

BIOLOGIC SECTION
“THE IMPORTANCE OF G. GAMOW'S IDEAS FOR BIOLOGY OF THE
21ST CENTURY”

20 August 2026 (Thursday) Kyiv time (UTC+3)

Zoom Meeting

<https://us05web.zoom.us/j/2719689610?pwd=SzY2dzBZVEZCYi9tNy9Wbks5SHFrZz09&omn=88916604185>

Passcode: 3101

10:00-17:15 **Section session** (20 or 15 min for report and 5 min for discussion)

(Convener – **S.V. Chebotar**)

10.00-10.10 **OPENING OF THE BIOLOGICAL SESSION** *S.Chebotar*

10.10-10.30 **C. W. Hertig**, M. P. Rajendran, M. M. Hasan, N. E. Mathew, B. Rezaeva, P. Satpathy, J. Kumlehn (Plant Reproductive Biology, Leibniz Institute of Plant Genetics and Crop Plant Research (IPK) Gatersleben, Seeland, Germany) **EXPANDING THE BREEDERS' TOOL SET FOR GENOME EDITING IN BARLEY AND OILSEED RAPE**

10.35-10.55 **R. E. Hoffie**¹, A. Habekuss³, D. Perovic³, I. Hoffie², I. Otto², S. K. Nimmagottu¹, H. Hecht¹, J. Kumlehn² (¹Biotechnology and Genome Editing, Leibniz Institute of Plant Genetics and Crop Plant Research (IPK), Gatersleben, Germany; ²Plant Reproductive Biology, Leibniz Institute of Plant Genetics and Crop Plant Research (IPK), Gatersleben, Germany; ³Institute for Resistance Research and Stress Tolerance, Julius Kuehn Institute (JKI), Federal Research Centre for Cultivated Plants, Quedlinburg, Germany) **OVERCOMING BOUNDARIES OF GENOME EDITING: LESSONS FROM ENGINEERING VIRUS RESISTANCE IN BARLEY**

11.00-11.20 **G. Caccialupi**¹, J. Milc¹, L. Cicala¹, F. Caradonia¹, T. Akar², M. Dahn³, E. J. Stockinger³, N. Pecchioni¹ and E. Francia¹ (¹Department of Life Sciences, Centre BIOGEST – SITEIA, University of Modena, and Reggio Emilia, Italy; ²Mugla University Faculty of Agriculture Dept. of Agronomy, Fethiye /Mugla, Turkey; ³Department of Horticulture and Crop Science, The Ohio State University, Wooster, OH 44691, USA; ⁴Council for Agricultural Research and Economics, Research Centre for Cereal and Industrial Crops (CREA-CI), Foggia, Italy) **COLD ACCLIMATION AND VERNALIZATION IN BARLEY: TWO PATHWAYS OR ONE ADAPTIVE STRATEGY?**

11.25-11.45 **P. Borbély**¹, Z. Tahmasebi^{1,2}, Z. Gulyás¹, Z. Farkas¹, D. Tarkowska³, A. Börner⁴, T. Pálmai¹, K. Benczúr¹, G. Galiba¹, M. Ahres¹ (¹Agricultural Institute, Centre for Agricultural Research, Martonvásár, Hungary; ²Doctoral School of Agricultural and Food Sciences, Hungarian University of Agricultural and Life Sciences, Keszthely H-8360, Hungary; ³Laboratory of Growth Regulators, Faculty of Science, Palacký University Olomouc and Institute of Experimental Botany, the Czech Academy of Sciences, Olomouc, Czech Republic; ⁴Leibniz Institute of Plant Genetics and Crop Plant Research, Seeland, Germany) **LIGHT-MEDIATED REGULATION OF FREEZING TOLERANCE IN CEREALS**

11.50-12.00 Coffee break

12.00 -12.20 **M. Nowak**^{1,2}, J. Giera², J. Leśniowska-Nowak¹, K. Kowalczyk¹ (¹ Institute of Plant Genetics, Breeding and Biotechnology, University of Life Sciences in Lublin, Poland, Akademicka St. 15, 20-950 Lublin; ² Plant Phenomics Centre, University of Life Sciences in Lublin, Lublin, Poland) **HIGH-THROUGHPUT DIGITAL IMAGING OF THE PHENOTYPIC RESPONSE OF COMMON WHEAT (TRITICUM AESTIVUM L.) TO DROUGHT STRESS**

12.25-12.40 **D. Zharikova**¹, Ch. J. Barnes^{1,2} (¹Department of Agroecology, Flakkebjerg, Aarhus University, Denmark; ²Center for Evolutionary Hologenomics, The Globe Institute, The

University of Copenhagen, Denmark) POPULATION HISTORY SHAPES DROUGHT-RESPONSIVE DNA METHYLATION IN BRACHYPODIUM DISTACHYON

12.45 -13.05 **I. Mitina**, A. Deaghileva, V. Mitin, C. Grajdieru, L. Tumanova (Institute of Genetics, Physiology and Plant Protection, Moldova State University, Chisinau, Moldova) A THREE-DOMAIN ASSESSMENT OF SOIL MICROBIOME UNDER PERENNIAL VITICULTURE AND ROTATIONAL ANNUAL CROPPING REGIMES

13.10-13.30 **T. Kalachova**¹, V. Psota², R. Thibert¹, O. Bondarenko^{2,3}, N. Korniienko^{2,3}, A. Kharina³, N. Zrelavs⁴, J. Dušek², B. Jindřichová², A. Antonova², L. Burketová² (¹ Institute of Experimental Botany of the Czech Academy of Sciences, Prague, Czech Republic; ² Farma Bezdinek s.r.o., Dolní Lutyne, Czech Republic; ³ Educational and Scientific Center (ESC) "Institute of Biology and Medicine", Taras Shevchenko National University of Kyiv, Kyiv, Ukraine; ⁴ Latvian Biomedical Research and Study Centre, Rīga, Latvia) FROM FIELD TO THE LAB AND BACK: ISOLATION AND CHARACTERIZATION OF BACTERIOPHAGES FOR PLANT PROTECTION AGAINST BACTERIAL DISEASES

13.30-14.30 *Lunch*

14.30-14.45 **K. Bahriichuk**, B. Ostash (Department of Genetics and Biotechnology, Ivan Franko National University of Lviv, Lviv, Ukraine) CONJUGATIVE TRANSFER OF BIOSYNTHETIC GENE CLUSTERS BETWEEN STREPTOMYCES ALBIDOFLAVUS J1074 STRAINS

14.50-15.05 **Stepanyshyn A.**, Chyzh A., Yushchuk O. (Department of Genetics and Biotechnology, Ivan Franko National University of Lviv, Lviv, Ukraine) CREATING A KNOCKOUT VECTOR FOR THE DELETION OF ACTE1_RS07735 GENE IN TEICOPLANIN PRODUCER ACTINOPLANES TEICHOMYCETICUS ATCC 31121

15.10-15.25 **Vedybida O.**, Deneka M., Yushchuk O. (Department of Genetics and Biotechnology, Ivan Franko National University of Lviv, Lviv, Ukraine) IMPACT OF INCREASING BLDA GENE COPY NUMBER ON A47934 PRODUCTION IN STREPTOMYCES TOYOCAENSIS NRRL 15009

15.30-15.45 **V. Rudenko**¹, Ye. Smirnova¹, A. Barkhatova¹, Ch. Rückert-Reed², T. Busche², J. Kalinowski², Y. Mast³, O. Yushchuk¹ (¹ Department of Genetics and Biotechnology, Ivan Franko National University of Lviv, Lviv, Ukraine; ² Microbial Genomics and Biotechnology, Center for Biotechnology, Bielefeld University, Bielefeld, Germany; ³ Department Bioresources for Bioeconomy and Health Research, Leibniz Institute DSMZ – German Collection of Microorganisms and Cell Cultures, Braunschweig, Germany) INVESTIGATING THE GENOMIC CAUSALITY OF THE BLD-LIKE PHENOTYPE IN UMEZAWAEA ENDOPHYTICA DSM 103496

15.50-16.00 *Coffee break*

16.00-16.15 **V. Rudik**¹, S. Chebotar^{1,2} (¹ Department of Molecular Biology, Biochemistry and Genetics, Odesa I.I. Mechnikov National University, Odesa, Ukraine; ² Plant Breeding and Genetics Institute – National Center of Seed and Cultivar Investigation, Odesa, Ukraine) RESULTS OF MOLECULAR IDENTIFICATION OF SPECIES OF THE ANOPHELES MACULIPENNIS S.L. COMPLEX IN ODESA REGION

16.20-16.35 **A. Mykhailenko**^{1,2}, K. Nadachowska-Brzyska¹, P. Zieliński¹ (¹ Institute of Environmental Sciences, Faculty of Biology, Jagiellonian University, Kraków, Poland; ² Oakland University, Rochester, Michigan, USA) COMPLEX GENOMIC LANDSCAPE OF EUROPE'S MOST DESTRUCTIVE FOREST PEST

16.40-16.50 **Yu. Mediukh**, I. Panchuk (Yuriy Fedkovych Chernivtsi National University, Chernivtsi, Ukraine) TAGMA- AND DEVELOPMENTAL STAGE-DEPENDENT EXPRESSION OF ANTIOXIDANT DEFENSE GENES IN THE HONEY BEE (APIS MELLIFERA)

16.55 -17.15 **CLOSING OF THE BIOLOGICAL SESSION**