

## COPM 2022 conference program

### Plenary session (1A)

**Chairperson: Prof. Katarzyna Krukiewicz**

14:00 – 14:15

**Opening session**

14:15 – 14:20

**Summary of conference schedule and invitation for parallel sessions**

### Parallel session (2A)

**Chairperson: Prof. Katarzyna Krukiewicz**

14:30 **Loffredo A**, Van Damme L, Van Hoorick J, Van Vlierberghe S, Pandit A, Biggs M: **The fabrication of multiphoton-microstructured hydrogels for neural guidance**

14:40 **Cesarz-Andraczke K**, Kania A: **Studies of resorbable magnesium alloys for orthopedic implants**

14:50 **Kostina-Bednarz M**, Barchanska H, Plonka J: **Preliminary studies of nitisinone metabolism in model systems**

15:00 **Geevarghese R**, Zur-Pinska J, Amirsadeghi A, Wlodarczyk-Biegun M: **Development of bioinks for gradient scaffolds for interface tissue engineering**

15:10 **Afra S**, Matin MM, Wlodarczyk-Biegun M, **Zur-Pinska J**: **Development of a printable hydrogel for local drug delivery in osteoporosis treatment**

15:20 **Jankowska K**, Los MJ, Hudecki A, Hybiak J: **ADSC differentiation into osteoblasts in the presence of tissue scaffolds obtained from core-shell micro- and nanofibers with addition of Cu**

15:30 **Skorupa M**, Krukiewicz K: **Copolymerization of biocompatible conducting polymers: PEDOT/PEDOP**

15:35 **Kania A**, Cesarz-Andraczke K: **Structure and corrosion resistance of a biomedical Mg-based alloy with Gd addition**

15:40 **Gudeti PKR**, Koch M, Wlodarczyk-Biegun M: **Biofabrication of myotendinous tissue using melt-electrowriting for patient-specific applications**

15:45 **Pogoda-Mieszczak K**, Sochanik A, Rahman MM, McFadden G, Jazowiecka-Rakus J: **Usefulness of human adipose tissue-derived mesenchymal stem cells as a carrier of oncolytic myxoma construct for the planned therapy of murine glioblastoma**

### Parallel session (2B)

**Chairperson: Dr. Maria Gracka**

14:30 **Sliwinska W**, Suwalska A, Marczyk M: **Automatic identification of COVID-19 patients on lung X-ray imaging with the use of deep learning techniques**

14:40 **Kalisz S**, Marczyk M: **Image blur reduction in the denoising autoencoder model for rib suppression on X-ray images of the lungs**

14:50 **Suwalska A**, Socha M, Prazuch W, Tobiasz J, Polanska J, Marczyk M: **nUMAP: How can we overcome the problem in the visualization in multi dataset comparative studies?**

15:00 **Janas A**, Marczyk M: **Cell segmentation on HE-stained histopathological images of breast cancer samples**

15:10 **Prazuch W**, Polanska J: **Graph modelling of bronchovascular bundle visualized by low-dose Computed Tomography imaging technique**

15:20 **Kowol K**, Pycinski B: **X-ray microtomography imaging of fresh and formalin-fixed poultry heart**

15:30 **Wilczek P**: **The recurrence and cross-recurrence quantification analysis (RQA) of the dose-response time series based on the local binary pattern (LBP) texture operator.**

15:40 **Kijonka M**, Borys D, Kapek L, Prazmowska J, Psiuk-Maksymowicz K, Sokol M: **Non-parametric MRI Brain Atlas for the Polish Population**

### Plenary session (3A)

**Chairperson: Prof. Joanna Polanska**

**Dr. Jack Tuszyński**

16:00 – 16:45

**Towards Electromagnetic Medicine: electro-conductive properties of cytoskeletal protein filaments and cancer cells exposed to electric and electromagnetic fields**

Parallel session (4A)		Parallel session (4B)	
	<b>Chairperson: Dr. Bartłomiej Melka</b>		<b>Chairperson: Dr. Michał Marczyk</b>
17:10	<b>Karpień I:</b> Effects of pre and postprocessing on brain volume: a preliminary study	17:10	<b>Mitusińska K, Mroz J, Jezela-Stanek A, Góra A:</b> Investigating rare diseases using in silico approaches
17:20	<b>Shojaei S, Azarpira N, Ghavami S:</b> Autophagy and cholesterol pathways possible crosstalk as a predisposing mechanism in glioblastoma multiforme	17:20	<b>Gil J, Szymiczek K, Polanski A:</b> Simulation system for fitness waves in clonal evolution
17:30	<b>Alsharabasy A, Bohara R, Farras P, Glynn S, Pandit A:</b> Investigation of the anti-cancer effects of Fe (iii)-protoporphyrin IX complex via nitric oxide scavenging mechanism: an experimental and theoretical study	17:30	<b>Sieradzka K, Polanska J:</b> Integrative approach for single-cell classification
17:40	<b>da Silva Rosa S, Alizadeh J, Ravandi A, Ghavami S:</b> Non-small cell lung cancer metastasis and anoikis resistance: a potential role for regulation of ceramides biosynthesis via BCL2L13	17:40	<b>Mesek M, Sinek A, Rojczyk M, Adamczyk W, Juszczyk J, Ostrowski Z, Bialecki R:</b> Construction and description of the experimental rig used to capture the displacement of deformable body subjected to pulsatile flow
17:50	<b>Fratczak K, Gawin M, Chekan M, Pietrowska M, Widlak P, Polanska J:</b> Intelligent cancer classification systems for MALDI-MSI head and neck study	17:50	<b>Bzowka M, Bagrowska W, Perez-Sanchez H, Góra A:</b> Application of computational methods in searching novel binding sites and inhibitors towards human soluble epoxide hydrolase
18:00	<b>Senthilkumar I, Howley E, McEvoy E:</b> Simulation of mechanosensitive tumour growth	18:00	<b>Mrukwa A, Marczyk M, Zyla J:</b> Gaussian mixture model for thresholding in pathway enrichment analysis of scRNA-Seq data
18:10	<b>Alizadeh J, Lorzadeh S, Triggs-Raine B, Ghavami S:</b> Mitophagy and non-small cell lung cancer metastasis	18:10	<b>Labaj W, Polanski A:</b> Identification of somatic mutations in glioblastoma multiforme cancer on the basis of scRNA seq data.
18:15	<b>Clark C, Shojaei S, Alizadeh J, Ghavami S:</b> TMZ-resistance and BCL2L13 in human glioblastoma cancer cells	18:20	<b>Tobiasz J, Mika J, Frackowiak J, Labaj W, Quintens R, Benotmane MA, Baatout S, Polanska J:</b> Low-dose radiation impact on brain development in mice
18:20	<b>Mrowiec K, Jelonek K, Kurczyk A, Debik J, Giskeødegård GF, Bathen TF, Widlak P:</b> Comparison of serum metabolome profiles in women with different types of solid cancers and healthy controls	18:30	<b>Kania M, Polanski A:</b> Unsupervised clustering of gene expression data of TCGA patients by using mixtures of multidimensional Gaussian distributions
18:25	<b>Bedzinska A, Lasut-Szyska B, Malachowska B, Gdowicz-Klosok A, Krzesniak M, Rusin M:</b> Transcriptome sequencing of four cell lines derived from different tumors revealed new genes regulated by p53 tumor suppressor		
18:30	<b>Chen C, Liu SM, Chen Y, Han M, Ou Q, Bao H, Xu L, Zhang Y, Zhang J-T, Zhong W, Zhou Q, Yang X-N, Shao Y, Wu Y-L, Liu S-Y, Li Y:</b> Identification of TCR rearrangements special for genetic alterations in EGFR-mutated non-small cell lung cancer: results from the ADJUVANT-CTONG1104 trial		

#### Plenary session (5A)

18:50 – 19:00	<b>Chairperson: Prof. Katarzyna Krukiewicz &amp; Dr. Michał Marczyk</b> <b>Conference summary and closing</b>
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