

2nd Symposium on the Basal Fungal Kingdom
March 12, 2024
32nd Fungal Genetics Conference
Asilomar Conference Grounds, California, USA

Organizers

Maribel Navarro Mendoza (Duke University, USA)
Carlos Pérez Arques (Duke University, USA)
Joseph Heitman (Duke University, USA)
Victor Garre (University of Murcia, Spain).
Luis M Corrochano (University of Seville, Spain)

Location: Fred Farr Forum

Scientific program

9:00-9:15 Welcome by the organizers

Session 1: Genomics of early-diverging fungal diversity

Chairs: Joseph Spatafora & Kerstin Voigt

9:15-9:30 Rhys Farrer
Two-speed genomes drive the evolution of pathogenicity in amphibian-infecting chytrids

9:30-9:45 Jessica Matthews
The transcriptomic landscape of lignocellulose degradation by anaerobic fungi

9:45-10:00 Carlos Lax
Unraveling the 6mA-regulated transcriptional regulatory networks in the early diverging fungus *R. microsporus*

10:00-10:15 Nicolas Helmstetter
Unravelling the 3D architecture of *Batrachochytrium* genomes by Hi-C analysis

10:15-10:30 Anna Muszewska
LCR differ among fungal phyla and from proteome background

10:30-11:00 Coffee break

Session 2: Cross-kingdom symbiosis: from pathogenesis to mutualism

Chairs: Teresa Pawlowska & Nicole Wernet

11:00-11:15 Elizabeth Ballou
Investigating the prevalence and influence of endohyphal bacteria on Mucorales

11:15-11:30 David Firer
Interrupting the progression of an amphibian pandemic

- 11:30-11:45 Hana Barret
The role of cell wall remodeling in innate immunity of early divergent Mucoromycotina
- 11:45-12:00 Delia Tota
A matter of life and death: characterizing the innate immune response of the mucoromycete *Rhizopus microsporus* to the antagonistically perceived *Mycetohabitans* bacterium
- 12:00-12:15 Nicole Wernet
The role of purine metabolism in the *C. elegans* Intracellular Pathogen Response to microsporidia and Orsay Virus infection
- 12:15-12:30 Kerstin Voigt
Lichtheimia corymbifera as model system for mucormycosis
- 12:30-2:00 Lunch

Session 3: Evolution and population dynamics

Chairs: Timothy James & Jessie Uehling

- 2:00-2:15 Mark Yacoub
The evolution and distribution of endogenous DNA viruses in early-divergent fungi
- 2:15-2:30 Nicole Reynolds
Dispersal and biotic filtering structure Mucoromycota fungal communities and their associated bacteria across two different biomes
- 2:30-2:45 Margaret Branine
Inferring molecular bases of the *Rhizopus microsporus/Mycetohabitans* symbiosis by genome-wide positive selection analysis
- 2:45-3:00 Reid Longley
Experimental evolution of *Benniella erionia* and Mollicutes-Related endobacteria
- 3:00-3:15 Andrew Urquhart
Exploring the biogeography of *Backusella*: Insights into the distribution of early diverging fungi

3:15-3:45 Coffee break

Session 4: Exploring early-diverging fungi through molecular toolkits

Chairs: Lillian Fritz-Laylin & Jason Stajich

- 3:45-4:00 Stephanie Brody
Genetic transformation of the frog-killing chytrid fungus *Batrachochytrium dendrobatidis*

- 4:00-4:15 Lazarina Butkovich
Separation of life stages within anaerobic fungi highlights differences in global transcription and metabolism
- 4:15-4:30 Edgar Medina
Cytoskeletal mechanisms driving 3D cellularization of multinucleated chytrid fungi
- 4:30-4:45 Thomas Gassler
Inducing novel endosymbioses by bacterial implantation into fungi
- 4:45-5:00 Lene Lange
Evolution and function of the enzyme secretome of the Chytridiomycota and the Neocallimastigomycota
- 5:00-5:15 Alex Idnurm
Identification of the putative mating type locus in the Mortierellomycotina
- 5:15-6:00 Farewell / open discussion