

**25th Fungal Genetics Conference at Asilomar
March 17-22
2009**

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Brief Schedule

DAY	MORNING	AFTERNOON	EVENING
Tuesday, March 17		Arrival Registration	Dinner Mixer
Wednesday, March 18	Plenary Session I Genome evolution and dynamics	Concurrent Sessions I	Poster Session I
Thursday, March 19	Plenary Session II Gene regulation and metabolism	Concurrent Sessions II	Poster Session II
Friday, March 20	Plenary Session III Signaling, development and sex	Concurrent Sessions III	Poster Session III
Saturday, March 21	Plenary Session IV Pathogenic and symbiotic interactions	Concurrent Sessions IV	Invited Lecture and Banquet Party
Sunday, March 22	<i>Ad Hoc</i> Sessions	Lunch Departure	

Facility note

To accommodate the increased attendance at this year's meeting, the plenary sessions will be presented by audio-visual link in the Chapel. Once Merrill Hall is full, attendees will be directed to Chapel.

Citations

The program book for the 25th Fungal Genetics Conference at Asilomar is published as a Supplement to Fungal Genetics Reports. Please cite abstracts as follows: Fungal Genet. Reports. 56 (Suppl):Page#. The abstracts are available online at the FGSC web-site (www.fgsc.net).

Posters

Please set your poster up in the **Fred Farr Forum Garage** immediately after lunch the day of your poster session. Posters will be available to view beginning as they are set up following lunch. The size of the poster should not exceed 4 feet x 4 feet. Two authors will share a 4 x 8 poster stand. Authors of ODD numbered posters should be at their poster from 7:30- 8:30 and authors of EVEN numbered posters should be at their posters from 8:30 - 9:30. If you have a poster that is not in the program book, you may post it at an un-numbered space.

Topic	# Range	Posters I	Posters II	Posters III
Comparative and Functional Genomics	1-112	1-112		
Gene Regulation	113-227		113-227	
Cell Biology	228-337			228-337
Biochemistry and Metabolism	338-386	338-386		
Population and Evolutionary Genetics	387-437			387-437
Host Pathogen Interactions	438-571		438-509	510-571
Education	572-576		572-576	
Other Topics	577-671	577-639	640-671	

Please thank Anne Marie Mahoney and the Genetics Society of America for their continued support of the Fungal Genetics Conference at Asilomar.

TWENTY FIFTH FUNGAL GENETICS CONFERENCE

SCIENTIFIC PROGRAM

Tuesday March 17

3:00pm - 10:00 pm	Registration	Administration Building
6:00 pm	Dinner	Crocker Hall
7:30 pm - 10:30 pm	Social Reception	Merrill Hall

Wednesday March 18

7:30 am - 1:00 pm	Registration	Administration Building
7:30 am - 8:30 am	Breakfast	Crocker Hall
8:30 am -12:00 pm	Plenary Session I	Merrill Hall and Chapel

GENOME EVOLUTION AND DYNAMICS Chair: Christina Cuomo, Broad Institute

Patrick Keeling	Microsporidia: intracellular fungi with reduced cells, genomes, and metabolism
Rays Jiang	Host-pathogen interaction drives genome plasticity in the late blight pathogen
Charles Saunders	The genome of <i>Malassezia globosa</i> , a fungus associated with dandruff
Thomas A. Richards	Horizontal gene transfer and the spread of trophic mechanisms in the eukaryotes
Bruce A. McDonald	The origins of plant pathogenic fungi

Following lunch, the morning speakers will be available on the benches outside the administration building to meet with students. Please allow time for students to meet the speakers. In the event of rain, please go inside the Administration building.

12:00 pm - 1:00 pm	Lunch	Crocker Hall
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AD HOC Sessions (lunch provided)

12:15 pm - 2:00 pm	The Phycomyces genome: manual annotation and analysis. Organizer: Luis Corrochano	Heather
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12:15 pm - 2:00 pm	Colletotrichum Workshop. Organizers: Michael Thon, Serenella Sukno	Scripps
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3:00 pm - 6:00 pm	Concurrent sessions I	
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Interactions between fungal pathogens and their human hosts:	Ted White and Judith Rhodes	Nautilus
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Population genetics and ecology:	Lynne Boddy and Kwangwon Lee	Merrill
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Secondary metabolism:	Barbara Howlett and Jurgen Wendland	Chapel
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Applied genomics and industrial mycology:	Ken Bruno and Peter Punt	Heather
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Architecture and tip growth:	Meritxell Riquelme and Rosa R. Mouriño-Pérez	Fred Farr Forum
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Circadian rhythms and photobiology:	Sue Crosthwaite and Christian Heintzen	Kiln
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Basidiomycete biology and genomics:	Sarah Watkinson and Dan Cullen	Scripps
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6:00 pm	Dinner	Crocker Hall
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7:30 pm -10:30 pm	Posters I	Fred Farr Forum Garage
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Poster Numbers	Topics
1-112	Comparative and Functional Genomics
338-386	Biochemistry and Metabolism
577-639	Other Topics

Authors of ODD numbered posters should be at their poster from 7:30- 8:30 and authors of EVEN numbered posters should be at their posters from 8:30 - 9:30. If you have a poster that is not in the program book, you may post it at an un-numbered space.

Thursday March 19

7:30 am - 1:00 pm Registration **Administration Building**
 7:30 am - 8:30 am Breakfast **Crocker Hall**

8:30 am -12:00 pm Plenary Session II **Merrill Hall and Chapel**

GENE REGULATION AND METABOLISM Chair: Joan W. Bennett, Rutgers University

Donald L. Nuss Regulation and consequences of a fungal antiviral RNA silencing response
Rachel Brem Natural genetic variation and the transcriptome
Jens Nielsen Metabolism of *Aspergilli* at the genome level
Robert Proctor Evolution of a secondary metabolite biosynthetic gene cluster in *Fusarium*
Eric U. Selker Control of DNA methylation in *Neurospora*

12:00 pm - 1:00 pm Lunch **Crocker Hall**

Following lunch, the morning speakers will be available on the benches outside the administration building to meet with students. Please allow time for students to meet the speakers. In the event of rain, please go inside the Administration building.

AD HOC Sessions (lunch provided)

12:15 pm -2:30 pm Workshop: JGI Genome Portal / Community Annotation Tools **Chapel**
 Organizer: Igor Grigoriev

3:00 pm -6:00 pm Concurrent sessions II

RNA functions, epigenetics and chromosome biology:	Hitoshi Nakayashiki and Yi Liu	Fred Farr Forum
Associations with plants:	Martijn Rep and Erika Kothe	Merrill
Natural products and small molecules:	Vera Meyer and Ben Horwitz	Kiln
Evolutionary genetics and genomics:	Jason Stajich and Linda Kohn	Chapel
Dimorphic transitions and morphogenesis:	Alex Andrianopoulos and Takashi Kamada	Heather
Biofuels and biomass disassembly:	Jonathan Walton and Scott Baker	Nautilus

6:00 pm Dinner **Crocker Hall**

7:30 pm -10:30 pm Posters II **Fred Farr Forum Garage**

Poster Numbers	Topics
113-227	Gene Regulation
438-509	Host Pathogen Interactions
572-576	Education
640-671	Other Topics

Authors of ODD numbered posters should be at their poster from 7:30- 8:30 and authors of EVEN numbered posters should be at their posters from 8:30 - 9:30. If you have a poster that is not in the program book, you may post it at an un-numbered space.

Friday March 20

7:30 am - 1:00 pm	Registration	Administration Building
7:30 am - 8:30 am	Breakfast	Crocker Hall

8:30 am -12:00 pm	Plenary Session III	Merrill Hall and Chapel
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SIGNALING, DEVELOPMENT AND SEX **Chair: Ursula Kues, GA Univ Göttingen, Germany**

Michael Feldbrugge	mRNA trafficking during pathogenic development of <i>Ustilago maydis</i>
Alex Idnurm	Sex and light signaling in the zygomycete <i>Phycomyces blakesleeanus</i>
Howard Judelson	Regulatory pathways involved in spore formation in the oomycete <i>Phytophthora infestans</i>
Paula Sundstrom	cAMP signalling in morphogenesis in <i>Candida albicans</i>
Jesus L. Aguirre	ROS signalling and control of development

12:00 pm - 1:00 pm	Lunch	Crocker Hall
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Following lunch, the morning speakers will be available on the benches outside the administration building to meet with students. Please allow time for students to meet the speakers. In the event of rain, please go inside the Administration building.

AD HOC Sessions (lunch provided)

12:15 pm - 1:00 pm	Neurospora business lunch. Organizer: Yi Liu	Chapel
12:15 pm - 2:00 pm	<i>Cryphonectria parasitica</i> genome sequence and annotation. Organizer: Donald L. Nuss	Nautilus
12:15 pm - 3:00 pm	Magnaporthe workshop. Organizers: Thomas Mitchell and Nicole Donofrio	Heather
12:15 pm - 2:30 pm	Dermatophyte genome sequencing workshop. Organizer: Ted White	Fred Farr Forum

After lunch 1:00 – 2:30	Neurospora functional genomics project. Organizer: Jay Dunlap	Chapel
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3:00 pm - 6:00 pm	Concurrent sessions III	
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Fungal and oomycete effectors:	Paul Birch and Thierry Rouxel	Merrill
Phylogenomics:	Joey Spatafora and David Geiser	Chapel
ROS in development and pathogenesis:	Paul Tudzynski and Wilhelm Hansberg	Heather
Cytoskeleton and motors:	Mike Plamann and Gero Steinberg	Fred Farr
Education and public outreach:	Pat Pukkila and Pietro Spanu	Scripps
Sex and development:	Yin-Won Lee and Frances Trail	Kiln
Analysis and regulation of carbon metabolism:	Bernhard Seiboth and Ronald P. De Vries	Nautilus

6:00 pm	Dinner	Crocker Hall
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7:30 pm -10:30 pm	Posters III	Fred Farr Forum Garage
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Poster Numbers	Topics
228-337	Cell Biology
387-437	Population and Evolutionary Genetics
510-571	Host Pathogen Interactions

Authors of ODD numbered posters should be at their poster from 7:30- 8:30 and authors of EVEN numbered posters should be at their posters from 8:30 - 9:30. If you have a poster that is not in the program book, you may post it at an un-numbered space.

Saturday March 21

7:30 am - 1:00 pm	Registration	Administration Building
7:30 am - 8:30 am	Breakfast	Crocker Hall
8:30 am -12:00 pm	Plenary Session IV	Merrill Hall and Chapel

PATHOGENIC AND SYMBIOTIC INTERACTIONS **Chair: Jim Kronstad, UBC Canada**

Neil A. R. Gow	Immune recognition of the fungal cell wall
Barbara Valent	Life inside a rice cell; lessons from the blast fungus
Lynda Ciuffetti	Toxins for life and death, a mechanism of pathogenesis
Paola Bonfante	Cellular and molecular plant responses to AM fungi
Meredith Blackwell	Insects in the lives of fungi

12:00 pm - 1:00 pm	Lunch	Crocker Hall
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Following lunch, the morning speakers will be available on the benches outside the administration building to meet with students. Please allow time for students to meet the speakers. In the event of rain, please go inside the Administration building.

AD HOC Sessions (lunch provided)

12:15 pm -1:45 pm	Zygomycetes and the microsporidia Workshop. Organizer: Joe Heitman	Nautilus
2:00 pm -5:00 pm	Concurrent sessions IV	

Zygomycetes and chytrids:	Mat Fisher and Santiago Torres	Scripps
Cool tools for fungal biology:	Gary Foster and Steve Osmani	Heather
Nitrogen regulation networks:	Bettina Tudzynski and Meryl Davis	Kiln
Metabolomics and Proteomics:	Peter Solomon and Kim Hammond-Kosack	Fred Farr Forum
Associations with microbes and insects:	Alfredo Herrera-Estrella and Pieter van West	Nautilus
Dothideomycete comparative genomics:	Steve Goodwin and Gert HJ Kema	Chapel
Speciation and evolution:	Tatiana Giraud and Jan Schirawski	Merrill

5:00 pm - 5:30 pm	Reception	Merrill Hall and Chapel
5:30 pm - 6:15 pm	Invited Lecture Claudio Scazzocchio, University of Paris XI, Orsay, France	Merrill Hall and Chapel

6:15 pm	Banquet	Crocker Hall
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8:00 pm - 12:30 am	Closing party Quiet alternative	Merrill Hall Surf and Sand Living Room
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Sunday March 22

7:30 am - 1:00 pm	Registration	Administration Building
8:30 am - 12:00 pm		

AD HOC Sessions/Workshops

9:00 am- 12:00 pm	Fusarium Workshop. Organizer: Bob Procter	Kiln
12:00 pm	Check-out	

Box lunches will be available to attendees who sign up for them in advance.

Ad Hoc Workshops

Wednesday March 18, 12:15 pm - 2:00 pm

The Phycomyces genome: manual annotation and analysis

Organizer: Luis Corrochano

Box lunches will be provided for the first 25 attendees

Heather

Colletotrichum Workshop

Organizers: Michael Thon, Serenella Sukno

Box lunches will be provided for the first 10 attendees

Scripps

Thursday March 19, 12:15 pm - 2:30 pm

JGI Genome Portal / Community Annotation Tools

Organizer: Igor Grigoriev

Box lunches will be provided for the first 50 attendees

Chapel

Friday March 20, 12:15 - 1:00 pm

Neurospora Business Lunch.

Organizer: Yi Liu

Box lunches will be provided for the first 60 attendees

Chapel

12:15 pm - 2:00 pm

Cryphonectria parasitica genome sequence and annotation

Organizer: Donald L. Nuss

Box lunches will be provided for the first 15 attendees

Nautilus

Magnaporthe workshop

Organizers: Thomas Mitchell and Nicole Donofrio

Box lunches will be provided for the first 40 attendees

Heather

Dermatophyte genome sequencing Workshop

Organizer: Ted White

Box lunches will be provided for the first 25 attendees

Fred Farr Forum

1:00 – 2:30

Neurospora Functional Genomics Project

Organizer: Jay Dunlap

Chapel

Saturday March 21, 12:15 pm -1:45 pm

Zygomycetes and the microsporidia

Workshop. Organizer: Joe Heitman

Box lunches will be provided for the first 25 attendees

Nautilus

Sunday March 22, 9:00 am- 12:00 pm

Fusarium Workshop

Organizer: Bob Procter

Kiln

Concurrent session schedules

Wednesday, March 18

Interactions between fungi and their human hosts

Nautilus

Co-chairs: Ted White and Judith Rhodes

Abstracts for this session begin on page 43

3:00-3:20

Tom Sharpton, University of California at Berkeley

Evolutionary genomics identifies proteins important to the interaction between *Coccidioides* and its host

3:20-3:40

Robert Cramer, Montana State University

Hypoxia adaptation and fungal virulence in *Aspergillus fumigatus*

3:40-4:00

Bill Nierman, JCVI

***Aspergillus fumigatus* gene expression in experimental murine lung infections**

4:00-4:20

Won Hee Jung, University of British Columbia

Ferroxidases in *Cryptococcus neoformans*: their roles inside macrophages and in antifungal susceptibility

4:20

Break

4:40-5:00

Kirsten Neilson, University of Minnesota

Giant Cell virulence in *Cryptococcus*

5:00-5:20

Ingrid E. Fröhner, University Vienna

***Candida albicans* cell surface superoxide dismutases degrade host-derived reactive oxygen species to escape innate immune surveillance**

5:20-5:40

David Kadosh, University of Texas

A filament-specific transcriptional regulator determines *Candida albicans* morphology and virulence

5:40-6:00

Richard Bennett, Brown University

Understanding sex in a hostile environment – cryptic mating in *Candida albicans*

Wednesday, March 18

Population genetics and ecology

Merrill

Co-chairs: Lynne Boddy and Kwangwon Lee

Abstracts for this session begin on page 46

3:00 - 3:20

Anne Pringle

Dispersal as a key to fungal population biology: creating wind, and travelling with humans.

3:20 - 3:40

James Anderson

Whole genome sequencing of experimental yeast populations identifies determinants of divergent adaptation and reproductive isolation

3:40 - 4:00

Chris Ellison

Evolution of the mating-type chromosome in *Neurospora tetrasperma*

4:00 - 4:20

Jan Stenlid

From population genetics to population genomics in wood decay fungi

4:20 - 4:40

Break

4:40 - 5:00

Stefano Torriani

Evolutionary history of the mitochondrial genome in *Mycosphaerella* populations infecting bread wheat, durum wheat, and wild grasses

5:00 - 5:20

Anastasia Litvintseva

"Out of Africa" origin of human pathogenic fungus *Cryptococcus neoformans* var. *grubii*

5:20 - 5:40

Yuriko Nagano

Fungal diversity in deep-sea sediments - a whole new world?

5:40 - 6:00

Frank Kempken

Fungal insect competition and the secondary metabolism

Wednesday, March 18

Secondary metabolism

Co-chairs: Barbara Howlett and Jürgen Wendland

Chapel

Abstracts for this session begin on page 49

3:00 - 3:20

Andrea Walther, Carlsberg Laboratory, Denmark

Oxidative stress response and riboflavin production in *Ashbya gossypii*

3:20 - 3:40

Jon Palmer, University of Wisconsin, Madison, WI

Delving into the mechanism of LaeA-regulated secondary metabolism

3:40 - 4:00

Rosie Bradshaw, Massey University, New Zealand

Dothistromin biosynthesis in the pine-infecting fungus, *Dothistroma spp*

4:00 - 4:20

Alice Churchill, Cornell University, Ithaca, NY

***Metarhizium anisopliae* NPS1 synthesizes novel cyclic heptapeptide spore factors called serinocyclins**

4:20 - 4:40

Break

4:40 - 5:00

K. Andreeva, University of Kentucky, Lexington, KY

Analysis of secondary metabolite gene clusters in the genome of *Epichloë festucae*

5:00 - 5:20

Natalie D. Fedorova, J. Craig Ventner Institute, Rockville, MD

SMURF: genomic mapping of fungal secondary metabolite pathways

5:20 - 5:40

Erik Lysøe, Bioforsk - Norwegian Institute of Agricultural and Environmental Research, Ås, Norway

The transcription factor FgStuA influences spore development, pathogenicity and secondary metabolite production in *Fusarium graminearum*.

5:40 - 6:00

Clay C. C. Wang, University of Southern California, Los Angeles, CA

Discovery of the emericellamide gene cluster by genomic mining in *Aspergillus nidulans*

Wednesday, March 18

Applied genomics and industrial mycology

Co-chairs: Ken Bruno and Peter Punt

Heather

Abstracts for this session begin on page 52

3:00-3:20

Carsten Russ, Broad Institute of MIT and Harvard, Cambridge, MA

Exploiting new sequencing technologies to study fungal genome structure and variation

3:20-3:40

Mikael R. Andersen, Technical University of Denmark, Lyngby, Denmark

Genomic analysis of evolution in *A.niger*

3:40-4:00

Mark Styczynski, Broad Institute of MIT and Harvard, Cambridge, MA

Comparative functional genomics: Reconstructing the evolution of central carbon metabolism in 15 fungal species

4:00-4:20

Axel Brakhage, HKI and Friedrich-Schiller-University, Jena, Germany

Functional Genomics in polyketide biosynthesis of *Aspergillus nidulans*

4:20-4:40

Break

4:40-5:00

Debby Yaver, Novozymes, Inc., Davis CA

An archeological exploration of fungal production strains: Analysis of *Aspergillus niger* AMG Producing Strains Using Comparative Genome Hybridization (CGH) and Quantitative Real-Time PCR (qPCR)

5:00-5:20

Peter Punt, TNO Quality of Life, Zeist, Netherlands

A systems biology approach towards improvement of itaconic acid production in *Aspergillus* sp.

5:20-5:40

Hideaki Koike, National Institute of Advanced Industrial Science and Technology (AIST), Japan.

Engineering intracellular metabolites by altering gene expression of *Aspergillus oryzae*

5:40-6:00

Hans Visser, Dyadic Nederland BV, Wageningen, Netherlands

Development of *Chrysosporium lucknowense* C1 as a commercial protein production platform: Exploration and exploitation of its genome

Wednesday, March 18

Architecture and tip growth

Fred Farr Forum

Co-chairs: Meritxell Riquelme and Rosa R.Mouriño-Pérez

Abstracts for this session begin on page 55

3:00 - 3:20

Peter Sudbery, Sheffield University, Sheffield, United Kingdom.

Phosphorylation of Sec2 by Cdc28-Hgc1 is required for transport of secretory vesicles to the Spitzenkörper during the hyphal growth of *Candida albicans*

3:20 - 3:40

Alejandro Beltrán, Center for Scientific Research and Higher Education of Ensenada, CICESE. Ensenada, BC, México.

The exocyst in *Neurospora crassa*: a tale of vesicles, fusions and apical growth

3:40 - 4:00

Norio Takeshita, University of Karlsruhe, Karlsruhe, Germany.

Interaction between microtubule plus ends and the hyphal tip cortex in *Aspergillus nidulans*

4:00 - 4:20

Robert W. Roberson, Arizona State University, Tempe, AZ USA.

Spitzenkörper distribution and diversity among the fungi

4:20

Break

4:40 - 5:00

Timo Schuerg, Technische Universitaet Braunschweig, Braunschweig, Germany.

BEM-1 is required for directed but not for general polar growth in *Neurospora crassa*

5:00 - 5:20

Barry Bowman, University of California, Santa Cruz, CA USA.

The structure of organelles and the distribution of calcium transporters in *Neurospora crassa*

5:20 - 5:40

Sara Gremillion, Rhodes College, Memphis, TN, USA.

Two Golgi apparatus COG proteins are important to polarity establishment and maintenance in *Aspergillus nidulans*

5:40 - 6:00

Rosa R. Mouriño-Pérez, Center for Scientific Research and Higher Education of Ensenada, CICESE. Ensenada, BC, México.

Actin binding proteins and endocytosis during tip growth of *Neurospora crassa*

Wednesday, March 18

Circadian rhythms and photobiology

Kiln

Co-chairs: Sue Crosthwaite and Christian Heintzen

Abstracts for this session begin on page 58

3:00- 3:20

Brian Crane, Department of Chemistry and Chemical Biology, Cornell University, Ithaca, NY

Coupling photochemistry to conformational change in fungal light sensors

3:20- 3:40

Reinhardt Fischer, Department of Applied Microbiology, University of Karlsruhe, Karlsruhe, Germany.

Light regulation in *Aspergillus nidulans*

3:40- 4:00

VG Tagua, C Sanz, Julio Rodríguez-Romero, A Idnurm, JM Christie, J Heitman, AP Eslava and LM Corrochano

Photoreceptor genes in *Phycomyces*

4:00 - 4:20

Deborah Bell-Pedersen, Center for Biological Clocks Research, Program for the Biology of Filamentous Fungi, and Department of Biology, Texas A&M University, Texas

Circadian Clock Output Pathways in *Neurospora crassa*

4:20

Break

4:40 - 5:00

Bill Belden, Dartmouth Medical School, Genetics Department, Hanover, New Hampshire

Chromatin-remodeling and epigenetics assist circadian clock-regulated gene expression

5:00 - 5:20

Ernestina Castro-Longoria, Michael Ferry, Salomón Bartnicki- García and Stuart Brody

Dynamics of nuclear localization *in vivo* of the *frq* gene product in *Neurospora crassa* during the circadian rhythm

5:20 - 5:40

Jinhu Guo, Ping Cheng, Yi Liu. Department of Physiology, The University of Texas Southwestern Medical Center, Dallas, TX

Posttranscriptional regulation of the *Neurospora* circadian clock

5:40 - 6:00

Steven B. Haase. Department of Biology, Duke University, Durham, North Carolina

Cycling without cyclins: a transcription network oscillator

Wednesday, March 18

Basidiomycete biology and genomics

Co-chairs: Sarah Watkinson and Dan Cullen

Scripps

Abstracts for this session begin on page 61

3:00-3:20

Ursula Kuës, Georg-August-University Göttingen

Laccase and other multi-copper oxidase genes in Agaricomycotina

3:20-3:40

Randy Berka, Novozymes, Inc.

Analysis of the *Postia placenta* genome reveals a novel paradigm for lignocellulose depolymerization

3:40-4:00

Sebastien Duplessis, INRA, Nancy

Recent updates on the genome project of the mycorrhizal basidiomycete *Laccaria bicolor*

4:00-4:20

Dan Eastwood, University of Warwick

Environmental regulation and transcript profiling of the reproductive phase change in *Agaricus bisporus*

4:20-4:40

Break

4:40-5:00

Heather Hallen, Michigan State University

Ribosomal synthesis of amatoxins in *Amanita* and *Galerina*

5:00-5:20

Walt Lilly, Southeast Missouri State University

Comparative genomics of basidiomycete peptidases

5:20-5:40

Mikael Brandström, Swedish University of Agricultural Sciences

Population genomics in the forest pathogen *Heterobasidion annosum*.

5:40-6:00

David Hibbett, Clark University

Phylogenetics and comparative genomics of brown-rot basidiomycetes

Concurrent session schedules

Thursday, March 19

RNA function, epigenetics and chromosome biology

Fred Farr Forum

Co-chairs: Yi Liu and Hitoshi Nakayashiki

Abstracts for this session begin on page 64

3:00-3:20

Nguyen Bao Quoc

How is RNA silencing invoked against the retrotransposon MAGGY in *Magnaporthe oryzae*?

3:20-3:40

Shwu-Shin Chang

qiRNA, a novel type of small RNA induced by DNA damage

3:40-4:00

Rosa M. Ruiz-Vázquez

The gene silencing mechanism in *Mucor*: consensus and dissent

4:00-4:20

Stephanie Bollman

Small RNA Pathways in the Oomycetes *Phytophthora sojae*, *Phytophthora ramorum*, and *Phytophthora infestans*

4:20-4:40

Break

4:40-5:00

Nancy Keller

Chromosomal landscapes and secondary metabolite cluster expression

5:00-5:20

Michiyoshi Wakabayashi

DNA damage checkpoint genes of *Neurospora crassa* are required for normal cell growth and maintenance of chromosome integrity

5:20-5:40

Kristina M. Smith ***Perkins Award Winner***

Centromeric regions of *Neurospora crassa* are composed of heterochromatin

5:40-6:00

Keyur K. Adhvaryu ***Perkins Award Winner***

Substitutions in amino terminal tail of histone H3 cause dominant loss of DNA methylation in *Neurospora*

Thursday, March 19

Associations with Plants

Co-chairs: Erika Kothe and Martijn Rep

Merrill

Abstracts for this session begin on page 67

3:00-3:20

Paul Tudzynski

***Botrytis cinerea*; special aspects of a necrotrophic life style**

3:20-3:40

Linda J. Johnson

A novel extracellular siderophore from *Epichloë festucae* is essential for grass mutualism

3:40-4:00

Sarah Gurr

On full blast: signals, sensors and stress

4:00-4:20

Brett Tyler

How oomycete and fungal effectors enter host cells

4:20

Break

4:40-5:00

Patrick Berndt

Physical-chemical plant-derived signals induce differentiation in *Ustilago maydis*

5:00-5:20

Claire Veneault-Fourrey

What makes a biotrophic fungus a plant-pathogen or a symbiont? Insights from transportome analysis

5:20-5:40

Claire Gachon

The immune response of brown algae against the basal oomycete pathogen *Eurychasma dicksonii*

5:40-6:00

Chang Hyun Khang

The biotrophic interfacial complex and the secretion of effector proteins into host cells during rice blast disease

Thursday, March 19

Natural products and small molecules

Kiln

Co-chairs: Vera Meyer and Ben Horwitz

Abstracts for this session begin on page 70

3:00-3:20

Gillian Turgeon

Nonribosomal peptide synthetase metabolites and fungal development

3:20-3:40

Massimo Reverberi

Aflatoxin biosynthesis is correlated to peroxisome functionality, lipid metabolism and oxidative stress in *Aspergillus flavus*

3:40-4:00

Donald Gardiner

Potent inducers of deoxynivalenol production by *Fusarium graminearum*

4:00-4:20

Timothy Friesen

***Stagonospora nodorum* utilizes multiple host-selective toxins which act as effectors of pathogenicity to induce disease on wheat**

4:20

Break

4:40-5:00

Alma Rodriguez

Screening of secondary metabolites important in fungal interactions: the challenge of data mining

5:00-5:20

Bruce Campbell

Natural phenolic compounds as anti-aflatoxicogenic and anti-fungal chemosensitizing agents

5:20-5:40

Ulrike Binder

Pathways involved in resistance to the antifungal protein PAF of *Penicillium chrysogenum*

5:40-6:00

Gustavo Goldman

Farnesol induces the transcriptional accumulation of the *Aspergillus nidulans* Apoptosis-Inducing Factor (AIF)-like mitochondrial oxidoreductase

Thursday, March 19

Evolutionary Genetics and Genomics

Co-chairs: Linda Kohn and Jason Stajich

Chapel

Abstracts for this session begin on page 73

3:00-3:20

Christina Cuomo

Comparative genomic analysis of pathogenic *Candida* species.

3:20-3:40

Darren M. Soanes

Insights into the evolution of fungal pathogenicity using comparative genomics

3:40-4:00

Paul F. Morris

Multiple horizontal gene transfer events and domain fusions have created novel regulatory and metabolic networks in the oomycete genome

4:00-4:20

Kathryn E. Bushley

Evolution of nonribosomal peptide synthetases: generating chemical diversity

4:20

Break

4:40-5:00

Richard Oliver

Mesosynteny between fungal chromosomes; a newly recognised type of sequence conservation found between fungal species

5:00-5:20

Illan Wapinski

Cross-species comparison of ribosomal protein transcriptional responses under environmental stress

5:20-5:40

Jeremy Dettman

Genome-wide investigation of reproductive isolation in *Neurospora*: Candidate regions identified by microarray-based genotyping and mapping

5:40-6:00

Jason Stajich

Evolutionary dynamics and transcriptional landscape of *Neurospora crassa* revealed through RNA sequencing and comparative genomics

Thursday, March 19

Dimorphic transitions and morphogenesis

Heather

Co-chairs: Alex Andrianopoulos and Takashi Kamada

Abstracts for this session begin on page 76

3:00-3:20

Anita Sil

Regulation of *Histoplasma capsulatum* morphology and virulence in response to temperature

3:20-3:40

Joachim Morschhaeuser

Control of white-opaque switching in *Candida albicans*

3:40-4:00

Anne Jeziorowski

The role of TOS9 domain proteins during growth and morphogenesis in the dimorphic human pathogen *Penicillium marneffei*

4:00-4:20

Anne Dranginis

Mechanisms of Flo11-dependent adhesion and morphogenesis in *Saccharomyces cerevisiae*.

4:20

Break

4:40-5:00

Dong-Min Han

A homeoprotein, NrsA represses sexual development of *Aspergillus nidulans*

5:00-5:20

Ulrich Kück

A molecular network of conserved signaling components and novel proteins controls cellular development in *Sordaria macrospora*

5:20-5:40

Takashi Kamada

Mutational analysis of sexual development in the mushroom *Coprinopsis cinerea*

5:40-6:00

Hoi Shan Kwan

Towards a better understanding of fruiting body development in basidiomycetous mushrooms

Thursday, March 19

Biofuels and biomass disassembly

Co-chairs: Johnathan Walton and Scott Baker

Nautilus

Abstracts for this session begin on page 79

3:00- 3:20

Sandy Merino, Novozymes

Development of a recombinant *Trichoderma* strain for improved hydrolysis of pretreated corn stover

3:20 - 3:40

Dan Cullen, USDA/Univ. Wisconsin

Mechanisms of lignocellulose degradation inferred from transcriptome and secretome analysis of the wood decay fungi *Phanerochaete chrysosporium* and *Postia placenta*.

3:40 - 4:00

Ronald de Vries, Utrecht University

Genome mining to improve bio-ethanol pre-treatments

4:00- 4:20

Bill Adney, NREL

Approaches to understanding processive cellulases

4:20

Break

4:40 - 5:00

Merja Pentilla, VTT Technical Research Centre of Finland

***Trichoderma reesei* as a production organism for enzymes for biomass hydrolysis**

5:00 - 5:20

William Thronset, Genencor, a Danisco Division

Strain Improvement of *Trichoderma* using Green Fluorescent Protein and Fluorescence Activated Cell Sorting

5:20 - 5:40

Yuji Noguchi, Nagoya University, Nagoya, Japan.

Post translational modification of AoXlnR, a key transcriptional regulator of biomass-degrading enzymes in *Aspergillus oryzae*.

5:40 - 6:00

Verena Seidl, Institute of Chemical Engineering, Vienna University of Technology, Austria.

Sex and the *Trichoderma*: New perspectives for industrial strain improvement.

Concurrent session schedules

Friday, March 20

Fungal and Oomycete effectors

Co-chairs: Paul Birch and Thierry Rouxel

Merrill

Abstracts for this session begin on page 81

3:00-3:20

Martijn Rep, University of Amsterdam, the Netherlands

Effectors of a xylem colonizing fungus

3:20-3:40

Pieter van West, University of Aberdeen, Scotland

Unraveling the mechanism of RxLR mediated translocation of Oomycete effector proteins

3:40-4:00

Regine Kahmann, Max-Planck-Institute, Marburg, Germany

The effectors of smut fungi: from comparative genomics to function

4:00-4:20

Eleanor Gilroy, SCRI, Scotland

Functional analysis of *Phytophthora infestans* RXLR effectors Avr2 and Avr3a

4:20

Break

4:40-5:00

Thierry Rouxel, INRA-Bioger, Versailles France

AT-rich isochores as ecological niches for effectors in the genome of *Leptosphaeria maculans*

5:00-5:20

Sophien Kamoun, The Sainsbury Laboratory, UK

Crinklers: A second class of host translocated effectors from oomycete plant pathogens

5:20-5:40

Bart Thomma, Wageningen University, The Netherlands

Secreted effectors of the tomato leaf mould fungus *Cladosporium fulvum* are virulence factors that target host defense

5:40-6:00

Francine Govers, Wageningen University, The Netherlands

Recognition of *Phytophthora infestans* RXLR-dEER effectors by resistance proteins is triggered by C-terminal domains comprising W motifs

Friday, March 20

Phylogenomics

Co-chairs: Joey Spatafora and David Geiser

Chapel

Abstracts for this session begin on page 84

3:00-3:20

Barbara Robbertse

Phylogenetic informativeness and the fungal tree of life

3:20-3:40

Magnus Karlsson

Functional differentiation of fungal chitinases

3:40-4:00

Bernard Henrissat

Carbohydrate-active enzymes in fungal genomes

4:00-4:20

Jason Slot

Excavating the adaptive palimpsest: acquisition and evolution of ecological function in fungal genome

4:20

Break

4:40-5:00

Emily Whiston

SNPs of information: Inferring evolutionary history in *Coccidioides*

5:00-5:20

Tatiana Giraud

Assessing the performance of single-copy genes for recovering robust phylogenies

5:20-5:40

Pari Skamnioti

Regulatory subfunctionalization and neofunctionalization account for the preservation of the ancient and extended cutinase family in *Magnaporthe oryzae*

5:40-6:00

Joelle Amselem

Comparative analysis of transposable elements in several fungal genomes

Friday, March 20

ROS in development and pathogenesis

Co-chairs: Paul Tudzynski and Wilhelm Hansberg

Heather

Abstracts for this session begin on page 87

3:00 - 3:20

Wilhelm Hansberg, Universidad Nacional Autónoma de México, Mexico

ROS, RAS-1, growth and development

3:20 - 3:40

Philippe Silar, Université Paris sud 11, Paris, France

Role and regulation of the Nox family in the filamentous fungus *Podospora anserina*

3:40 - 4:00

Nicholas J Talbot, University of Exeter, Exeter EX4 4QD, UK

Determining the role of reactive oxygen species generation in *Magnaporthe grisea*

4:00 - 4:20

Barry Scott, Massey University, Palmerston North, New Zealand

Bem1 and Cdc24: additional components of the *Epichloe festucae* NADPH oxidase complex? Coffee break

4:20

Break

4:40- 5:00

Benjamin A. Horwitz, Technion, Haifa, Israel

Role of reactive oxygen species and stress signaling pathways in development and virulence of *Cochliobolus heterostrophus*

5:00 - 5:20

Nora Temme, Westfaelische Wilhelms Universitaet Muenster, Muenster, Germany

Reactive oxygen species: *Botrytis cinerea* 's friends or foes during host infection?

5:20 - 5:40

Kwang Hyung Kim, Virginia Bioinformatics Institute, Blacksburg, VA, USA.

A novel transmembrane protein is required for oxidative stress homeostasis and virulence in plant and animal fungal pathogens

5:40 - 6:00

Aurélie Deveau, Dartmouth Medical School, Hanover, NH

Integration of farnesol signaling in *Candida albicans*: importance of heterogeneous response in population for the promotion of level fitness in the face of oxidative stress.

Friday, March 20

Cytoskeleton and motors

Fred Farr Forum

Co-chairs: Mike Plamann and Gero Steinberg

Abstracts for this session begin on page 90

3:00-3:20

Nadine Zekert, University of Karlsruhe, Germany

The *Aspergillus nidulans* kinesin-3 UncA motor moves vesicles along a subpopulation of microtubules

3:20-3:40

Gero Steinberg, University of Exeter, United Kingdom

Single dynein motors drive long-distance endosome transport in *Ustilago maydis*

3:40-4:00

Berl Oakley, University of Kansas, USA

Functional analysis of the myosin II and myosin V homologs of *Aspergillus nidulans*

4:00-4:20

Tetsuya Horio, University of Kansas, USA

Whole genome analysis of the *Aspergillus nidulans* kinesins

4:20

Break

4:40-5:00 pm

Ryan Elsenpeter, University of Missouri, USA

Exploring the Role of the C-terminal domains of cytoplasmic Dynein heavy chain in *Neurospora crassa*

5:00-5:20

Sandrine Grava, University of Basel, Switzerland

Microtubule cytoskeleton in the filamentous fungus *Ashbya gossypii*: organization and role in nuclear migration

5:20-5:40 pm

Christian Böhmer, University of Marburg, Germany

Disassembly of septin filaments during transition from collar to ring-like structures

5:40-6:00 pm

Michael Kemper, University of Osnabrueck, Germany

A novel, microtubule dependent role for a formin in the filamentous fungus *Ashbya gossypii*

Friday, March 20

Education and public outreach

Co-chairs: Pat Pukkila and Pietro Spanu

Scripps

Abstracts for this session begin on page 93

3:00 - 3:20

Mimi Zolan, Indiana University

How do we prepare future faculty?

3:20 - 3:40

Scott Gold, U. Georgia

DelsGate, a robust deletion method used as a tool for undergraduate teaching in fungal genomics

3:40 - 4:20

Roundtable discussion led by Pietro Spanu, Imperial College

Innovations in Education and Public Outreach

4:20

Break

4:40 - 5:00

Joan Bennett, Rutgers University

Lessons learned from building a program for women in science

5:00 - 5:20

Gloria Turner, U. California at Los Angeles

***Neurospora* genetics and genomics summer research institute: An introduction to research**

5:20 - 5:40

Pat Pukkila, U. North Carolina at Chapel Hill

Undergraduate research in the state capital: Helping your State Legislators understand and appreciate higher education

5:40 - 6:00

Tom Volk, U. Wisconsin-LaCrosse

Plant pathology vs. medical mycology: Battle of the fungi

Friday, March 20

Sex and development

Kiln

Co-chairs: Yin-Won Lee and Frances Trail

Abstracts for this session begin on page 95

3:00 - 3:20

Gerhard Braus

Coordination of fruit body formation and secondary metabolism in *Aspergillus nidulans*

3:20 - 3:40

Robert Debuchy

Microarray identification of genes differentially transcribed in strains of opposite mating types in *Podospora anserina*

3:40 - 4:00

Steve Horton

B-regulated sexual development and the sugar transporter Sts1 in *Schizophyllum commune*

4:00 - 4:20

Johannes Wostemeyer

Regulation of sex pheromone synthesis in Mucor-like fungi

4:20

Break

4:40 - 5:00

Christina Hull

Gene regulation and dikaryon formation during sexual development of *Cryptococcus neoformans*

5:00 - 5:20

Katherine Borkovich

Regulation of growth and development by the guanine nucleotide exchange factor RIC8 in *Neurospora*

5:20 - 5:40

Mohamed Hijri

Live-cell imaging reveals that arbuscular mycorrhizal fungi inherit and require hundreds of nuclei to survive

5:40 - 6:00

William Alexander ***Perkins Award Winner***.

DCL-1 colocalizes with other components of the MSUD machinery and is required for silencing

Friday, March 20

Analysis and regulation of carbon metabolism

Co-chairs: Bernhard Seiboth and Ronald P. De Vries

Nautilus

Abstracts for this session begin on page 97

3:00 - 3:20

Margaret Katz

Genes involved in controlling the response to carbon starvation in *Aspergillus nidulans*

3:20 - 3:40

Bernhard Seiboth

Role of hexokinases in carbon catabolite repression and induction in *Hypocrea jecorina*

3:40 - 4:00

Géraldine Mey

Mechanisms of regulation of amino acid transport and metabolism in phytopathogenic fungi

4:00 - 4:20

Michael S. Price

Carbon metabolism and *Cryptococcus neoformans* virulence

4:20

Break

4:40 - 5:00

Evy Battaglia

Analysis of *Magnaporthe grisea* XlnR reveals significant differences in pentose catabolism from *Aspergillus niger*

5:00 - 5:20

Carmen Limon

Effect of phosphoglucose isomerase deletion on cellulase production in *Trichoderma reesei*

5:20 - 5:40

Claudia Maerker

Aconitase AcoA of *Aspergillus nidulans*, regulation at the atomic level?

5:40 - 6:00

Andrea Prynnych

Mechanisms of action of transcriptional regulators involved in fatty acid catabolism

Concurrent session schedules

Saturday, March 21

Concurrent sessions start one hour earlier on Saturday.

Zygomycetes and Chytrids

Co-chairs: Santiago Torres and Mat Fisher

Scripps

Abstracts for this session begin on page 100

2:00-2:20

Soo-Chan Lee

Sex locus and virulence of zygomycetes and microsporidia, the basal fungi

2:20-2:40

Igor Grigoriev

Annotation and analysis of zygomycetes: *Phycomyces blakesleeanus* and *Mucor circinelloides*

2:40-3:00

Tim James

Rapid expansion of the emerging fungal disease chytridiomycosis into declining and healthy amphibian populations

3:00-3:20

Mat Fisher

Mapping evolving *Batrachochytrium* lineages

3:20

Break

3:40-4:00

Li-Jun Ma

Genomic analysis of the basal lineage fungus *Rhizopus oryzae* reveals a whole-genome duplication

4:00-4:20

Victoriano Garre

Regulation of photocarotenogenesis via proteolysis-independent ubiquitylation in the zygomycete *Mucor circinelloides*

4:20-4:40

Meredith D. M. Jones

Environmental DNA combined with fluorescent *in situ* hybridisation reveals a missing link in the fungal tree of life

4:40-5:00

Satoshi Sekimoto

Elongation factor 2 phylogeny of *Olpidium* and its implications for early fungal evolution

Saturday, March 21

Cool tools for fungal biology

Co-chairs: Gary Foster and Steve Osmani

Heather

Abstracts for this session begin on page 103

2:00 - 2:20

Andy Bailey

Transforming Mushroom Biology

2:20 - 2:40

Luis Larrondo

Novel tools for gene manipulations and a luciferase-based reporter system in *Neurospora crassa* reveal detailed real-time dynamics of frq /FRQ oscillations and uncovers new period mutants

2:40 - 3:00

Nick Reed

Manipulating living fungal cells with light

3:00 - 3:20

Steve Osmani.

Comprehensive methods to inactivate, visualize and purify all fungal proteins.

3:20

Break

3:40 - 4:00

Susan Kaminskyj

Exploring fungal biology using light-, electron- and spectro-microscopy.

4:00- 4:20

Martha Arnaud

The Aspergillus Genome Database (AspGD), a curated database of Aspergillus gene, protein, and genomic sequence information for the fungal research community.

4:20- 4:40

Hye-Seon Kim

Development of fluorescent protein-based biosensors for Ca²⁺ and pH to monitor physiological changes during *Arabidopsis thaliana*-*Fusarium oxysporum* interactions

4:40 - 5:00

Mia Champion,

Progress under the Fungal Genome Initiative : Sequencing and comparative analysis of fungal genomes

Saturday, March 21

Nitrogen regulation networks

Kiln

Co-chairs: Bettina Tudzynski and Meryl Davis

Abstracts for this session begin on page 106

2:00-2:20

Mark Caddick, The University of Liverpool, Liverpool, UK.

The coordinated cellular response to nitrogen availability in *Aspergillus nidulans*

2:20-2:40

Richard Todd, Kansas State University, Manhattan K,S USA.

Deletion of the *Aspergillus nidulans* nitrogen regulatory gene areB reveals pleiotropic phenotypes

2:40-3:00

Joseph Strauss, BOKU-University, Vienna, Austria.

Integration of nitrate assimilation into the nitrogen metabolic network of *Aspergillus nidulans*

3:00-3:20

Jinny Paul, University of Louisville, Louisville, KY

Exploring interactions among ammonium transporters of fungi

3:20

Break

3:40-4:00

Bettina Tudzynski, Universität Münster, Münster, Germany.

Highly conserved key players of nitrogen regulation can play different roles in different filamentous fungi

4:00-4:20

Richard Wilson, University of Nebraska, Lincoln, USA.

Trehalose-6-phosphate synthase integrates metabolic control and fungal virulence in *Magnaporthe oryzae* via a novel NADP(H)-dependent genetic switch

4:20- 4.40

Manuel Sánchez López-Berges, Universidad de Córdoba, Spain.

Nitrogen controls invasive growth and plant pathogenicity in *Fusarium oxysporum* via the Ser/Thr kinase TOR and the bZIP transcription factor MeaB

Saturday, March 21

Metabolomics and proteomics

Co-chairs: Peter Solomon and Kim Hammond-Kosack

Fred Farr Forum

Abstracts for this session begin on page 109

2:00- 2:20

Rohan G.T. Lowe

DON mycotoxin biosynthesis by *Fusarium* species, a metabolomics perspective

2:20 - 2:40

Romaine Huget

Comparative proteomic analysis of infection-related development in the rice blast fungus *Magnaporthe oryzae*

2:40 - 3:00

Martin Vödisch

Proteome maps of total cell, mitochondrial and secreted proteins of *Aspergillus fumigatus*

3:00 - 3:20

Philippe Tanguay

Peptide-assisted annotation of the *Melampsora larici-populina* genome

3:20

Break

3:20 - 3:40

Kar-Chun Tan

An 'omics approach to characterise heterotrimeric G-protein signalling in *Stagonospora nodorum*

3:40 - 4:00

Bret Cooper

Quantitative proteomic analysis of an obligate bean rust fungus and its host

4:00- 4:40

Pietro Spanu

The genome of *Blumeria graminis*: massive size expansion in an obligate biotroph

4:40 - 5:00

Delphine Vincent

High resolution analysis of fungal secreted proteins

Saturday, March 21

Associations with microbes and insects

Nautilus

Alfredo Herrera-Estrella and Pieter van West

Abstracts for this session begin on page 112

2:00 - 2:20

David P. Hughes

Crazy ants: the fine detailed manipulation and exploitation of ants by the fungus *Ophiocordyceps* (=Cordyceps) unilateralis

2:20 - 2:40

Prasun Mukherjee

The mechanism of action of *Trichoderma* during biocontrol of phytopathogenic fungi

2:40 - 3:00

Suzanne Joneson

Upregulated fungal genes in the early developmental stages of lichen symbiosis

3:00- 3:20

Morten Nedergaard Grell

Proteins involved in attack and defence in Zygomycete-aphid interactions

3:20

Break

3:20 - 3:40

Harold J.G. Meijer

Cellular responses of *Phytophthora infestans* to cyclic lipopeptide surfactants produced by *Pseudomonas* species

3:40 - 4:00

S. Bleuler-Martinez

A lectin-mediated defense of fungi against predators and parasites

4:00 - 4:20

Nrupali Patel

Intracellular pathogenesis of filamentous fungi by the biocontrol bacterium *Lysobacter enzymogenes*

4:40-5:00

Alfredo Herrera-Estrella

Analysis of gene expression and antibiotic production in biocontrol by *Trichoderma* spp

Saturday, March 21

Dothideomycete comparative genomics

Co-chairs: Steve Goodwin and Gert H.J. Kema

Chapel

Abstracts for this session begin on page 115

2:00-2:20

Shaobin Zhong

Development of genomic resources and tools for *Cochliobolus sativus*

2:20-2:40

Bourras Salim

A systematic analysis of T-DNA insertion patterns in the genome of *Leptosphaeria maculans*

2:40-3:00

Carrie A. Smith

Morphogenetic mutants of *Phoma medicaginis*

3:00-3:20

Andrea Aerts

Comparative genomics tools for analysis of six Dothideomycete genomes

3:20

Break

3:40-4:00

Sarrah Ben M'Barek

Outstanding: the dispensable chromosomes of *Mycosphaerella graminicola*

4:00-4:20

Braham Dhillon

Absence of cytosine methylation in *Mycosphaerella graminicola* correlates with Repeat Induced Point mutation signatures in its *Dim-2* homologue

4:20-4:40

Ioannis Stergiopoulos

Homologues of the *Cladosporium fulvum* effector proteins are present in *Mycosphaerella* species

4:40-5:00

Eva H. Stukenbrock

Deciphering the genetic basis of speciation of a fungal plant pathogen through comparative genomics

Saturday, March 21

Speciation and evolution

Merrill

Co-chairs: Tatiana Giraud and Jan Schirawski

Abstracts for this session begin on page 118

2:00 - 2:20

Hanna Johannesson, Uppsala Sweden

Mating-type chromosome evolution in the filamentous ascomycete *Neurospora tetrasperma*

2:20 - 2:40

Edmond J. Byrnes, Durham NC USA

Evidence that the Vancouver island *Cryptococcus gattii* outbreak has expanded into the United States Pacific North West

2:40 - 3:00

Ronny Kellner, Bochum Germany

Genetic variability of mating genes and virulence factors of phytopathogenic fungi

3:00 - 3:20

Daniel Henk, London UK

Speciation and recombination in the globally distributed penicillin producing fungus *Penicillium chrysogenum*

3:20

Break

3:40 - 4:00

Linda Kohn, Toronto Canada

Speciation genes in fungi

4:00 - 4:20

Pierre Gladieux, Orsay France

Inferring the history of speciation from multilocus sequence and microsatellite data: the case of the *Microbotryum violaceum* species complex

4:20 - 4:40

Bridget Barker, Arizona Tucson USA

Evidence for hybridization and introgression between *Coccidioides immitis* and *C. posadasii*

4:40 - 5:00

Jan Schirawski, Marburg, Germany

Host adaptation as mechanism of speciation? Comparative analysis of *Sporisorium reilianum* isolates with different host preference