

**7th Scientific Conference
of Polish Metabolomics Society
Bialystok, 4-6th November 2020**



HARMONOGRAM



4th November 2020

WORKSHOPS

	Moderators: Patrycja Mojsak, Marta Kordalewska
09.00-09.30	Tomas Kovalczuk , Leco Poland High Performance GC- and GCxGC-TOFMS metabolomics-based approach for the discovery of potential cancer biomarkers in plasma
09.30-09.45	Tomas Kovalczuk , Leco Poland Aroma Profiling of Coffee with GC, GCxGC, and TOF MS
09.45-10.00	Q&A Moderators: Joanna Godzien, Michal Ciborowski
10.00-10.45	Anas Kamleh , Thermo Fisher Scientific Setting a new standard for analytical rigor and confident identifications in metabolomics
10.45-11.00	Q&A Moderators: Ewa Paszkowska, Adrian Godlewski
11.00-12.25	Manuel Kratzke , Biocrates Standardized metabolomics kits for quantitative and reproducible results. Kit workflow in the laboratory and the MetIDQ™ software
12.25-12.40	Q&A Moderators: Joanna Godzien, Michal Ciborowski
12.40-15.25	Lukasz Nowicki , Perlan Technologies Targeted and non-targeted data mining techniques for exploring high resolution spectro-chromatographic data; Alignment, normalization and filtering the data for efficient compound identification in metabolomics research
15.25-15.40	Q&A
15.45-16.45	Isabel Riba , Waters Corporation Ion mobility MS/MS data processing in complex matrixes
16.45-17.00	Q&A

5th November 2020

09.30–10.00 Conference Opening

SESSION I – *Analytical advances*

Chairmen: Michal Ciborowski, Michal Markuszewski

PLENARY LECTURE

10.00-10.35	Coral Barbas , Universidad CEU-San Pablo, Madrid, Spain In source fragmentation a tool for improving metabolite identification in untargeted Metabolomics
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ORAL PRESENTATIONS

- 10.35-11.00 **Jerzy Adamski**, Helmholtz Zentrum München, Neuherberg, Germany
Metabolomics for biomedical research
- 11.00-11.25 **Magdalene Reinkensmeier**, Bruker Daltonik GmbH
Highly reproducible 4D-Metabolomics using PASEF on a timsTOF Pro
- 11.25-11.50 **Hafiz Suleria**, The University of Melbourne, Australia
LC-ESI-QTOF-MS/MS characterization of phenolic compounds from Australian grown avocados and their antioxidant potential
- 11.50-12.15 **Emily Armitage**, Shimadzu Corporation, Manchester, UK
MS/MS untargeted metabolic profiling approach to study ethanol toxicity in mouse cerebral Tissue
- 12.15-12.40 **Craig Wheelock**, Karolinska Institute, Stockholm, Sweden
An automated high-precision workflow for untargeted LC-MS-based urinary metabolomic epidemiology

DISCUSSION PANEL I

- 12.50-13.40 **Metabolomics in biomedicine**
Experts: Barbara Bojko, Boguslaw Buszewski, Michal Markuszewski, Piotr Mlynarz
Moderators: Ewa Slominska, Wieslaw Wiczowski

13.40-14.30 *Coffee break/Poster session*

- 14.30-15.45 **Short presentations session I**
Chairmen: Marta Kordalewska, Patrycja Mojsak

DISCUSSION PANEL II

- 15.45-16.35 **Metabolomics versus metadata and other omics**
Experts: Stanislaw Deja, Beata Malachowska, Kamil Myszczyński, Ivana Stanimirova-Daszykowska
Moderators: Michal Daszykowski, Andrzej Eljaszewicz

SESSION II - *Application of metabolomics*

Chairmen: Wojciech Milytk, Ryszard Smolenski

ORAL PRESENTATIONS

- 16.35-17.00 **Wojciech Barg**, Wroclaw Medical University, Poland
Employing metabolomics in medicine - a clinician's point of view
- 17.00-17.20 **Natalia Drabinska**, Polish Academy of Sciences, Olsztyn, Poland
Towards the identification of antibiotic-resistant bacteria causing urinary tract infections using volatile organic compounds analysis-a pilot study
- 17.20-17.45 **Shaun Bilsborough**, Agilent Technologies
Determination of metabolomic changes involved in C2C12 rat myoblast differentiation into myotubes using discovery and targeted workflows

17.45-18.05	Marek Michalowski , Pro-Environment, Poland HCS and In Vivo imaging applications as a necessary part of targeted therapy development
18.05-18.30	Stanislaw Deja , UT Southwestern Medical Center UnACceptable? - the interplay between fat oxidation and gluconeogenesis
6th November 2020	
SESSION III – Lipidomics Chairmen: Joanna Godzien, Rafal Szewczyk	
PLENARY LECTURE	
09.00-09.40	Maria Federova , University of Leipzig, Germany Analytical solutions for deep lipidome profiling
ORAL PRESENTATIONS	
09.40-10.05	Tomas Cajka , Institute of Physiology CAS, Czech Republic A workflow for combined analysis of the lipidome, metabolome, and exposome
10.05-10.25	Wojciech Luczaj , Medical University of Bialystok, Poland Lipidomic characterization of keratinocytes from skin of psoriatic patients exposed to cannabidiol followed by UVB irradiation
10.25-10.45	Mariusz Aleksander Bromke , Wroclaw Medical University, Poland Profiling of free fatty acids in lymph: a technical advance
10.45-11.05	Malgorzata Szultka-Mlynska , Nicolaus Copernicus University, Poland "Omics" applications of EC-MS
DISCUSSION PANEL III	
11.15-12.05	Metabolomics in practical terms Experts: Emilia Fornal, Tomasz Ligor, Lukasz Nowicki, Wojciech Wojtowicz Moderators: Joanna Godzien, Mariusz Aleksander Bromke
12.05-13.20	Short presentations session II Chairmen: Natalia Drabinska, Bartlomiej Kalaska
13.20-14.30	<i>Coffee break/Poster session</i>
DISCUSSION PANEL IV	
14.30-15.20	Metabolomics in the non-academic sector Experts: Tomasz Bienkowski, Damian Smuga, Rafal Szewczyk, Jerzy Wisniewski Moderators: Andrzej Malkowski, Piotr Mlynarz
SESSION IV - Analytical advances II Chairpersons: Maciej Stopa, Andrzej Eljaszewicz	

ORAL PRESENTATIONS

15.20-15.45	Liang Li , University of Alberta, Edmonton, Alberta, Canada Recent advances in Chemical Isotope Labeling (CIL) LC-MS for high-coverage quantitative metabolome analysis
15.45-16.10	Tomas Kovalczuk , LECO EATC Berlin, Germany Advantages of GC- and GCxGC- TOF MS in metabolomic research
16.10-16.35	Piotr Mlynarz , Wrocław University of Science and Technology, Wrocław, Poland Cancer cells metabolomics studies. The effect of hypoxia, normoxia and cultivation time
16.35-17.00	Anthony Zerlin , Agilent Technologies How to efficiently remove lipids and proteins from your metabolomic samples for better LCMS results
17.00-17.25	Joanna Bogusiewicz , Nicolaus Copernicus University in Torun, Poland Spatially resolved profiling of human brain in vivo. Chemical biopsy as a new tool in neuroscience research
17.25-18.05	Conference Closing

SHORT PRESENTATIONS

5th November 2020

(14.30-15.45)

- **Anna Michalska-Falkowska**, Medical University of Bialystok, Poland
The significance of systematic biobanking for reliable metabolomics research
- **Radik Mametov**, Nicolaus Copernicus University, Torun, Poland
Polypyrrole based coating materials for SPME fibers to be used in analysis of VOCs as potential colorectal cancer biomarkers
- **Karolina Zuchowska**, Nicolaus Copernicus University, Torun, Poland
Quantitative determination of piperacillin and imipenem in plasma and bronchoalveolar lavage with SPME-LC-MS/MS
- **Natalia Platosz**, Polish Academy of Sciences in Olsztyn, Poland
Methylated cyanidin glucuronide is the main anthocyanin compound found in sheep's blood plasma and cerebrospinal fluid after intraruminal administration of chokeberry preparation
- **Marika Franczak**, Medical University of Gdansk, Poland
Nanochromatography with mass detection: a new way to measure level of angiotensins in human plasma
- **Adrian Arendowski**, Rzeszow University of Technology, Poland
Gold nanoparticle-based laser desorption/ionization mass spectrometry in serum and urine metabolomics analyses of renal cell carcinoma

- **Agata Sumara**, Medical University of Lublin, Poland
Application of high resolution mass spectrometry and chemometric method as a tool to detect sesame seeds oil
- **Kacper Jablonowski**, Medical University of Białystok, Poland
Comparison of nutraceutical effect of *Cystoseira abies marina* and *Rosemarinus Officinalis* on oxidative stress in T1DM animal model: the changes in the levels of phospholipids and ether-phospholipid
- **Szymon Plewa**, Poznan University of Medical Sciences, Poland
Towards spatial distribution of lipids - matrix-assisted laser desorption/ionization mass spectrometry imaging of ovarian tumour tissue – the pilot study

6th November 2020

(12.10-13.25)

- **Sinemyiz Atalay**, Medical University of Białystok, Poland
Proteomic profile of skin keratinocytes from rats exposed to UVA/B radiation and treated with cannabidiol
- **Alicja Braczkó**, Medical University of Gdansk, Poland
The development of LC/MS method for cystine determination in peripheral blood leukocytes and new challenges in laboratory diagnosis and monitoring of cystinosis in Poland
- **Agnieszka Gegotek**, Medical University of Białystok, Poland
Proteomic approach to metabolic changes in psoriasis vulgaris
- **Maria Jacewicz**, Waters Corporation, Warsaw, Poland
A one second screening of cyanobacteria utilizing laser REIMS technology
- **Ewelina Maslak**, Nicolaus Copernicus University, Torun, Poland
Culturomics approach for diabetic foot infection diagnosis
- **Karolina Mielko**, Wrocław University of Science and Technology, Poland
Comparison of microorganisms disintegration methods for metabolomics analysis by using ¹H NMR
- **Paulina Mierzejewska**, Medical University of Gdansk, Poland
An unusual nicotinamide derivative - 4-pyridone-3-carboxamide ribonucleoside (4PYR) as a novel endothelial toxin and oncometabolite
- **Magdalena Muszynska**, Biotechnology Line Leader Pro-Environment Polska Sp. z o.o.
Bispecific antibodies - a new look at the molecular interactions analysis
- **Julia Mironenka**, University of Lodz, Poland
The influence of 2,4-D on the lipid peroxidation of *Trichoderma harzianum*

POSTER SESSION

5th November 2020 (13.40-14.30)

6th November 2020 (13.25-14.30)

- **Monika Beszterda**, Poznan University of Life Sciences, Poland
Important remarks concerning LC/ESI-MS analysis of biochanin A and prunetin
- **Magdalena Buszewska-Forajta**, Medical University of Gdansk, Poland
The potential role of lipids in prostate cancer based on FFPE tissue samples with the use of MALDI-TOF
- **Weronika Brzozowska**, University of Szczecin, Poland
Biosynthesis of three-dimensional diatomaceous biosilica doped with titanium ions
- **Anna Czajkowska**, Medical University of Bialystok, Poland
Relative Dependency Analysis of metabolomics data obtained for aqueous humour samples collected from diabetic and non-diabetic patients during cataract surgery
- **Joanna Dawidowska**, Medical University of Gdansk, Poland
The role of intervention in improving hemodialyzed patients adherence to hypotensive therapy
- **Mariusz Fleszar**, Wroclaw Medical University, Poland
Development of Mass Spectroscopy assay for N ϵ -(1-Carboxymethyl)-L-Lysine, N ϵ -(1-Carboxyethyl)-L-lysine in human plasma
- **Magdalena Gregorczyk**, Medical University of Gdansk, Poland
Amino acid and nucleotide profile in plasma, kidney, and liver of mice with Huntington's disease
- **Ahsan Hameed**, Medical University of Bialystok, Poland
Differences in the metabolic response to a high-carbohydrate meal between lean and overweight men - a metabolomics study
- **Piotr Jakubow**, Medical University of Bialystok, Poland
Neurometabolite changes in patients with complex regional pain syndrome using proton magnetic resonance spectroscopy
- **Daria Janiszewska**, Nicolaus Copernicus University, Torun, Poland
Application of hyphenated techniques for the determination and identification of antibiotics and microorganisms from clinical samples
- **Agnieszka Klupczynska**, Poznan University of Medical Sciences, Poland
A study of free amino acid composition of different honeybee products
- **Anna Kozub**, Medical University of Lublin, Poland
LC/HRMS-based metabolic fingerprinting and multivariate analysis in authentication of meat
- **Tomasz Kulesza**, Mossakowski Medical Research Centre Polish Academy of Sciences, Poland
The influence of the diabetic environment on phosphate homeostasis in podocytes

- **Marcin Lipinski**, Medical University of Gdansk, Poland
Simultaneous determination of lopinavir, saquinavir, and ritonavir in human plasma using liquid chromatography–ion trap mass spectrometry
- **Szymon Macioszek**, Medical University of Gdansk, Poland
Evaluation of gastrointestinal stromal tumour sample preparation procedure for LC-MS untargeted metabolomic analysis
- **Katarzyna Miniewska**, Medical University of Bialystok, Poland
Postprandial changes in plasma metabolome of non-diabetic men are related to genetic susceptibility to type 2 diabetes
- **Hanna Mojska**, National Institute of Public Health - National Institute of Hygiene, Warsaw, Poland
AAMA and GAMA levels in urine as markers of acrylamide exposure from the diet and tobacco smoke
- **Aneta Ostrozka-Cieslik**, Medical University of Silesia in Katowice, Poland
Effect of thyrotropin on kidney damage of stored before transplantation by hypothermic perfusion
- **Alicja Pakiet**, University of Gdansk, Poland
The effect of one anastomosis gastric bypass on serum fatty acid profile in patients with morbid obesity
- **Karolina Pietrowska**, Medical University of Bialystok, Poland
Metabolomics reveals differences in aqueous humor composition between patients with and without pseudoexfoliation syndrome
- **Grzegorz Przybyla**, University of Opole, Poland
Paracetamol - a drug with new and multidirectional mechanisms of action
- **Natalia Pudelko-Malik**, Wrocław University of Science and Technology, Poland
Application of advanced metabolomics methods for the determination of fatty acids in seeds oils
- **Badr Qasem**, Wrocław University of Science and Technology, Poland
The ¹H NMR studies for monitoring of unique changes in metabolic response of fibrosarcoma cell line on oxygen availability and cultivation time
- **Lidia Radko**, National Veterinary Research Institute in Pulawy, Poland
Interactions of veterinary drugs: enrofloxacin and fipronil in vitro study
- **Anna Rajska**, Medical University of Gdansk, Poland
Searching for changes in metabolome of women with polycystic ovary syndrome with the use untargeted metabolomics
- **Anna Roszkowska**, Medical University of Gdansk, Poland
Optimization of analytical approach based on SPME-LC-MS/MS for the analysis of selected endocannabinoids in brain regions
- **Paulina Samczuk**, Medical University of Bialystok, Poland
Biochemistry of death – application of metabolomics in forensic medicine

- **Jolanta Strzelecka**, Medical University of Warsaw, Poland
QEEG as a possible biomarker for ASD diagnosis
- **Marta Tomczyk**, Medical University of Gdansk, Poland
Use of stable isotopomers and liquid chromatography with mass spectrometry (LC/MS) for cardiac substrate preference analysis in mice
- **Renata Wawrzyniak**, Medical University of Gdansk, Poland
Untargeted metabolomics of early vascular aging in hypertensive patients
- **Izabela Wojtczak**, Nicolaus Copernicus University, Poland
Metabolic insertion of biosilica obtained from diatoms with cerium ions
- **Magdalena Zabielska-Kaczorowska**, Medical University of Gdansk, Poland
Label-free quantitative SWATH-MS proteomic analysis of adult myocardial slices in vitro after biomimetic electromechanical stimulation

Organizatorzy zastrzegają sobie prawo do wprowadzania zmian w harmonogramie Konferencji.