



The 35th International Specialized Symposium on Yeasts

21 - 25 October 2019
Antalya, Turkey

"Yeast Cornucopia: Yeast for health and wellbeing"

SCIENTIFIC PROGRAM Oral Presentations



From the ISSY 35 Organizing Committee

Dear Friends and Colleagues,

On behalf of the Organizing Committee, I would like to thank you for your attendance of The 35th International Specialised Symposium on Yeasts. This is the first time the ISSY meeting is held in Turkey. The symposium is jointly organized by The International Commission on Yeasts (ICY) and the Department of Food Engineering, Faculty of Agriculture, Çukurova University.



Yeasts are important industrial microorganisms that have been used in numerous traditional as well as many new biotechnological applications. The theme of the 35th symposium is “Yeast Cornucopia: Yeast for health and wellbeing”. The aim of the 35th ISSY is to provide an overview of the latest developments on yeast fermented foods and beverages, the production of ingredients and additives formed by yeasts, recent developments in yeast genetics and genomics as it relates to the yeast cultures used and taxonomic yeast characterization with emphasis on ecology and biodiversity, probiotic yeasts and the role of yeasts in improving health and wellbeing. Our hope by covering these topics is to expand new horizons and to broaden scientific knowledge in several of these areas.

The ISSY 35th symposium will have 1 plenary lecture, 8 keynote lectures and 57 oral talks and 78 poster presentations. The symposium has gathered more than 200 distinguished senior, young and industrial scientists from over 47 countries that will present their latest research results while exploring the nearby beauties of Antalya as time permits. Some of our participants will visit the Olympus antique city ruins and the mountainous region surrounding the city as part of the social program that we hope they will enjoy. All abstracts, presentation slides, photographs and video recordings with authors permission, will be published at the webpage of the congress after the event, so please keep following our official webpage www.issy35.com.

I would like to express my personal gratitude for ICY and ISSY35 Organizing Committee for all of their hard work and to the Scientific Committee members for their great efforts in evaluating many of the abstracts.

I am especially grateful to Turkish and International sponsors for their generous financial support. I also would like to thank to all participants, session chairs, speakers and Leon Congress who helped to turn the congress into a reality.

Welcome and thank you for attending ISSY35 and Turkey.

Prof. Huseyin Erten, PhD

Chair of Organizing Committee of ISSY35

Head of Department,

Department of Food Engineering, Faculty of Agriculture,
Çukurova University, Adana, Turkey

From the International Commission on Yeasts (ICY)

Dear Colleagues (ISSY35 Attendees),

On behalf of the International Commission on Yeasts (ICY), I welcome all of you to the International Specialized Symposium on Yeasts (ISSY35) held in Antalya, Turkey. This symposium is organized by Prof. Huseyin Erten (Department of Food Engineering, Faculty of Agriculture, Cukurova University, Turkey), who is a great scientist in the field of food science and engineering in yeasts and lactic acid bacteria, and his wonderful team under the auspices of ICY. I'd like to express million thanks to his excellent job.



The subtitle of this symposium is “Yeast Cornucopia: Yeast for Health and Wellbeing”, which covers a wide range of ‘yeast science and technology’ in fermented foods and beverages, probiotics, health, taxonomy, ecology, biodiversity, genetics and genomics, and as sources of ingredients and additives.

I wish all of you a productive meeting in Antalya, which is the eighth-most populous city in Turkey with over one million people, located on Mediterranean coast bordered by the Taurus Mountains. You can enjoy not only yeast science and technology but also a rich natural environment and historical/cultural tradition of Antalya and Turkey.

ICY <<https://www.iums.org/index.php/home-icy>> has been established in Bratislava in 1966 as the Council for Yeast Research, composed of prominent specialists in the field of yeasts. In 1971 the Council was transferred into the International Association of Microbiological Societies (IAMS), now International Union of Microbiological Societies (IUMS). ICY is now a commission under the Division of Mycology and Eukaryotic Microbiology. The general objectives of ICY are to establish an effective liaison between persons and organizations concerned with yeast investigations, and between them and the practical users of results of investigations including yeast culture collections. Every four years a General Symposium (International Congress on Yeasts; ICY) and each year in the meantime a Specialized Symposium (International Specialized Symposium on Yeasts; ISSY) will be held.

Welcome and thank you for coming to ISSY35 !!

Prof. Hiroshi Takagi, Ph.D.

Chair of ICY

Nara Institute of Science and Technology (NAIST), Japan

A handwritten signature in blue ink, which appears to read 'Hiroshi Takagi'.

21 October 2019, Monday - Adrasan Hall

08:00-09:00	Breakfast at Hotel
09:00-09:40	Opening Ceremony by Huseyin Erten, ISSY35 Chair Mustafa Kibar, Cukurova University Rector Hiroshi Takagi, ICY Chair
09:40-10:20 Opening Lecture	Charles Abbas - University of Illinois & Ibiocat Inc. USA My Journey with Yeast: Exploiting Yeast Diversity for Industrial Applications
10:20-10:40	Coffee Break
Session 1: Yeasts in Fermented Foods and Beverages Chairs: Charles Abbas & Huseyin Erten	
10:40-11:00	Francisco Carrau - University of the Republic, Uruguay Global Winemaking Application of <i>Hanseniaspora vineae</i> Under Mixed Yeast Culture Conditions
11:00-11:20	María José Valera - University of the Republic, Uruguay ARO10 Genes Are Involved in Benzenoids Biosynthesis by Yeast During Wine Fermentation
11:20-11:40	Neil Jolly - ARC Infruitec-Nietvoorbij, South Africa Non- <i>Saccharomyces</i> Yeast in Wine – A South African Story
11:40-12:00	Agustin Aranda - University of Valencia-CSIC. Spain Activity of Nutrient Signalling Pathways of <i>Saccharomyces cerevisiae</i> During Winemaking
12:00-13:20	Lunch Break
Session 2: Yeasts in Fermented Foods and Beverages Chairs: Hiroshi Takagi & Charoen Charoenchai	
13:20-14:00 Keynote Lecture	Hiroshi Takagi - Nara Institute of Science and Technology, Japan Improvement of Fermentation Ability and Product Quality in Industrial Yeast by “Functional Amino Acid Engineering”
14:00-14:20	Vivien Measday - University of British Columbia, Canada Whole Genome Sequencing of 75 <i>S. cerevisiae</i> Strains Isolated from Canadian Vineyards and Wineries
14:20-14:40	Angela Capece - University of Basilicata, Italy Interaction between <i>Saccharomyces cerevisiae</i> and <i>Hanseniaspora uvarum</i> in Mixed Fermentation Affects Wine Characteristics

21 October 2019, Monday - Adrasan Hall

14:40-15:00	Nikola Gyurchev - University of Leicester, UK De Novo Yeast Hybrids with Enhanced Brewing Characteristics
15:00-15:20	Marc Serra Colomer - Carlsberg Research Laboratory, Denmark Unleashing the Brewing Potential of <i>Brettanomyces</i> Yeasts
15:20-15:40	Coffee Break
15:40-16:40	Poster Session 1
Session 3: Yeasts in Fermented Foods and Beverages Chairs: Patrizia Romano & Vladimir Jiranek	
16:40-17:20 Keynote Lecture	Anne Christine Gschaedler Mathis – CIATEJ, Mexico Non- <i>Saccharomyces</i> Yeasts in Food Fermentations and Beverages: Current Situation and Future Perspectives
17:20-17:40	Behnam Taidi - Ecole Centrale Supélec, France A New Process for Yeast-Propagation for Champagne-Production
17:40-18:00	Vasileios Englezos - University of Turin, Italy <i>Starmerella bacillaris</i> and <i>Saccharomyces cerevisiae</i> Interactions During Alcoholic and Malolactic Fermentations
18:00-18:20	Coffee Break
18:20-18:40	Vladimir Jiranek - University of Adelaide, Australia The indigenous microbiota of Australian Aboriginal and Torres Strait Islander fermentations
18:40-19:00	Vanessa Postigo - Madrid Institute for Research and Rural Development in Food and Agriculture, Spain New Ingredients for The Fermentation of Beer: Non- <i>Saccharomyces</i> Yeasts from Wine
19:00-19:20	Kevin Verstrepen - VIB - KULeuven Center for Microbiology, Belgium Physiological Role and Industrial Opportunities of Yeast Aroma Production
19:20-20:40	Dinner (at hotel)
20:40-22:00	Welcome Cocktail

22 October 2019 Tuesday - Adrasan Hall

08:00-09:20	Breakfast at Hotel
09:20-09:40 Sponsor Speech	Sureyya Mert Selimoglu - Pakmaya (Pak Group of Companies), Turkey Industrial Production of Baker's Yeast – Current Trends and Challenges
Session 4: Probiotic Yeasts Chairs: Lene Jespersen & Johan Thevelein	
09:40-10:20 Keynote Lecture	Lene Jespersen - University of Copenhagen, Denmark Beneficial Impact of Food-Borne and Probiotic Yeasts on Human Health – Traits That Determine Their Biological Functionality
10:20-10:40	Coffee Break
10:40-11:00	Johan Thevelein - VIB & KU Leuven, Belgium Unique Genetic Basis of the Distinct Antibiotic Potency of High Acetic Acid Production in the Probiotic Yeast <i>Saccharomyces cerevisiae</i> var. <i>boulardii</i>
11:00-11:20	Patricia Taillandier - Toulouse INP / LGC, France Kombucha Fermentation: Yeast Populations and Biological Activities
11:20-11:40	David Lapeña - Norwegian University of Life Sciences, Norway Production of Different Yeasts on Grown on Media Composed of Spruce Sugars and Protein Hydrolysates from Poultry by-Products
11:40-12:00	Ishtar Snoek - AB Biotek, Australia From Strain to Product
12:00-13:20	Lunch Break
Session 5: Yeast Taxonomy, Ecology, and Biodiversity Chairs: Pietro Buzzini & Kyria Boundy-Mills	
13:20-14:00 Keynote Lecture	Pietro Buzzini - University of Perugia, Italy Polar and Non-Polar Cold Habitats: Little Explored Habitats for Fungal Life
14:00-14:20	Claire Brice - Stockholm University, Sweden The Frequency of Transgressive Segregants in Interspecific <i>Saccharomyces</i> Hybrids

22 October 2019 Tuesday - Adrasan Hall

14:20-14:40	Rameshwar Panditrao Avchar - MACS' Agharkar Research Institute, India Buffalo Rumen: A Potential Niche for Novel, Thermotolerant, and High Ethanol Producing Yeasts
14:40-15:00	Luís Ferraz - University of Milano Bicocca, Italy Membrane Engineering to Improve <i>Saccharomyces cerevisiae</i> Robustness Towards Formic Acid
15:00-15:20	Omer Simsek - University of Pamukkale, Turkey The Effect of Backslopping on the Yeast Diversity of Tarhana Fermentation
15:20-15:40	Coffee Break
15:40-16:40	Poster Session 2
Session 6: Yeast Taxonomy, Ecology, and Biodiversity Chairs: Leda Mendonça-Hagler & Hyun Ah Kang	
16:40-17:00	Pooja Jayaprakash - University of Milano-Bicocca, Italy Adaptive Laboratory Evolution to Enhance Organic Acid Tolerance in <i>Kluyveromyces marxianus</i> on Residual Biomass
17:00-17:20	Masako Takashima - Meiji Pharmaceutical University, Japan Fungal Diversity Based on Ortholog Analysis of Draft Genomes
17:20-17:40	Mithat Kurban - Hacettepe University, Turkey DNA Barcoding of Yeast Strains from Anatolia
17:40-18:00	Alexander Rapoport - University of Latvia, Latvia Intracellular Protective Reactions in Yeasts at Stress Conditions
18:00-18:20	Seraphim Papanikolaou - Agricultural University of Athens, Greece Ethanol and Biomass Production by Newly Isolated Wild-Type Yeast Strains Cultivated on Glucose in Shake-Flask Experiments
18:20-21:40 Dinner (at hotel)	19:30-23:00 ICY Commission Dinner

23 October 2019 Wednesday

Parallel Sessions - Adrasan Hall

08:00-09:20	Breakfast at Hotel
09:20-09:40 Sponsor Speech	John Evans - AB Biotek, USA NGS for Industrial Yeast Development at AB Biotek
Session 7: Yeast Genetic and Genomic Chairs: Diethard Mattanovich & Mehmet Inan	
09:40-10:20 Keynote Lecture	Diethard Mattanovich - University of Natural Resources and Life Sciences, Austria Transcriptional Control Limits Central Carbon Metabolism of Crabtree Negative Yeasts: A Potential Role in Early Evolution of Fermentation?
10:20-10:40	Coffee Break
10:40-11:00	Zeynep Petek Çakar - Istanbul Technical University, Turkey Evolutionary Engineering and Molecular Characterization of Stress-Resistant Yeasts Using Systems Biology Tools
11:00-11:20	Matthias Sipiczki - University of Debrecen, Hungary Postzygotic Genome Evolution in <i>Saccharomyces</i> Interspecies Hybrids
11:20-11:40	Mehmet İnan - İzmir Biomedicine and Genome Center, Turkey Development of Synthetic <i>Pichia pastoris</i> Alcohol Dehydrogenase (ADH) Promoters
11:40-12:00	Emrah Nikerel - Yeditepe University, Turkey World of Small Molecules in Non-Conventional Yeasts
12:00-13:20	Lunch Break
Session 8: Yeast Genetic and Genomic Chairs: John Morrissey & Hana Sychrova	
13:20-14:00 Keynote Lecture	Patrick Fickers - University of Liège, Belgium Erythritol Metabolism in <i>Yarrowia lipolytica</i> and Engineering Tools Derived Thereof.
14:00-14:20	Feng-Yan Bai - Chinese Academy of Sciences, China Adaptive Evolution of Sugar Metabolism Networks in Domesticated Lineages of <i>Saccharomyces cerevisiae</i>

23 October 2019 Wednesday

Parallel Sessions - Adrasan Hall

14:20-14:40	Petri-Jaan Lahtvee - University of Tartu, Estonia From Protein Translation to Fluxes – Quantitative Systems Biology of Yeast Stress Responses
14:40-15:00	Eduvan Bisschoff - University of the Free State, South Africa The Development of a Wide Range CRISPR-Cas9 Gene Editing System for Yeast.
15:00-15:20	Tiina Alamäe - University of Tartu, Estonia Maltase of <i>Blastobotrys adenivorans</i> Displays Unusual Properties and Has Biotechnological Potential
15:20-15:40	Coffee Break
Session 9: Yeast Genetic and Genomic Chairs: Andriy Sibirny & Vivien Ruth Measday	
15:40-16:20 Keynote Lecture	Andriy A. Sibirny - Institute of Cell Biology NAS of Ukraine Construction of the Advanced Producer of Riboflavin on Whey and Lignocellulose Hydrolyzates in the Flavinogenic Yeast <i>Candida famata</i>
16:20-16:40	Liliane Barroso - University of Leicester, UK Insights into Phenotypic and Genetic Characteristics of the Spoilage Yeast <i>Zygosaccharomyces (para) bailii</i>
16:40-17:00	Paola Branduardi - University of Milano Bicocca, Italy Improving Yeast Stress Tolerance by the Synthetic Shuffling of the PolyA Binding Protein (Pab1) Domains
17:00-17:20	Justyna Ruchala - University of Rzeszow, Poland Construction of the Riboflavin-Overproducing Strain of the Yeast <i>Komagataella pastoris</i> Producing the Flavin Antibiotic Aminoriboflavin
17:20-17:40	Jacobus Albertyn - University of the Free State, South Africa CRISPR-CAS9 Gene Editing Tools in Pathogenic and Non-Pathogenic Yeasts
17:40-21:00	LEON Congress Special Event "Knowledge Based Treasure Hunting"
21:00-23:40	Gala Dinner

23 October 2019 Wednesday

Parallel Sessions -Vista Hall

08:00-09:20	Breakfast at Hotel
09:20-09:40	<i>Please attend the Sponsor Speech at the Adrasan Hall</i>
09:40-10:20	<i>Please attend the Keynote Lecture at the Adrasan Hall</i>
10:20-10:40	Coffee Break
Session 10: Yeast General Chairs: Patricia Lappe-Oliveras & M. Evodia Setati	
10:40-11:00	Hatice Aybuke Karaoğlu - Cumhuriyet University, Turkey Effect of Heat Pre-Treatment on Aminoacidic Profile in Fermentation of Synthetic Must Achieved by <i>Saccharomyces cerevisiae</i>
11:00-11:20	Bilal Agirman - Cukurova University, Turkey Biocontrol Capability and Action Mechanisms of <i>Aureobasidium pullulans</i> and <i>Pichia guilliermondii</i> Against Blue and Green Moulds
11:20-11:40	Cennet Pelin Boyaci Gunduz - Adana Alparslan Turkes Science and Technology University, Turkey Predominant Yeasts in the Sourdoughs Collected from Different Parts of Turkey
11:40-12:00	Nicola Francesca - Università degli studi di Palermo, Italy Fermented Honey and Manna Ash products: Novel Ecological Niches of Wine Yeasts
12:00-13:20	Lunch Break
13:20-14:00	<i>Please attend the Keynote Lecture at the Adrasan Hall</i>
Session 11: Yeasts as Sources of Ingredients and Additives Chairs: Volkmar Passoth & Feng-Yan Bai	
14:00-14:20	Milan Čertík - Slovak University of Technology, Slovak Republic Metabolic Engineering of <i>Yarrowia lipolytica</i> for Production of Tailor-Made Lipid Compounds
14:20-14:40	Kyria Boundy-Mills - University of California Davis, USA Conversion of Sugars and Phenolic Compounds to Secreted Surfactants by <i>Rhodotorula</i> Yeasts

23 October 2019 Wednesday

Parallel Sessions -Vista Hall

14:40-15:00	Małgorzata Kus-Liśkiewicz - University of Rzeszow, Poland Yeast Cornucopia – Bioinspired Gold Nanoparticles Synthesis
15:00-15:20	Zbigniew Lazar - Wrocław University of Environmental and Life Sciences, Poland Biotechnological Applications of the Yeast <i>Yarrowia lipolytica</i>
15:20-15:40	Coffee Break
15:40-16:20	<i>Please attend the Keynote Lecture at the Adrasan Hall</i>
Session 12: Yeasts as Sources of Ingredients and Additives Chairs: Patrick Fickers & Elena S. Naumova	
16:20-16:40	John Morrissey - University College Cork, Ireland Synthetic Strategies for Production of Aromatic Molecules in <i>Kluyveromyces marxianus</i>
16:40-17:00	Volkmar Passoth - Swedish University of Agricultural Sciences, Sweden Biofuels, Feed and Food Production from Lignocellulose Using <i>Oleaginous</i> Yeasts
17:00-17:20	Clara Vida Corrêa Carneiro - University of Brasília, Brazil Comparison of Xylitol Production by a New Isolate Strain of <i>Meyerozyma guilliermondii</i> with <i>Spathaspora</i> sp. and <i>Wickerhamomyces anomalus</i>
17:20-17:40	Nazanin Bolghari- Pasteur Institute of Iran, Iran A Novel Chimeric Bioadhesive Protein Production in <i>Pichia pastoris</i> for Biomedical Applications

24 October 2019 Thursday Vista Hall

08:00-09:20	Breakfast at Hotel	
Session 13: Yeasts in Health Chairs: Steve Oliver - Markus Ralser		
09:20-10:00 Keynote Lecture	Markus Ralser - Charité University Medicine, Germany & The Francis Crick Institute, United Kingdom Towards Explaining the Metabolome of a Yeast Cell	
10:00-10:20	Nitnipa Soontorngun - King Mongkut's University of Technology Thonburi, Thailand The Yeast Transporter Pdr5 Confers Resistance to the Antifungal Cytochalasin of <i>Xylaria</i> sp. BCC 1067	
10:20-10:40	Oluwasegun Kuloyo - University of the Free State, South Africa Arachidonic Acid Increases Expression of CDR1 in <i>C. albicans</i> , But Inhibits Efflux Activity	
11:40-11:00	Hana Sychrova - Institute of Physiology Czech Academy of Sciences, Czech Republic Trk Transporters Mediate Potassium Uptake and Contribute to Cell pH Homeostasis and Fitness of Pathogenic <i>Candida</i> Species	
11:00-11:40	Closing Ceremony	
11:40-12:10	Hotel Check-Outs	
12:10-13:30	Lunch Break	12:10 Social Event Kemer Scuba Diving Tour (Lunch at the Yatch)
13:30-18:30	Social Event Cable-car Trip to Olimpos Mountains and Ancient City Tour with Sunset View	

25 October 2019, Friday – Vista Hall

WORKSHOP

08:00-09:20	Breakfast at Hotel
09:20-10:40	Overview of Recombinant Protein Production in Yeast (<i>Pichia pastoris</i>)
10:40-11:00	Coffee Break
11:00-12:00	Strain Development (<i>Pichia pastoris</i>)
12:00-13:20	Lunch Break
13:20-13:40	Transfer to Akdeniz University
14:00-15:00	Fermentation Basics and Applications
15:00-17:30	Hands on Experience in the Lab
17:40-18:00	Transfer to Hotel

Workshop Instructor

Prof. Mehmet Inan (PhD)

Assistant Director

Technological Research Program

Izmir Biomedicine and Genome Center (IBG)

Izmir, Turkey

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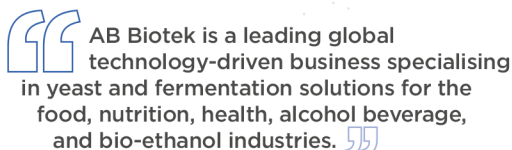
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The 35th International Specialized Symposium on Yeasts



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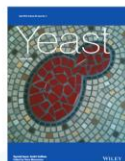


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