



31st International Conference on Yeast Genetics and
Molecular Biology
ICYGMB31

<https://www.yeastflorence2023.com/>

Local Conference Organizer: Duccio Cavalieri, University of Florence.

International Organizing Scientific Committee

Terrance Cooper, Jens Nielsen, Diethard Mattanovich, Steve Oliver, Andriy Sibirny, and the Finance and Policy Committee (FINPOL).

National Organizing Scientific Committee.

Alberto Amaretti, Paola Branduardi, Stefano Campanaro, Valentina Cappelletti, Tiziana Cervelli, Cristina Dallabona, Alberto Inga, Ileana Ferrero, Marco Foiani, Marco Fondi, Alvaro Galli, Sergio Giannattasio, Paola Goffrini, Valeria Mapelli, Enzo Martegani, Massimiliano Marvasi, Cristina Mazzoni, Marco Muzi Falconi, Luigi Palmieri, Graziano Pesole, Danilo Porro, Edoardo Puglisi, Rino Rappuoli, Teresa Rinaldi, Maddalena Rossi, Irene Stefanini, Arianna Tavanti, Marco Vanoni.

Sunday 20th August

- 17.00-18.00 Registration
18.00-19.00 Welcome to ICYGMB31-Opening Party

Monday 21st August-Palazzo dei Congressi

Palazzo dei Congressi-Piazza Adua

- 08.00-09.00 Registration & Opening address
09.00-11.00 **Plenary Session 1 - Yeast Evolutionary Genomics**
Chairs: Gianni Liti and Daniela Delneri
Joseph Schacherer - "Genome Evolution"
Sally Otto - "Experimental Evolution in *S. cerevisiae*"
Daniela Delneri - "Interspecific Hybridization and yeast species evolution"?
1 Talk selected from abstracts
11.00-13.00 **Plenary Session 2 - Systems Level Reconstruction of Cell-Cell Interactions**
Chairs: Sophie Martin, Liz Ballou, and Stefano Campanaro
Liz Ballou - "Yeast-environment interactions"
Kiran Patil - "Yeast metabolism in ecological context"
Sophie Martin - "Yeast-host interactions"
Zdena Palkova - "Spatially structured yeast populations: Interactions, differentiation and regulatory networks"
13.00-14.30 Lunch
14.30-16.00 Poster Session
16.00-17.30 **WORKSHOPS 1-2-3**
Workshop 1 – Cell death, ageing, Telomeres (Cristina Mazzoni, Frank Madeo)
Workshop 2 – Yeast Sociobiology-Sensing and Signaling (Gianluigi Cardinali, Sophie

Martin)

Workshop 3 – Yeast Evolution and Ecology (Pietro Buzzini & Andrey Yurkov).

17.30-18.30 Opening Keynote Lecture: Brenda Andrews: “Mapping biological networks using systematic genetics and cell biology”.

18.30-20.00 Welcome party

Tuesday 22nd August

08.30-10.30 **Plenary Session 3 - Yeast Commensalism and Pathogenesis**

Chairs: Arianna Tavanti and Neil Gow

Suzanne Noble –

Neil Gow – “How the immune system detects the fungal wall”

Bernard Hube- "The dual function of the fungal toxin candidalysin"

Jurgen Wendland - “Predator Yeasts”

Frank Madeo – “From regulated cell death in yeast to anti-aging and anti-fungal treatments”.

10.30-11.00 coffee break

11.00-13.00 **Plenary Session 4- Yeast Biotechnology**

Chairs: Danilo Porro, Valeria Mapelli and Diethard Mattanovich

Tom Ellis - “Synthetic Yeast Chromosomes and their biotechnological applications”

Irina Borodina - “Engineering yeast for production of novel foods”

Paola Branduardi - “Closing the loop: The power of microbial biotransformations from traditional bioprocesses to biorefineries, and beyond”

Dr. Roksolana Vasylyshyn "Identification of the new genes involved in regulation of xylose alcoholic fermentation in the thermotolerant yeast Ogataea polymorpha"

13.00-14.30 Lunch

14.30-16.00 Poster Sessions-wine and cheese sponsored break.

16.00-18.00 **WORKSHOPS 4-5-6**

Workshop 4 - Growth control and metabolism (Sergio Giannattasio, Marco Vanoni)

Workshop 5 - Gene expression: from epigenetic regulation to mRNA stability and Cell Cycle Control (Naama Barkai, Matteo Barberis)

Workshop 6 – Stress Response, aggregation and Misfolding (Valentina Cappelletti, Tiago Outeiro).

18.00-19.30 Finpol Meeting.

18.00-19.30 Job Placement Corner.

Social Dinner.

Wednesday 23th August

08.30-9.30 **Resources for the yeast community SGD & Pombase Workshop-**

Chair Mike Cherry

Speakers from SGD and Pombase

09.30-10.30 **Hot Topics Session**

Chair: Pascale Daran Lapujade, John Morrissey.

Johan Thevelein: 'Novel Warbicin® family of phosphorylation-dependent glucose-uptake inhibitors in yeast and human cells as potential anti-cancer drugs.'

Anthony J. Burnett "Engineering phototrophic yeast: physiology, approaches, and applications"

10.30-11.00 coffee break

11.00-13.00 Plenary Session 5 – Classical Yeast Genetics and Molecular Biology

Chairs: Terrance Cooper, Ileana Ferrero, and Marco Muzi Falconi

Marco Foiani – "Topological mechanisms mediating intra and inter chromosomal connections"

J. Marie Hardwick– "Amino acid sensing, vesicle trafficking to the vacuole, cell death and virulence"

Claudio De Virgilio – "Metabolic control of TORC1."

Michael Lisby - "The proteome of DNA Repair"

13.00-14.30 Lunch

14.30-16.00 Poster Session-Beer event sponsored by Baladin.

16.00-18.00 WORKSHOPS 7-8-9

Workshop 7 – DNA replication & recombination; DNA Damage & Repair (Dana Brnzei, Marco Muzi Falconi)

Workshop 8 - Systems & Synthetic Biology of Yeasts (Paola Branduardi, John Morrissey).)

Workshop 9 - Yeast Biotechnology (Alberto Amaretti, Alberto Inga, Andri Sibirny).

18.00-19.30 Special Event 1 - Yeast Cell Cycle and modelling Transcriptional regulation.

In memory of Stefan Hohman-Novo Nordisk Session

Chairs: Lilia Alberghina and Steve Oliver

Matteo Barberis – "Systems Biology of cell cycle control in yeast and beyond"

Naama Barkai - "RNA stability and protein fate in Cell development"

Terrance Cooper - "Multivariant global control of the major nitrogen-responsive transcription activator, Gln3".

20.30 Social Dinner and dancing party at Villa Viviani

Thursday 24th August

08.30-10.30 Plenary Session 6 - Yeast as a Model to study mechanism of disease

Chairs: Sergio Giannattasio, Cristina Mazzoni and Alvaro Galli

Tiago Outeiro - "Unravelling the molecular mechanisms of neurodegeneration: lessons from yeast"

Cristina Dallabona - "Yeast as a model to study mitochondrial disorders"

Dana Brnzei - "Good and bad about replication-associated recombination".

Xin Jie Chen– "Elucidating Ant1-induced diseases using the yeast model"

10.30-11.00 coffee break

11.00-13.00 Plenary Session 7 - Yeast cells and organelles as cell factories.

Chairs: Andrei Sibirny, Luigi Palmieri, Cristina Dallabona

Andriy Sibirny - "Metabolic engineering of non-conventional yeasts *Komagataella phaffii* and *Candida famata* for the production of bacterial antibiotics roseoflavin and

aminoriboflavin"

Yongjin Zhou - "Engineering yeast for production of valuable chemicals through targeting pathways to specific organelles - in particular peroxisomes."

Dr. Justyna Ruchala "Construction of the advanced riboflavin and flavin mononucleotide producers on cheese whey in the flavinogenic yeast *Candida famata*"

Prof. Gianni Agrimi. "Unlocking the yeast powerhouse: metabolic engineering of *Yarrowia lipolytica* via manipulation of mitochondrial transporters".

13.00-14.30

Lunch

14.30-17.00

Plenary Session 8 - Synthetic and Systems Biology

Chairs: Jens Nielsen and Teresa Rinaldi

Ferian Li - "Mathematical modeling of yeast: a driver for innovation in biotechnology and human medicine"

Charlie Boone - "Mapping genetic and chemical-genetic networks in yeast"

Pascale Daran Lapujade- "Pathway swapping and chromosome engineering"

Daniel Segré - "Modeling the rise of microbial interdependences in yeast cheater-cooperator system"

Patrick Cai - "Constructing Synthetic yeast chromosomes with tRNA genes".

17.00-17.30

Closing Ceremony: R.K. Mortimer and M. Polsinelli Award for research on wine yeasts, communications from IUMS (Rino Rappuoli) and FEMS (Davide Zannoni) Yeast Best poster and Best presentation prizes.

17.30-18.30

Closing Keynote Lecture-Jef Boeke - "Yeast Synthetic Biology: Past Present and Future"

Friday 25th August-Polo delle Scienze Sociali di Novoli. Satellite workshop on Yeast from fermented foods to immune modulation

09.00-11.00

Satellite workshop 1 - Yeast Ecology and Fermentations: the intimate relationship of *S. cerevisiae* and fermented foods

Chairs: Gianluigi Cardinali, Edoardo Puglisi, and Jurgen Wendland

Irene Stefanini – "Yeast-insects associations: from ecology and evolution to winemaking"
Quinten.Deparis - "Generating custom yeast strains for traditional and precision fermentation."

Vladimir Jiranek – "The yeast consortia involved in tree sap fermentations performed by indigenous Australian peoples"

Jean Luc Legras - "From vineyard to winery: *S. cerevisiae* microbial diversity driving wine fermentation".

11.00-13.00

Yeast science meets the industry of fermented foods-Roundtable.

13.00-15.00

Lunch Break

15.00-17.00

Satellite Workshop 2 - Yeast probiotics, trained immunity and the fungal microbiome.

Chairs: Duccio Cavalieri, Rino Rappuoli and Cristina Cuomo

Luigina Romani - *Candida* and *Prevotella*: friend or foe in the gut?

Christina Cuomo – "Intra-host diversity and the emergence of systemic *Candida* infections".

Rino Rappuoli - "Role of yeasts in vaccine development and manufacturing"

Florian Bauer-"Yeast cell wall genes and social interactions"

17.00-19.00

Roundtable-Chair Steve Oliver:"The future of yeast research: Yeast genetics meets

Ecology and Evolution”