes and Cellulosomics: Where do we Draw the Lines?"
8:55 pm - 9:05 pm	Discussion
9:05 pm - 9:30 pm	General Forum, Discussions at Proctor Academy Clubhouse

MONDAY

7:30 am - 8:30 am	Breakfast
8:30 am	Group Photo
9:00 am - 12:30 pm	CELL WALL ARCHITECTURE AND DISPLAY
	Discussion Leader: Mike Himmel (DOE-NREL, USA)
9:00 am - 9:30 am	Shi-You Ding (DOE-NREL, USA) "Characterization of Plant Cell Wall Microfibril Structure using Advanced Imaging Approaches"
9:30 am - 9:40 am	Discussion
9:40 am - 10:10 am	Harry Brumer (KTH, Sweden) "Ex-vivo Modification of Cellulose Fibers using Xyloglucan and XET"

10:10 am - 10:20 am	Discussion
10:20 am - 10:45 am	Coffee Break
10:45 am - 11:15 am	Arthur Ragauskas (Georgia Inst. of Technology, USA) "CP/MAS ^{13}C NMR to Analyse Enzyme Treated Plant Cell Walls"
11:15 am - 11:25 am	Discussion
11:25 am - 11:55 am	Junji Sugiyama (RISH, Kyoto University, Japan) "Molecular Directionality of Celluloses Polymorphs"
11:55 am - 12:05 pm	Discussion
12:05 pm - 12:30 pm	General Forum
12:30 pm	Lunch
1:30 pm - 4:00 pm	Free Time
4:00 pm - 6:00 pm	Poster Session
6:00 pm	Dinner
7:30 pm - 9:30 pm	GLYCOSIDE HYDROLASE (GH) STRUCTURE AND FUNCTION - CELLULOSOMAL MODULE INTERACTIONS
	Discussion Leader: Jean-Pierre Belaich (CNRS, France)
7:30 pm - 8:00 pm	Veronique Receveur-Brechot (CNRS, Marseille, France) "Structural Features Contributing to Cellulosome Efficiency Determined by Small Angle X-ray Scattering"
8:00 pm - 8:10 pm	Discussion
8:10 pm - 8:40 pm	Carlos Fontes (CIISA, Portugal) "Structural Determinants of Specificity in Type I Cohesin-Dockerin Complexes"
8:40 pm - 8:50 pm	Discussion
8:50 pm - 9:20 pm	Steve Smith (Queen's University, Canada) "From Dissecting to Building the Cellulosome: Structural Studies of Multi-Modular Complexes"
9:20 pm - 9:30 pm	Discussion, Discussions at Proctor Academy Clubhouse

TUESDAY

7:30 am - 8:30 am	Breakfast
9:00 am - 12:30 pm	GH STRUCTURE AND FUNCTION - CATALYTIC DOMAINS
	Discussion Leader: David Wilson (Cornell University, USA)
9:00 am - 9:30 am	Tracey Gloster (University of York, United Kingdom) "Structure-Function Relationships of Xyloglucanases from Different Families"
9:30 am - 9:40 am	Discussion
9:40 am - 10:10 am	Anna Larsson (University of Uppsala, Sweden)

	"Analysis of the Catalytic Centers of GH5 and GH6 Enzymes"
10:10 am - 10:20 am	Discussion
10:20 am - 10:45 am	Coffee Break
10:45 am - 11:15 am	Mirjam Czjzek (CNRS, France) "Enzyme-Substrate Interactions of Marine Glycoside Hydrolases - Adaptation to the Marine Environment? The Case Study of Family 16 Enzymes"
11:15 am - 11:25 am	Discussion
11:25 am - 11:55 am	Nicole Koropatkin (Donald Danforth Plant Science Center, USA) "SusD has a Novel Structure that Recognizes Starch Helices"
11:55 am - 12:05 pm	Discussion
12:05 pm - 12:30 pm	General Forum
12:30 pm	Lunch
1:30 pm - 4:00 pm	Free Time
4:00 pm - 6:00 pm	Poster Session
6:00 pm	Dinner
7:30 pm - 9:30 pm	CARBOHYDRATE BINDING MODULES - EMERGENT CONCEPTS AND APPLICATIONS Discussion Leader: Roy Doi (UC-Davis, USA)
7:30 pm - 8:00 pm	William Willats (University of Copenhagen, Denmark) "High-throughput Analysis of Plant Cell Walls Using Novel Carbohydrate Microarrays"
8:00 pm - 8:10 pm	Discussion
8:10 pm - 8:40 pm	Wade Abbott (University of Victoria, Canada) "New Mechanistic Insights into Oligogalacturonic Acid Recognition During Pectin Catabolism"
8:40 pm - 8:50 pm	Discussion
8:50 pm - 9:20 pm	Elodie Gaulin (CNRS, France) "The role of CBM modules in eliciting plant immune response to fungal pathogens"
9:20 pm - 9:30 pm	Discussion, Discussions at Proctor Academy Clubhouse

WEDNESDAY

7:30 am - 8:30 am	Breakfast
9:00 am - 12:30 pm	PROKARYOTE GENOMICS Discussion Leader: Yuval Shoham (Technion, Israel)
9:00 am - 9:30 am	Bernard Henrissat (CNRS, Marseille, France) "Eukaryote and Prokaryote CAZomes. Where is Genome Sequence Data Taking us?"
9:30 am - 9:40 am	Discussion

9:40 am - 10:10 am	Steven Hutcheson (University of Maryland, USA) "Genomic, Proteomic and Transcriptomic Analysis of the Cellulolytic System of <i>Saccharophagus degradans</i> "
10:10 am - 10:20 am	Discussion
10:20 am - 10:45 am	Coffee Break
10:45 am - 11:15 am	Justin Sonnenburg (Washington University of Saint Louis, USA) "Functional Genomic and Metabolic Studies of Host-Microbial Symbiosis in the Mammalian Gut"
11:15 am - 11:25 am	Discussion
11:25 am - 11:55 am	Phil Hugenholtz (DOE-Joint Genome Institute, USA) "Metagenomic Analysis of Plant Biomass Degradation in the Termite Hindgut"
11:55 am - 12:05 pm	Discussion
12:05 pm - 12:30 pm	General Forum
12:30 pm	Lunch
1:30 pm - 4:00 pm	Free Time
4:00 pm - 6:00 pm	Poster Session
6:00 pm	Dinner
7:30 pm - 9:30 pm	EUKARYOTE GENOMICS Discussion Leader: Dan Cullen (University of Wisconsin-Madison, USA)
7:30 pm - 8:00 pm	Amber Vanden Wymelenberg (University of Wisconsin-Madison, USA) "Comparative Analysis of the Secretomes of <i>Phanerochaete chrysosporium</i> and <i>Postia placenta</i> "
8:00 pm - 8:10 pm	Discussion
8:10 pm - 8:40 pm	Nina Aro (VTT, Finland) "Transcriptional Regulation of Glycoside Hydrolases in <i>Trichoderma reesei</i> "
8:40 pm - 8:50 pm	Discussion
8:50 pm - 9:20 pm	Paul Harris (Novozymes Inc., USA) "Stimulation of Lignocellulose Hydrolysis by Proteins of Glycoside Hydrolase Family 61 (GH61): Structure and Function of a Large, Recondite Family"
9:20 pm - 9:30 pm	Discussion, Discussions at Proctor Academy Clubhouse

THURSDAY

7:30 am - 8:30 am	Breakfast
9:00 am - 12:30 pm	RATIONAL DESIGN, DIRECTED EVOLUTION AND PROSPECTING FOR SUPERIOR ENZYMES Discussion Leader: Henri-Pierre Fierobe (CNRS, France)

9:00 am - 9:30 am	Colin Mitchinson (Genencor, USA) "The Outlook for Cellulase Improvement"
9:30 am - 9:40 am	Discussion
9:40 am - 10:10 am	Jonathan Caspi (Weizmann Research Institute, Israel) " <i>En route</i> to the Conversion of a Complete Free Cellulase system to the 'Designer Cellulosome' Mode"
10:10 am - 10:20 am	Discussion
10:20 am - 10:45 am	Coffee Break
10:45 am - 11:15 am	Kevin Gray (Diversa Corporation, USA) "Discovery and Optimization of Biomass Hydrolyzing Enzyme Cocktails"
11:15 am - 11:25 am	Discussion
11:25 am - 11:55 am	Mark Nimlos (DOE-NREL, USA) "Computational Modeling of Enzyme-Substrate Interactions"
11:55 am - 12:05 pm	Discussion
12:05 pm - 12:30 pm	General Forum
12:30 pm	Lunch
1:30 pm - 4:00 pm	Free Time
4:00 pm - 6:00 pm	Poster Session
6:00 pm	Dinner
7:30 pm - 8:00 pm	<u>Business Meeting</u> (Nominations for the next Vice Chair; Fill out Conference Evaluation Forms; Discuss future Site & Scheduling preferences; Election of the next Vice Chair)
8:00 pm - 9:30 pm	CELLULASES, CELLULOSOMES AND CARBOHYDRATE ACTIVE ENZYMES IN ENGINEERED PROCESS Discussion Leader: Tony Warren (University of British Columbia, Canada)
8:00 pm - 8:30 pm	Mike Ladisch (Purdue University, USA) "Progress and Limitations to Improved Cellulose Conversion in Microbial Fermentations"
8:30 pm - 8:40 pm	Discussion
8:40 pm - 9:10 pm	Lee Lynd (Dartmouth College, USA) "Cellulose Hydrolysis and Biofuel Production: Reconciling Bottom-Up and Top-Down Perspectives"
9:10 pm - 9:20 pm	Discussion
9:20 pm - 9:30 pm	Closing Remarks, Discussions at Proctor Academy Clubhouse

FRIDAY

7:30 am - 8:30 am Breakfast

9:00 am

Depart

DEMOGRAPHICS

1. Previous GRC'S	None:	42%	1 to 5:	47%	6 to 10:	10%	Over 10:	0%	
2. Typical Annual Conf's	1 to 2:	65%	3 to 5:	28%	6 to 8:	6%	Over 9:	1%	
3. Gender	Male:	73%	Female:	27%					
4. Role in Conference	Chair / V. Chair:	2%	Speaker:	24%	Disc. Leader:	8%	Poster Pres.:	43%	Conferee: 24%
5. Affiliation	Academic:	70%	Industry:	13%	Gvmnt:	14%	Research:	3%	
6. Age Group	20's:	21%	30's:	37%	40's:	19%	50's:	16%	60+: 6%
7. Num. of People Was	Too Small:	1%	Just Right:	99%	Too Large:	0%			
8. Region of Residence	N. America:	62%	S. America:	0%	Europe:	22%	Africa:	2%	
	Asia:	13%	Australia/Oceania:	2%					
9. Position	Grad Student:	21%	Post Doc:	12%	Professor:	26%	Rsrch Sci:	26%	Rsrch Dir: 9%
	Program Mgr:	3%	Other:	2%					

TOTAL ATTENDED: 124

NUMBER OF RESPONSES: 118

MANAGEMENT / ORGANIZATION

	Sco re	A%	B%	C%	D%	E%
1. Good selection of topics.	1.3	77%	20%	2%	0%	1%
2. Good selection of speakers.	1.3	77%	19%	3%	0%	1%
3. Speakers were present and available for discussion after their presentation.	1.2	85%	14%	1%	0%	1%
4. Attendees were diverse and reflected the composition of this field.	1.2	85%	11%	3%	0%	2%
5. Pool of speakers was diverse and reflected the composition of this field.	1.3	81%	15%	3%	0%	2%

ALL: 1.2

ATMOSPHERE

	Sco re	A%	B%	C%	D%	E%
1. The Conference was more than just a meeting, workshop, or collection of papers.	1.2	86%	10%	2%	0%	2%
2. Opportunities were available for networking with colleagues.	1.1	94%	5%	0%	0%	1%
3. The overall Conference atmosphere was friendly, not cliquish.	1.2	87%	9%	2%	2%	1%
4. Informal interactions contributed strongly to the quality of the meeting.	1.2	89%	9%	2%	0%	1%
5. Conference business was conducted in an open and democratic fashion.	1.2	86%	8%	5%	0%	1%

ALL: 1.2

OVERALL CONFERENCE SUITABILITY

	Sco re	A%	B%	C%	D%	E%
1. The Conference met my expectations.	1.1	93%	6%	0%	0%	1%
2. I expect to attend this Conference again.	1.3	82%	13%	4%	0%	1%
3. This was the best Conference in the field I attended this year.	1.2	85%	10%	3%	3%	0%

PATENT CERTIFICATION

Gordon Research Conferences

Awardee _____

☐ Interim Certification

DE-FG02-07ER64426

DOE Prime and/or Subcontract Nos. _____

☒ Final Certification

Awardee hereby certifies unless indicated to the contrary, that:

1. All procedures for identifying and disclosing subject inventions as required by the patent clause of the contract have been followed throughout the reporting period.
2. There were no subcontracts or purchase orders involving research, development, and demonstration except as follows: (a separate certification must be provided to DOE for each subcontract or purchase order awarded.)
3. No inventions or discoveries were made or conceived in the course of or under this contract other than the following (Certification includes ☐, does not include ☐ all subcontracts):

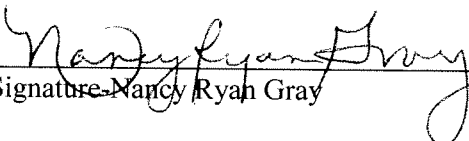
<u>TITLE</u>	<u>INVENTOR</u>	<u>DATE REPORTED</u>	<u>DOE "S" NO.*</u>
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NONE

4. The completion date of this contract is as follows: June 30, 2008
5. The following period is covered by this certification:

July 1, 2007 to June 30, 2008

Gordon Research Conferences
Contractor


Signature Nancy Ryan Gray

512 Liberty Lane

Director
Title

West Kingston, RI 02892
Address

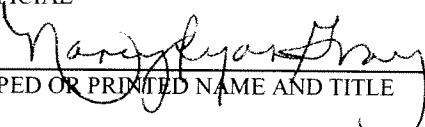
9/18/08
Date of Certification

* Also include Subcontract No. if available.

NOTE: A positive certification for this Item 3 does not negate the requirement for furnishing to DOE a fully executed Patent Certification from each subawardee identified in Item 2.

FINANCIAL STATUS REPORT

(Follow instructions on the back.)

1. FEDERAL AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH REPORT IS SUBMITTED DOE		2. FEDERAL GRANT OR OTHER IDENTIFYING NUMBER DE-FG02-07ER64426		OMB Approved No. 80-R0180	
3. RECIPIENT ORGANIZATION (Name and complete address, including ZIP code) Gordon Research Conferences 512 Liberty Lane West Kingston, RI 02892-0984		4. EMPLOYER IDENTIFICATION NUMBER 050300482			
		5. RECIPIENT ACCOUNT NUMBER OR IDENTIFYING NO.			
		6. FINAL REPORT <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		7. BASIS <input checked="" type="checkbox"/> CASH <input type="checkbox"/> ACCRUAL	
8. PROJECT/GRANT PERIOD (See instructions)		9. PERIOD COVERED BY THIS REPORT			
FROM (Month, day, year) 07/01/2007	TO (Month, day, year) 06/30/2008	FROM (Month, day, year) 07/01/2007	TO (Month, day, year) 06/30/2008		
10. STATUS OF FUNDS					
a. Net outlays previously reported				\$ 0.00	
b. Total outlays this report period				10,000.00	
c. Less: Program income credits				0.00	
d. Net outlays this report period (Line a minus line c)				10,000.00	
e. Net outlays to date (Line a plus line d)				10,000.00	
f. Less: Non-Federal share of outlays				0.00	
g. Total Federal share of outlays (Line e minus line f)				10,000.00	
h. Total unliquidated obligations				0.00	
i. Less: Non-Federal share of unliquidated obligations shown on line h				0.00	
j. Federal share of unliquidated obligations (Line h minus line i)				0.00	
k. Total Federal share of outlays and unliquidated obligations (Line g plus j)				10,000.00	
l. Total cumulative amount of Federal funds authorized				10,000.00	
m. Unobligated balance of Federal funds (Line l minus line k)				0.00	
11. INDIRECT EXPENSE NONE	a. TYPE OF RATE (Place "X" in appropriate box) <input type="checkbox"/> PROVISIONAL <input type="checkbox"/> PREDETERMINED <input checked="" type="checkbox"/> FINAL FIXED				
	b. RATE	c. BASE	d. TOTAL AMOUNT	e. FEDERAL SHARE	
12. REMARKS (Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation.) 2007 Cellulases and Cellulosomes					
13. CERTIFICATION I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents		SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL 		DATE REPORT SUBMITTED 9/18/08	
		TYPED OR PRINTED NAME AND TITLE Nancy Ryan Gray, Director		TELEPHONE (Area code, number, and extension) 401-360-1519	
DISTRIBUTION: Copy 1 - Official Grant File Copy 2 - Grants Section, FAAB Copy 3 - Grantee			STANDARD FORM 269 (7-76) Prescribed by Office of Management and Budget Cir. No. A-110		

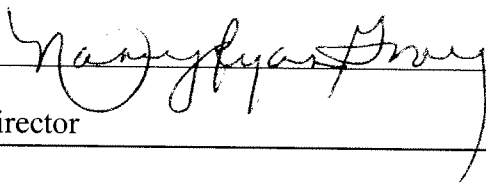
FINANCIAL ASSISTANCE
PROPERTY CERTIFICATION

AWARDEE Gordon Research Conferences AWARD NO. DE-FG02-07ER64426
2007 Cellulases and Cellulosomes

The DOE Assistance Rules, 10 CFR 600, define property acquired under the terms of the award as either exempt (purchased with DOE operating dollars) or non-exempt (acquired with DOE capital equipment dollars, Government-furnished or acquired from the Government excess property lists). Non-exempt property is normally identified in the award document as Government-owned and requires a Semi-Annual Summary Report of DOE-Owned Plant and Capital Equipment to be submitted annually pursuant to DOE regulations.

In order to facilitate grant closeout, please review your property records and complete the applicable Item I, for exempt property, or Item II, for non-exempt property, of this certificate and return it to the Contracting Officer as soon as possible.

- I. There was no reportable residual exempt property of any description at the completion of this award.

SIGNATURE 
TITLE Director DATE 9/18/08

- II A final inventory of residual non-exempt property is enclosed for the category (or categories) checked below:

- () A. NONEXPENDABLE PERSONAL PROPERTY, Federally-Owned (acquired with Capital Equipment funds, Government-furnished equipment, or through excess)
- () B. EXPENDABLE PERSONAL PROPERTY (SUPPLIES), if fair market value exceeds \$5,000.

Except for the category (categories) checked above, no other reportable residual property Of any description remained on this award at its completion.

SIGNATURE _____
TITLE _____ DATE _____