

PROGRAM



YEAST

The Omni-Tool

ISSY38

1-5 September 2025, Warsaw, Poland



Image Author:

Bernardo Bellotto "Widok Warszawy od strony Pragi"

Source: https://commons.wikimedia.org/wiki/File:Bellotto_View_of_Warsaw_from_Praga.jpg

www.issy38.com.pl

Organizers



UNIVERSITY
OF WARSAW



WROCLAW UNIVERSITY
OF ENVIRONMENTAL
AND LIFE SCIENCES




INTERNATIONAL
COMMISSION ON
YEASTS

Monday, September 1st 2025

12:00-18:00	Registration
15:30-18:00	OPENING CEREMONY Chair: Adrianna Skoneczna & Zbigniew Lazar
16:00-17:00	Yeast mating-type switching: a paradigm for studying the repair of a broken chromosome James Haber
17:00-18:00	Insights from the diversity of antifungal drug tolerance responses Judith Berman
18:00-21:00	Get together

Tuesday, September 2nd 2025

08:30-09:20	Using yeast to study the ubiquitin-proteasome system Mark Hochstrasser
09:20-10:10	DECIPHERING OF MOLECULAR MECHANISMS OF EUKARYOTIC CELLS WITH YEAST I Chair: Martin Kupiec & Joanna Kufel
09:20-09:40	A genetic screen reveals the mechanisms that control sister chromatid cohesion Martin Kupiec
09:40-09:50	WHO are you? – A new category of yeast mobile genetic elements at the borderline between homing and transposable elements Ludovic Monnin
09:50-10:00	Unilateral ends-out gene targeting increases mistargeting Petar Tomev Mitrikeski
10:00-10:10	Retrograde signalling in yeast <i>Candida albicans</i> Karolina Łabędzka-Dmoch
10:10-10:40	Coffee break
10:40-11:40	DECIPHERING OF MOLECULAR MECHANISMS OF EUKARYOTIC CELLS WITH YEAST II Chair: Joanna Kufel & Martin Kupiec
10:40-11:00	Non-canonical translation events in the yeast <i>Saccharomyces cerevisiae</i> Joanna Kufel

11:00-11:10	The head, rather than the tail. Metabolic responses are tuned to RNA polymerase III <i>de novo</i>, non-coding RNA synthesis through the Dhh1-dependent pre-translational gene regulation Malgorzata Adamczyk	
11:10-11:20	Deciphering the diverse role of Gal4 transcription factor in the regulation of central carbon metabolism of <i>Saccharomycetaceae</i> yeasts Riccardo Milanesi	
11:20-11:40	Glucose induces selective autophagy of methanol-induced native and heterologous cytosolic proteins in the yeast <i>Komagataella phaffii</i> Andriy Sibirny	
11:40-14:30	WARSAW TOUR	
14:30-15:30	Lunch	
14:40-15:20	FEMS Yeast Research Editorial Board meeting room No.116 on the 2 nd floor	
15:30-16:20	A genome-level screen identifies evolutionary conserved buffer genes that influence the phenotypic effect of <i>de novo</i> mutations in the yeast genome Kevin J. Verstrepen	
16:20-17:00	YEAST SCREENS I Chair: Brenda Andrews & Adrianna Skoneczna	
16:20-16:30	Cracking the code of the crabtree effect: enhancing <i>S. cerevisiae</i> potential as a cell factory Samuel Hanon	
16:30-16:40	Time-resolved functional genomics using deep learning reveals a global hierarchical control of autophagy Jorrit Enserink	
16:40-16:50	Unravelling the natural complexity of protein secretion to develop novel yeast strains Dimitrios Konstantinidis	
16:50-17:00	Unveiling the potential of <i>Mrakia</i>: a genomic perspective on its role in low-alcohol beverage innovation Benedetta Turchetti	
17:00-17:30	Coffee break	
17:30-18:40	YEAST SCREENS II Chair: Adrianna Skoneczna & Brenda Andrews	
17:30-17:50	Yeast as an omni-tool for functional genomics and systems biology Brenda Andrews	

17:50-18:10	Small molecule fitness profiling of diverse <i>Saccharomyces cerevisiae</i> strains using a novel CRISPR-Cas9 marker-less barcoded library Vivien Measday
18:10-18:20	Small Volume – Big Problem: Culturing <i>Yarrowia lipolytica</i> in high-throughput micro-formats Ewelina Celińska
18:20-18:30	An effective inhibitor of SARS-CoV-2 Main Protease revealed by yeast system Andonis Karachitos
18:30-18:40	Identifying conserved aging regulators by high throughout lifespan screen in budding yeast Weiwei Dang
18:40-20:10	Poster session 1. Odd number posters
Wednesday, September 3rd 2025	
09:00-09:50	Making yeast more powerful: from the beginning to the future Xin-Qing Zhao
09:50-11:00	METABOLISM AND METABOLOMICS I Chair: Diethard Mattanovich & Hiroshi Takagi
09:50-10:10	Metabolic pathway design for efficient conversion of single carbon substrates into building block chemicals Diethard Mattanovich
10:10-10:30	Hexokinase: the mysterious guardian of cellular energy Zbigniew Lazar
10:30-10:40	Production of an extracellular polysaccharide from crude glycerol in industrial waste by the oleaginous yeast <i>Rhodotorula toruloides</i>: Uncovering a component responsible for the production Shigeyuki Kawai
10:40-10:50	Metabolic engineering of <i>Yarrowia lipolytica</i> for the biosynthesis of vitamin A Jin Hou
10:50-11:00	Bioconversion of sugarcane industry residues to oleochemicals engaging the non-conventional oleaginous yeast <i>Pichia manshurica</i> Wesley Cardoso Generoso
11:00-11:30	Coffee break



11:30-12:50	METABOLISM AND METABOLOMICS II Chair: Ewelina Celińska & Diethard Mattanovich
11:30-11:50	A novel proline metabolism found in <i>Saccharomyces cerevisiae</i> and its application to biotechnology Hiroshi Takagi
11:50-12:10	Overcoming methanol toxicity for carbon-neutral overproduction of chemicals by enhancing cellular homeostasis and DNA repair Yongjin J. Zhou
12:10-12:20	The dynamics of ergosterol biosynthesis in pathogenic <i>Candida</i> species Olga Heidingsfeld
12:20-12:30	Nitrogen and phosphorus limitation as drivers of microbial lipid biosynthesis in waste hydrophobic media Katarzyna Wierzchowska
12:30-12:50	When science meets production: some practical considerations Ildar Nisamedtinov
12:50-13:20	Coffee break
13:20-14:20	THE YOUNG RESEARCHERS FORUM Chair: Vivien Measday & Maciej Wnuk
13:20-13:50	How to think about and do successful research - cliffnotes for graduate students and post-docs Terry Cooper
13:50-14:20	Workshop
14:20-15:30	Conference photo and Lunch
15:30-16:20	Yeast as omni-tool to study host microbiome interactions Duccio Cavalieri
16:20-17:50	HUMANIZED YEAST IN HEALTH RESEARCH Chair: Ľubomír Tomáška & Teresa Żołądek
16:20-16:40	Expanding the yeast mitochondrial proteome by means of post-translational modifications ĽubomírTomáška
16:40-17:00	Studies in yeast revealed a molecular mechanism of neurodegenerative diseases linked to MT-ATP6 mutations Róża Kucharczyk
17:00-17:10	Genetic and environmental determinants of multicellular-like phenotypes in fission yeast Benjamin Heineike

17:10-17:20	Cell size and its role in determining physiological efficiency: key player or side effect? Renata Zdraġ-Tęcza
17:20-17:30	Yeast as an omni-tool to study and functionalize fungal peptide-GPCRs for synthetic cell-cell communication, biosensing and as future antifungal drug targets Sonja Billerbeck
17:30-17:40	Accelerated screening of cell factory designs with G protein-coupled receptor-based yeast biosensors Emil Damgaard Jensen
17:40-17:50	Regulation of arsenic-induced protein aggregate formation, processing, and clearance: insights from genome-wide image-based screening Jakub Masaryk
18:00-19:30	Poster session 2. Even numbers posters
18:30	ICY Meeting Chopin I salon on the 2 nd floor of Bristol Hotel, Krakowskie Przedmieście 42/44, 7 min walk from the conference venue <div>  <div>INTERNATIONAL COMMISSION ON YEASTS</div> </div>
Thursday, September 4th 2025	
09:00-09:50	Continental scale variation of <i>Saccharomyces</i> yeasts Gianni Liti
09:50-10:50	YEAST IN POPULATION AND EVOLUTION MODELS Chair: Cécile Neuvéglise & Matthias Sipiczki
09:50-10:10	Recombination of allospecific mitogenomes in interspecies <i>Saccharomyces</i> hybrids Matthias Sipiczki
10:10-10:20	Model-guided predictive evolution of metabolic phenotypes Paula Jouhten
10:20-10:30	Testing the mitochondrial prey hypothesis of apoptosis origin Szymon Kaczanowski
10:30-10:40	Surprising sympatric divergence of the wild <i>Saccharomyces cerevisiae</i> in a Chinese subtropical forest region home to the oldest lineage of the yeast Feng-Yan Bai
10:40-10:50	Dici: a new Tc1/mariner transposon reshaping the genome of <i>Diutina catenulata</i> Cécile Neuvéglise

10:50-11:20	Coffee break
11:20-13:00	FERMENTATION, FOOD AND BEVERAGES Chair: Francisco Carrau & Zbigniew Lazar
11:20-11:40	The shikimate pathway in <i>Hanseniaspora vineae</i>: a native eukaryotic model to enhance and study the biosynthesis of flavour bioactive compounds from aromatic amino acids Francisco Carrau
11:40-12:00	To touch or not to touch: The role of physical contact between cells of different yeast species in the wine microbial ecosystem Florian Bauer
12:00-12:10	Genome-based exploration of alcohol acyltransferases for flavor formation in the food yeast <i>Wickerhamomyces subpelliculosus</i> Su Jin Yoo
12:10-12:20	Yeast-assisted flavour improvement in pea protein-based yoghurt via controlled fermentation strategies Frederico Magalhães
12:20-12:30	The role of yeast in the production of sauerkraut Paweł Satora
12:30-12:40	Study of a potential CWI pathway like to <i>S. cerevisiae</i> in <i>B. bruxellensis</i> Maria Angelica Ganga
12:40-12:50	Single cell proteins from yeast: From production to nutritional and functional potential Nathalie Gorret
12:50-13:00	Evolution of maltose utilisation in wild Irish isolates of <i>Saccharomyces eubayanus</i> Sean Bergin
13:00-14:00	Lunch
14:00-15:10	YEASTS AS MOLECULAR FACTORIES I Chair: Paola Branduardi & Rodrigo Ledesma-Amaro
14:00-14:20	Sustainable food manufacturing using microbial metabolic engineering Rodrigo Ledesma Amaro
14:20-14:30	Sustainable biosynthesis of natural sunscreens: Mycosporine-like amino acids and phytoene production in engineered yeasts Ji-Sook Hahn
14:30-14:40	A survey for identification of endogenous <i>Saccharomyces cerevisiae</i> transporters capable of exporting succinic acid Andreea Perpelea

14:40-14:50	Evaluating alternative metabolic engineering strategies for 3-hydroxypropionic acid production in <i>Komagataella phaffii</i> Pau Ferrer
14:50-15:00	Converting lignocellulosic feedstocks to high-value lipophilic compounds: Cell disruption strategies for <i>Rhodotorula</i> Yashaswini Nagavara Nagaraj
15:00-15:10	Integrated analysis of <i>Yarrowia lipolytica</i> bioprocesses for hydrocarbons valorization: linking cell structure, lipids, and enzymes production Marlene Lopes
15:10-15:40	Coffee break
15:40-16:50	THE YOUNG RESEARCHERS REPORTS Chair: Vivien Measday & Maciej Wnuk
	A single-molecule approach to the study of protein aggregation in response to stress Linde Viaene
	A new look at hexokinase from <i>Yarrowia lipolytica</i>: crystallographic and functional analysis Kacper Szymański
	Impact of yeast sequential inoculation strategies to diversify the aroma and flavour profiles of cider Siyamkele Solontsi
	OMICS analyses of the wine yeast <i>Hanseniaspora guilliermondii</i> to ethanol stress Diogo Santos
	Impact of glucose and propionic acid on even and odd chain fatty acid profiles of oleaginous yeasts Veronica Bonzanini
	<i>Yarrowia lipolytica</i>, dimorphic transition and lipid synthesis Alejandro Ordonez
	Unlocking the catalytic potential of yeast geranylgeranyl diphosphate synthase through metabolic-driven epistatic interactions Yueming Dong
	Transcription factors as tools of massive operation in engineering of industrial traits in <i>Yarrowia lipolytica</i> Maria Gorczyca
	Metabolic engineering of yeast cell factories to produce natural food colors Ingrid Lykke Mohr

	Developing a yeast-based platform for the valorisation of end-of-life bioplastics in heterogeneous waste streams Daniele Vezzini
	Mechanism of Ssg1-mediated lifespan extension predicted to be involved in vacuolar transport of S-adenosylmethionine in budding yeast Sayaka Kawasaki
18:30-22:30	Conference dinner Address: Nowa Oranżeria, Agrykola 1, 00-460 Warszawa On foot: approximately one hour walk (4 km, 2.5 miles) from the conference venue By public transport: bus no. 180 Read the QR code to find the restaurant on Google maps 
Friday, September 5 th 2025	
09:00-11:00	YEASTS AS MOLECULAR FACTORIES II Chair: Paola Branduardi & Rodrigo Ledesma-Amaro
09:00-09:20	Yeast biodiversity and metabolic engineering for creating novel value chains in industrial biotechnology Paola Branduardi
09:20-09:30	The journey of red yeast <i>Rhodotorula toruloides</i> from laboratory to industrial production Ivana Marova
09:30-09:40	Identification of novel secretion signals and screening of precision fermentation strains using a dual reporter system Parastoo Karimian
09:40-09:50	<i>In vivo</i> promoter shuffling enables streamlined engineering of yeast production strains Lena Hochrein
09:50-10:00	Synthetic communities of <i>Yarrowia lipolytica</i> for bioproduction Armand Bernard
10:00-10:10	Toxic and useful: harnessing yeast killer toxins for product recovery Ankita Suri
10:10-10:20	Metabolic engineering to bring progress to life™ Paul Klaassen

10:20-10:40	<p>Continuous production of recombinant lipase CRL1 in <i>Pichia pastoris</i> under pGAP promoter using saccharified fruit bio-waste as the main carbon source: Evaluation of operational strategies</p> <p>Ana G. Del Hierro</p>	 
10:40-11:00	<p>Confluence of parallel advances in yeast-based synthetic biology, bioinformational engineering and bioelectronics</p> <p>Isak S. Pretorius</p>	
11:00-11:30	Coffee break	
11:30-13:50	CLOSING CEREMONY	
11:30-12:20	<p>Systems biology of yeast metabolism</p> <p>Jens Nielsen</p>	
12:20-13:20	Awards ceremony	
13:20-13:50	Closing remarks	

CONGRESS MANAGEMENT



www.whynottravel.pl
www.whynotcongress.pl

Chairs of the Organizing Committee for ISSY38:



Adrianna Skoneczna

Laboratory of Genome Stability Mechanisms
Institute of Biochemistry and Biophysics,
Polish Academy of Sciences
Warsaw, Poland



Zbigniew Lazar

Department of Biotechnology and Food Microbiology
Wrocław University of Environmental
and Life Sciences
Wrocław, Poland

Local Committee

Adrianna Skoneczna, Teresa Żołądek & Marek Skoneczny

(Institute of Biochemistry and Biophysics, Polish Academy of Sciences)

Zbigniew Lazar

(Wrocław University of Environmental and Life Sciences)

Joanna Kufel & Michał Koper

(University of Warsaw)

Ewelina Celińska

(Poznań University of Life Sciences)

Renata Zadrąg-Tęcza & Maciej Wnuk

(Rzeszów University)

Scientific Committee

Adrianna Skoneczna & Zbigniew Lazar *(Poland)*

Brenda Andrews *(Canada)*

Florian F. Bauer *(RPA)*

Paola Branduardi *(Italy)*

Francisco Carrau *(Uruguay)*

Terrence G. Cooper *(USA)*

Daniel J. Klionsky *(USA)*

Lumir Krejci *(Czech Republic)*

Martin Kupiec *(Israel)*

Rodrigo Ledesma-Amaro *(UK)*

Michael Lisby *(Denmark)*

Diethard Mattanovich *(Austria)*

Vivien Measday *(Canada)*

John Morrissey *(Ireland)*

Andrei Sibirny *(Ukraine)*

Matthias Sipiczki *(Hungary)*

Verena Siewers *(Sweden)*

Hiroshi Takagi *(Japan)*

Ľubomír Tomáška *(Slovakia)*

PATRONAGE



Komitet
Biotechnologii



ODDZIAŁ WARSZAWSKI

OFFICIAL CARRIER OF THE EVENT

POLISH AIRLINES



A STAR ALLIANCE MEMBER

PLATINUM SPONSORS



bionet®



LPPequipment Warsaw



SILVER SPONSORS



ALCHEM GRUPA Sp. z o.o.



TT-THERMO KING

SPONSORS



Genes | Genomes | Genetics

GENETICS



WILEY

