

Comenius University Bratislava

Jessenius Faculty of Medicine in Martin

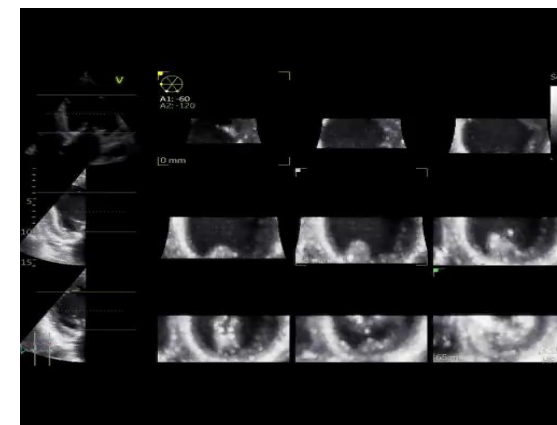
Cardio – Thrombo – Metabolic Group

(Matej Samos, Tomas Bolek, Martin Jozef Pec, Lucia Stanciakova, Jan Stasko, Juraj Sokol, Peter Galajda, Marian Mokaň)



Clinical and translational research in Cardio-thrombo-metabolic diseases dedicated on:

- Long-term Antithrombotic pharmacotherapy of acute coronary syndrome and atrial fibrillation
- Type 2 diabetes, obesity and long-term antithrombotic therapy
- Type 2 diabetes-related and obesity-related chronic heart failure
- Acute decompensated heart failure
- Modern echocardiography
- Obesity – complex management with the aim to prevent cardiovascular complications



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Contact person: Matej Samos

matej.samos@uniba.sk



TRANSLATIONAL CANCER RESEARCH

PATHOGENESIS AND BIOLOGY OF CANCER FOCUSING ON

- Oncogenic Signalling
- Tumour Heterogeneity
- Gene and Protein Expression
- Circulating Cancer Cells
- Cancer Stem Cells

IDENTIFICATION OF TARGETS FOR

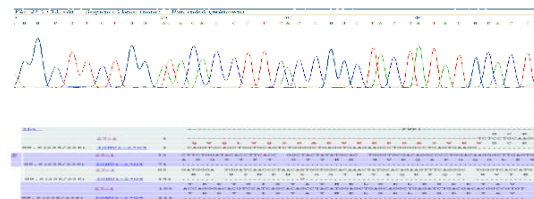
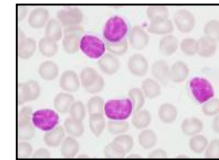
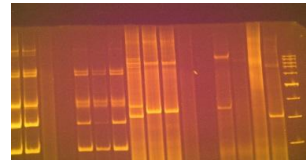
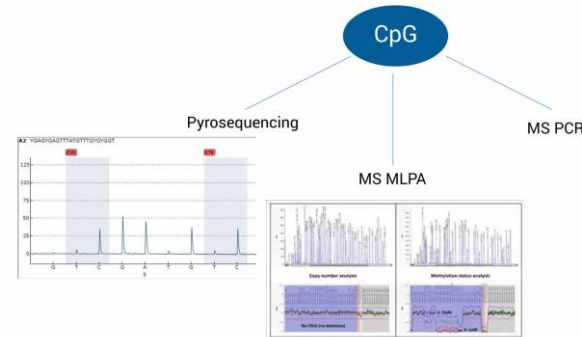
- Cancer Predisposition
- Early Cancer Detection
- Treatment Resistance Research
- Therapy Prediction

METHODS USED

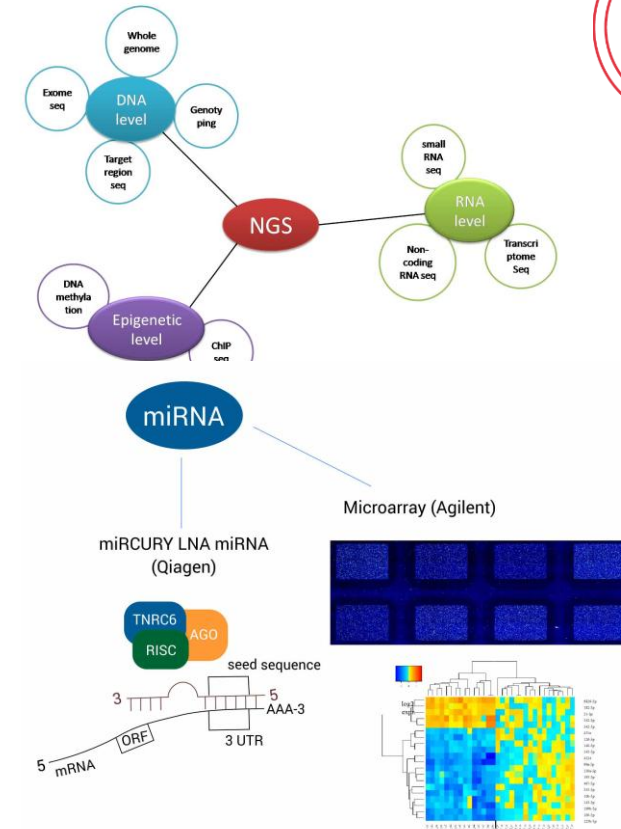
- Next Generation Sequencing (MiSeq, NexSeq, NovaSeq)
- Comparative Genomic Hybridisation
- Droplet Digital PCR
- Microarray

MAIN FOCUS ON

- Molecular Onco-gynaecology
- Breast Cancer Pathology
- Molecular Pathology of Colorectal Cancer and Gastrointestinal Tumours
- Lung Cancer Genetics
- Prostate Cancer Genetics
- Genetics of Leukaemia



Clonality and mutation status in Chronic lymphocytic leukemia



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Contact person: Erika Halasova

erika.halasova@uniba.sk

Laboratory of Proteomics and Mitochondriopathies

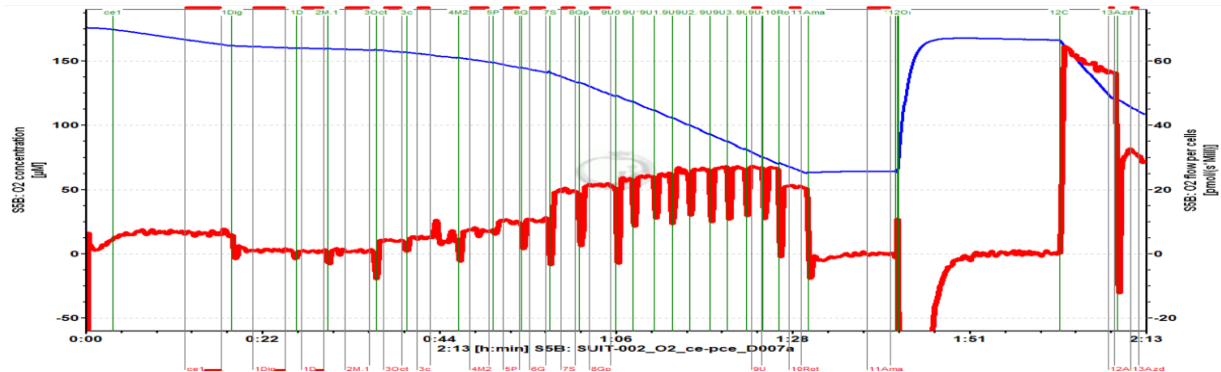


Cassification: Neurosciences

Target diagnoses: Rare neurological diseases (orfan mitochondrial diseases), MELAS and MERRF syndromes, *morbus Parkinson*, *morbus Alzheimer*, ALS, rare muscular diseases (Miyoshi dysferlinopathy)

Technologies:

1. High-resolution respirometry Oroboros O2k
2. Seahorse high throughput respirometry
3. Proteome analyses utilizing aptamer sequencing
4. Integrative phosphoproteome and signalome analyses
5. Proteinological analyses in cluding BN and CN analyses of native protein complexes
6. Computational integrative OMICs analyses (proteomics, metabolomics, genomics)



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Contact person: Martin Kolisek

martin.kolisek@uniba.sk



Synthetic Surfactants for RDS/ARDS: Expertise and Innovation



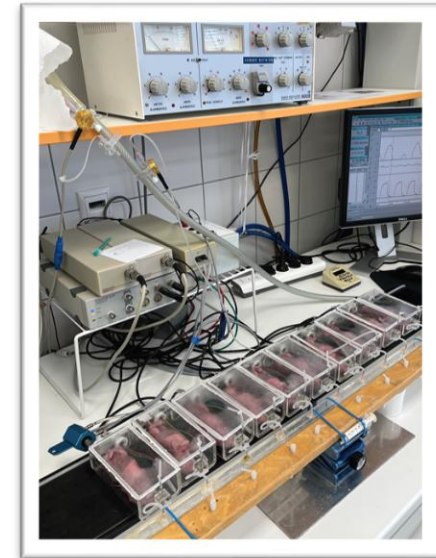
- **Expertise in Advanced Surfactant Development**

- Long-standing research in respiratory therapies
- Focus on third-generation synthetic surfactants (e.g., CHF5633)
- Development of surfactant preparations with modified protein analogs

- **Specialized Preclinical Testing**

- Proficient in animal models of RDS and ARDS
- Comprehensive modeling from model selection to ICU set and care and data analysis
- State-of-the-art facilities and experienced specialists

- **Strong International Collaborations**



Contact person:

pavol.mikolka@uniba.sk

<https://mikolkalab.org>

www.jfmed.uniba.sk

