

4th Central European Biomedical Congress, Kraków, Poland, June 7-9, 2021

“Impact of bioinformatics and omics on biology and medicine”

Date	Time	Event	Chair
June 7, 2021	9.00 - 9.10 a.m.	Welcome message	
	9.30 a.m. – 5.30 p.m.	Poster session	
	9.10 - 10.00 a.m. 10.00 – 10.10 a.m. chat A	Plenary lecture 1 Inaugural lecture Francesco Pavone University of Florence, Florence, Italy <i>Human brain optical mapping</i>	Władysław Lasoń
	10.30 a.m.– 12.20 p.m. 12.20 – 12.30 p.m. chat A	Session 1 Covid-19 pandemic S.01-1 Johan Neyts KU Leuven, Leuven, Belgium <i>Towards antiviral strategies against SARS-CoV2</i> S.01-2 Krzysztof Pyrc Jagiellonian University, Krakow, Poland <i>Drug repurposing: can you teach an old dog new tricks?</i> S.01-3 Jacek Jemielity University of Warsaw, Warsaw, Poland <i>Chemically modified mRNA</i> S.01-4 Marek Sanak Jagiellonian University Medical College, Krakow, Poland <i>Beyond SARS-CoV-2 sequencing</i>	Marek Sanak

<p>10.30 a.m. – 12.20 p.m. 12.20 – 12.30 p.m. chat B</p>	<p>Session 2</p> <p style="text-align: center;"><i>Chem- and bioinformatics in drug design</i></p> <p>S.02-1 Didier Rognan Université de Strasbourg, Strasbourg, France <i>Designing a truly unbiased dataset for machine learning and virtual screening</i></p> <p>S.02-2 Johannes Kirchmair University of Vienna, Vienna, Austria <i>Computational methods for flagging compounds likely to cause false outcomes in biological assays</i></p> <p>S.02-3 György M. Keserű Research Center for Natural Sciences, Budapest, Hungary <i>The role of the secondary binding pocket in GPCR pharmacology</i></p>	<p>Andrzej Bojarski</p>
<p>12.30 – 1.00 p.m.</p>	<p>Join to poster session</p>	
<p>1.00 – 2.50 p.m. 2.50 – 3.00 p.m. chat A</p>	<p>Session 3</p> <p style="text-align: center;"><i>Clinical genomics</i></p> <p>S.03-1 Rafał Płoski Medical University of Warsaw, Warsaw, Poland <i>Whole exome and genome sequencing for discovery of novel human diseases</i></p> <p>S.03-2 Maciej Giefing Institute of Human Genetics Polish Academy of Sciences, Poznan, Poland <i>New (epi)genetic diagnostic tools for cancer - liquid biopsy and beyond</i></p> <p>S.03-3 Maria M. Sąsiadek Wroclaw Medical University, Wrocław, Poland <i>Multigene panel testing in oncology clinical practice - pros and cons</i></p> <p>S.03-4 Arkadiusz Piotrowski & Anna Kostecka Medical University of Gdańsk, Gdańsk, Poland <i>Somatic driver mutations in normal mammary tissue from breast cancer patients – incidental or causal?</i></p>	<p>Michał Korostyński Michał Dąbrowski</p>

<p>1.00 – 2.50 p.m. 2.50 – 3.00 p.m. chat B</p>	<p>Session 4 <i>Discovery of biomarkers in mental disorders</i></p> <p>S.04-1 Gordana Nedic Erjavec Ruđer Bošković Institute, Zagreb, Croatia <i>Biomarkers of schizophrenia</i></p> <p>S.04-2 Rebecca Strawbridge King's College London, London, UK <i>What's the use of biomarkers for depression?</i></p> <p>S.04-3 Andreas Grabrucker University of Limerick, Limerick, Ireland <i>Zinc deficiency and affected signalling networks as biomarkers and causative factors of Autism Spectrum Disorders</i></p>	<p>Bernadeta Szewczyk Andreas Grabrucker</p>
<p>3.15 – 3.35 p.m. 3.35 – 3.45 p.m. chat</p>	<p>ERC presentation</p> <p>Janka Matrai, Nicolas Voilley European Research Council Executive Agency, Brussels, Belgium</p>	<p>Jan Manuel Rodriguez Parkitna</p>
<p>4.00 – 6.00 p.m. 5.20 – 5.30 p.m. chat A</p>	<p>Session 5 <i>Presentations of ERC grant awardees</i></p> <p>S.05-1 Maja Jagodic Karolinska Institutet, Stockholm, Sweden <i>Applied epigenomics: insights into the pathogenesis of Multiple Sclerosis</i></p> <p>S.05-2 Jan Gründemann University of Basel, Basel, Switzerland <i>Imaging deep: Sensory and state coding in subcortical circuits</i></p> <p>S.05-3 Ewelina Knapska Nencki Institute of Experimental Biology of Polish Academy of Sciences, Warsaw, Poland <i>Central amygdala - ventral tegmental area - cortical circuits in motivation for social interaction and food reward</i></p>	<p>Jan Manuel Rodriguez Parkitna</p>
<p>5.30 – 6.30 p.m</p>	<p>Join to poster session</p>	

Date	Time	Event	Chair
June 8,2021	9.00 – 11.00 a.m. 11.00 – 11.10 a.m. chat A	<p>Session 6 <i>Perspectives for therapy of treatment-resistant depression</i></p> <p>S.06-1 Wiesław J. Cubala Medical University of Gdansk, Poland <i>New developments in understanding mechanisms of drug resistance in the treatment of depression</i></p> <p>S.06-2 Łukasz Święcicki Institute of Psychiatry and Neurology, Warsaw, Poland <i>Somatic therapies for treatment-resistant depression: ECT, TMS, VNS, DBS</i></p> <p>S.06-3 Paul Willner Swansea University, Swansea, UK</p> <p>S.06-4 Adrian Newman-Tancredi Neurolix Inc., Wilmington, DE 19808, USA <i>Cortical 5-HT1A receptor biased agonism - a novel mechanism for effective therapy of treatment-resistant depression</i></p>	Mariusz Papp
	9.00 – 11.00 a.m. 11.00 – 11.10 a.m. chat B	<p>Session 7 <i>Neuroimaging – beyond the structure</i></p> <p>S.07-1 Bogdan Draganski University of Lausanne, Lausanne, Switzerland <i>MRI-based in vivo histology - myth or reality</i></p> <p>S.07-2 Adrian Chrobak Jagiellonian University Medical College, Krakow, Poland</p>	Joanna Pera

	<p><i>Time-frequency dynamics of resting state in euthymic bipolar disorder patients - a preliminary fMRI study</i></p> <p>S.07-3 Anna Ceglarek Jagiellonian University, Krakow, Poland <i>Reduced regional homogeneity after intraocular lens (IOL) implantation – resting-state fMRI study</i></p> <p>S.07-4 Anna Sobczak Jagiellonian University, Krakow, Poland <i>Functional connectivity differences in Salient Network among euthymic bipolar disorder patients in regard to suicide risk; a preliminary fMRI study</i></p>	
9.30 a.m. – 5.30 p.m.	Poster session	
11.30 a.m.– 12.20 p.m. 12.20 – 12.30 p.m. chat A	<p>Plenary lecture 2</p> <p>Francesco Battaglia Radboud University, Nijmegen, The Netherlands <i>Whole-cortex dynamics and interactions with the hippocampus</i></p>	Małgorzata Filip
12.30 – 1.00 p.m.	Join to poster session	
1.00 – 2.50 p.m. 2.50 – 3.00 p.m. chat A	<p>Session 8 <i>The role of serotonin in neurodevelopmental disorders</i></p> <p>S.08-1 Judith Homberg Radboud University, Nijmegen Medical Centre, Nijmegen, the Netherlands <i>The role of serotonin in brain development and behaviour: the SSRI and efavirenz cases</i></p> <p>S.08-2 Francesca Calabrese University of Milan, Milan, Italy <i>Stress exposure as a risk factor for the development of psychiatric disorders: a role for the serotonergic system</i></p> <p>S.08-3 Natalia Alenina Max Delbrück Center for Molecular Medicine, Berlin, Germany <i>Maternal and central serotonin: contribution to the early development in rodents</i></p>	Piotr Popik Agnieszka Nikiforuk

	<p>S.08-4 Markus Wöhr KU Leuven, Leuven, Belgium Philipps-University of Marburg, Marburg, Germany <i>Affective communication in rodents: serotonin and its modulating role in ultrasonic vocalizations</i></p>	
<p>1.00 – 2.50 p.m. 2.50 – 3.00 p.m. chat B</p>	<p>Session 9 <i>Biological context of bipolar disorder</i></p> <p>S.09-1 Dominika Dudek Jagiellonian University Medical College, Krakow, Poland <i>Chronobiology and social rhythms in bipolar disorders</i></p> <p>S.09-2 Janusz Rybakowski Poznan University of Medical Sciences, Poznan, Poland <i>Lithium – mechanism of action in association with bipolar disorder’s neurobiology</i></p> <p>S.09-3 Marcin Siwek Jagiellonian University Medical College, Krakow, Poland <i>Biomarkers of staging in BD</i></p> <p>S.09-4 Adrian Chrobak Jagiellonian University Medical College, Krakow, Poland <i>Neurocognitive and motor deficits in BD – neuroimaging and clinical studies</i></p>	<p>Dominika Dudek</p>
<p>3.00 – 3.30 p.m.</p>	<p>Join to poster session</p>	
<p>3.30 – 5.30 p.m.</p>	<p>Workshops</p>	

Date	Time	Event	Chair
June 9, 2021	9.00– 10.00 a.m. 10.00 – 10.10 chat A	Plenary lecture 3 Magdalena Paczkowska-Abdulsalam Medical University of Białystok, Białystok, Poland <i>Omics, Metabolic Health and Obesity</i>	Irena Nalepa
	10.20 a.m. – 12.10 p.m. 12.10 – 12.20 p.m. chat A	Session 10 <p style="text-align: center;"><i>Computational personalised medicine</i></p> S.10-1 Marian Bubak Sano Centre: Towards Holistic Computational Medicine Sano Centre for Computational Personalised Medicine – International Research Foundation, Krakow, Poland S.10-2 Róża Szweda Lukaszewicz Research Network –PORT, Polish Centre of Technology Development, Wrocław, Poland <i>Sequence-defined polymers – a next generation data storage medium</i> S.10-3 Zbigniew Szewczuk University of Wrocław, Wrocław, Poland <i>Using markers in targeted diagnostics</i> S.10-4 Klaudia Proniewska Jagiellonian University Medical College, Krakow, Poland <i>New ways to record and replay medical operations - Holographic MedAssistant</i>	Marian Bubak Przemysław Mielczarek
	10.20 a.m. – 12.10 p.m. 12.10 – 12.20 p.m. chat B	Session 11 <p style="text-align: center;"><i>Genes affect your risk for addiction</i></p> S.11-1 Lucia Caffino Università degli Studi di Milano, Milano, Italy <i>Effects of cocaine self-administration on neuroplastic mechanisms: evidence from rats lacking the serotonin transporter</i>	Małgorzata Frankowska Irena Smaga-Maślanka

	<p>S.11-2 Judith Homberg Radboud University Medical Center, Nijmegen, The Netherlands <i>The neural mechanisms driving the transition from regular to compulsive cocaine intake in rats lacking the serotonin transporter</i></p> <p>S.11-3 Liubov Kalinichenko University of Erlangen-Nuremberg, Erlangen, Germany <i>Sphingolipids in depression-induced alcoholism</i></p> <p>S.11-4 Giuseppe Giannotti University of Colorado Denver, Aurora, CO, USA <i>Paraventricular thalamic control of heroin withdrawal and relapse</i></p>	
12.20 – 1.00 p.m.	Join to poster session	
1.00 – 1.50 p.m. 1.50 – 2.00 p.m. chat A	<p>Plenary lecture 4</p> <p>David E. Nichols University of North Carolina, Chapel Hill, North Carolina, United States <i>Psychedelic Research in the 21st Century</i></p>	Krystyna Gołembiowska
2.30 – 4.20 p.m. 4.20 – 4.30 p.m. chat A	<p>Session 12</p> <p style="text-align: center;"><i>Novel views on psychoactive and addictive drugs</i></p> <p>S.12-1 Noelle C. Anastasio University of Texas Medical Branch, Galveston, USA <i>Defining and Mining Therapeutic Targets in Psychostimulant Use Disorders</i></p> <p>S.12-2 Nicola Simola University of Cagliari, Cagliari, Italy <i>The novel psychoactive substance methoxetamine induces persistent behavioral abnormalities and neurotoxicity: a study in rats</i></p> <p>S.12-3 Nicholas Pintori University of Verone, Verona, Italy <i>Dopamine system dysregulation, glial cells alteration and behavioral correlates after repeated exposure to the synthetic cannabinoid JWH-018</i></p>	Krystyna Gołembiowska

	<p>S.12-4 Giulia Costa University of Cagliari, Cagliari, Italy Mechanisms and neurotransmitter systems involved in the neurotoxic effects of 3,4-methylenedioxymethamphetamine (MDMA) administration during adolescence.</p>	
<p>2.30 –4.20 p.m. 4.20 – 4.30 p.m. chat B</p>	<p>Session 13 <i>Endocannabinoid signaling in health and disease</i></p> <p>S.13-1 Vincenzo Di Marzo ICB Consiglio Nazionale delle Ricerche, Pozzuoli (NA), Italy; Université Laval, Québec City, Canada <i>Bidirectional interaction between the gut microbiome and the endocannabinoidome</i></p> <p>S.13-2 Martin Kaczocha Stony Brook University, NY, USA <i>Targeting FABP5 to Treat Pain and Inflammation</i></p> <p>S.13-3 Beat Lutz University Medical Center of the Johannes Gutenberg, University Mainz, Mainz, Germany <i>Anandamide Signaling in Stress Coping: For Good or Bad?</i></p>	<p>Katarzyna Starowicz - Bubak</p>
<p>4.45 – 5.45 p.m. A</p>	<p>Session 14 <i>Young scientific investigators' session</i></p> <p>S.14-1 Alicja Trzaska Medical University of Warsaw and Center for Preclinical Studies, Warszawa, Poland <i>The association between FTO rs9930506 polymorphism, vitamin D levels and depression</i></p> <p>S.14-2 Karolina Przepiórska Maj Institute of Pharmacology Polish Academy of Sciences, Krakow, Poland <i>3,3'-diindolylmethane protects rat brain from perinatal asphyxia</i></p>	<p>Joanna Pera Rafał Ryguła</p>

S.14-3**Nishita Mandal**

Adam Mickiewicz University, Poznań, Poland

Coarse-grained simulations for identification and analysis of transport pathways in proteins: encouraging speed-accuracy trade-off

S.14-4**Natalia Treder**

Medical University of Gdansk, Gdansk, Poland

Monitoring concentration profiles of anthracycline antibiotics in pediatric oncology patients

S.14-5**Joanna Golebiowska**

Maj Institute of Pharmacology Polish Academy of Sciences, Krakow, Poland

Comparison of social behaviour and ultrasonic vocalisation in male and female rats with life-long genetic depletion of brain serotonin

S.14-6**Sara Trzos**

Jagiellonian University, Krakow, Poland

Characteristics of CD4+ T cell N-glycans in Hashimoto's thyroiditis

S.14-7**Monika Herian**

Maj Institute of Pharmacology Polish Academy of Sciences, Krakow, Poland

Tolerance development and neurotoxicity induction after repeated treatment with the hallucinogenic compound 25I-NBOMe

S.14-8**Agata Ciechanowska**

Maj Institute of Pharmacology Polish Academy of Sciences, Krakow, Poland

Molecular patterns of XCL1 and its receptors after central and peripheral nervous system damages

S.14-9**Beata Krasuska**

Medical University of Lublin, Poland

The effects of ACEA 1021, NMDA receptor antagonist, on neurotoxicity of dexamethasone – the preliminary histopathological and immunohistochemical study

		S.14-10 Marta Bryk Maj Institute of Pharmacology Polish Academy of Sciences, Cracow, Poland <i>Mesenchymal stem cells and extracellular vesicles cultured on graphene-based substrates diminish osteoarthritis-related pain in a rat model</i>	
	5.45 – 6.00 p.m.	Closing & Award ceremony	Małgorzata Filip Joanna Pera