

## Poster Session I (Tuesday, 24.9.2019)

### Synthetic biology

**PI 1** Design of split superantigen fusion proteins for cancer immunotherapy  
[Anja Golob-Urbanc](#)

**PI 2** Triangular protein nanostructures self-assembled *in vivo*  
[Helena Gradišar](#)

**PI 3** Minimization of gas vesicle cluster  
[Vid Jazbec](#)

**PI 4** Nanobodies targeting coiled-coil protein origami cages for structure determination and introduction of delivery application  
[Andreja Majerle](#)

**PI 5** Sonogenetics - transcriptional regulation by ultrasound  
[Maja Meško](#)

**PI 6** De novo designed parallel heterodimeric coiled coil peptide pairs with high affinity  
[Tjaša Plaper](#)

**PI 7** In vitro evolution as a tool to study the specificity of proteins for membrane lipids  
[Aleksandra Šakanović](#)

### Molecular interactions and networking

**PI 8** Tumour Spheroid Cell Model with Stem-like Properties  
[Larisa Goričan](#)

**PI 9** Interacting partners of the human retrotransposon L1 ORF1p  
[Anamarija Habič](#)

**PI 10** The effect of listeriolysin O binding to cholesterol-rich membranes studied by solid-state NMR  
[Mirijam Kozorog](#)

**PI 11** Lytic/ lysogenic switch of the *Bacillus thuringiensis* temperate bacteriophage GIL01  
[Anja Pavlin](#)

**PI 12** Phosphoproteomic analysis of legumain deficient mice  
[Tilen Sever](#)

**PI 13** NLP proteins as pore-forming toxins  
[Tina Snoj](#)

### Protein structure and function

**PI 14** Mechanisms of action and interplay of three key virulence factors of *Listeria monocytogenes*  
[Maksimiljan Adamek](#)

**PI 15** Role of the unique insertion sequence in subtilisin-like proteinase from hyperthermophile *Aeropyrum pernix* K1

[Miha Bahun](#)

**PI 16** A platform for protein production and crystal structure determination

[Katarina Karničar](#)

**PI 17** The interaction of RahU protein with invertebrate lipids and its biological role

[Eva Kočar](#)

**PI 18** Proteomic and biological characterisation of the venom from *Vipera ursinii ssp.*, a karst viper from Croatia

[Adrijana Leonardi](#)

**PI 19** Can structure of annexin A11 explain its ALS-associated mutations?

[Vera Župunski](#)

**PI 20** Advanced isotopic labelling of MurD for protein-based NMR studies of ligand-MurD binding

[Iza Ogris](#)

**PI 21** ATP binding to the Nerve Growth Factor: a molecular switch for neurotrophins signaling?

[Francesca Paoletti](#)

**PI 22** Bacterial surface-layer-protein assemblies at atomic scale

[Tea Pavkov-Keller](#)

**PI 23** Evaluation of computational approaches for use of chemical crosslinking-based spatial restraints in modeling of homo-oligomeric complexes

[Miha Pavšič](#)

**PI 24** Determination of kinetic parameters of paraoxonase 1 based on time-course data

[Boštjan Petrič](#)

**PI 25** Substrate recognition and cleavage of *Staphylococcus aureus* GH73 family hydrolases is accompanied by a large conformational change and domain movement

[Sara Pintar](#)

**PI 26** Fungal lectin KKP affects bacterial adhesion

[Jerica Sabotič](#)

**PI 27** Visualization of oligomeric Cyt2Aa toxin from *Bacillus thuringiensis* on model membrane systems

[Gašper Šolinc](#)

**PI 28** Insight into thyroid hormone formation

[Ajda Taler-Verčič](#)

**PI 29** How is salicylic acid perceived in potato?

[Špela Tomaž](#)

**PI 30** The role of thiopurine S-methyltransferase in biotransformation of selenium compounds

[Dunja Urbančič](#)

**PI 31** Characterization of the export system of *C. difficile* surface proteins

[Aleksandra Usenik](#)

**PI 32** Analysis of EpCAM's lateral oligomerization shows cis-dimerization is more robust than previously expected

[Tomaž Žagar](#)

### **Biotechnology and bionanotechnology**

**PI 33** Systems biology of oxytetracycline production in *Streptomyces rimosus*

[Selma Beganovic](#)

**PI 34** Multiplex Quantification of Six in EU Authorised Genetically Modified Soybean Lines Using Crystal Digital PCR

[Alexandra Bogožalec Košir](#)

**PI 35** Vitamin C: biochemistry and detection

[Sabina Fijan](#)

**PI 36** Systems biology of rare omega fatty acid biosynthesis in *Yarrowia lipolytica*

[Sofija Jovanovic](#)

**PI 37** Structure-based engineering of flexuous filamentous virus-like particles for potential bionanotechnological applications

[Luka Kavčič](#)

**PI 38** The effect of stabilized in basil extract silver nanoparticles on rats' liver fibrosis experimental model

[Shushanik Kazaryan](#)

**PI 39** Establishment of CRISPR/Cas9-mediated microRNA knock-out in potato

[Tjaša Lukan](#)

**PI 40** The unique binding properties of aegerolysins and their application as biopesticides

[Anastasija Panevska](#)

**PI 41** Deciphering the binding and disaggregating potential of New Methylene Blue towards fibrillation of lysozyme

[Puja Paul](#)

**PI 42** Evaluation of qPCR and dPCR Instruments Performance using Single Control DNA

[Dejan Štebih](#)

**PI 43** Targeting tumor cell lines with lactic acid bacterium *Lactococcus lactis*

[Tina Vida Plavec](#)

**PI 44** Antibiotic resistant bacteria in waste waters from Slovenian general hospital

[Urška Rozman](#)

**PI 45** Intracellular expression of cytotoxic fluorescent protein KillerRed in *Lactococcus lactis* for imaging and treating colorectal cancer

[Abida Zahirović](#)

## Poster Session II (Wednesday, 25.9.2019)

### Functional genomics and system biology

**PII 46** Development of an Open Information System for Sample Management in Biomedical Research Studies and in a Biobank Repository

[Laura Bohinc](#)

**PII 47** Pharmacogenetics of postoperative pain management with tramadol

[Jakob Jeriha](#)

**PII 48** Gene ontology of anti-TNF therapy response biomarkers in rheumatoid arthritis

[Gregor Jezernik](#)

**PII 49** Development and improvement of insect sex pheromone bioproduction in plants using systems biology approaches

[Mojca Juteršek](#)

**PII 50** Microfluidic capillary electrophoresis for next-generation sequencing (NGS) library quantification and quality control

[Simon Koren](#)

**PII 51** The role of small RNA regulatory networks in tolerance and resistance responses of potato to PVY infection

[Maja Križnik](#)

**PII 52** Robust *de novo* assembly of tetraploid potato transcriptomes

[Marko Petek](#)

**PII 53** Landscape exploration of motifs in *Arabidopsis thaliana* and *Solanum tuberosum* networks

[Živa Ramšak](#)

**PII 54** Identification of Novel Splicing Factors influencing Circular RNA Expression in Hepatocellular Carcinoma

[Rok Razpotnik](#)

**PII 55** Association between response to anti-TNF treatment with adalimumab and genetic variants within the TLR signalling pathway in Crohn's disease

[Katja Repnik](#)

**PII 56** Modelling of Cell Growth

[Domen Vaupotič](#)

**PII 57** Proteomic identification of legumain physiological substrates provides a novel link with innate immune response in mice

[Robert Vidmar](#)

**PII 58** Preemptive pharmacogenomic testing for preventing adverse drug reactions – PREPARE study in Slovenia

[Maja Žugec](#)

## **Molecular basis of disease**

**P11 59** A transcriptome-wide approach to identifying RNA targets of the Prader-Willi locus  
snoRNAs

[Janja Božič](#)

**P11 60** Cholecalciferol ameliorates insulin signalling in the male rat heart

[Tijana Culafic](#)

**P11 61** Aberrant miR137 Host Gene methylation at the CpG island that encompasses miR137 in  
head and neck cancer patients

[Helena Čelešnik](#)

**P11 62** Expression of CB1, CB2 and GPR55 Receptors in Selected Breast Cancer Cell Lines

[Luka Dobovišek](#)

**P11 63** Molecular mechanism of NLRP3 inflammasome assembly and self-regulation

[Iva Hafner-Bratkovič](#)

**P11 64** Obstacles in studying human myeloid-derived suppressor cells

[Tanja Jakoš](#)

**P11 65** Diagnostic and/or prognostic value of plasma concentration of angiogenic factors in  
endometrioid endometrial cancer

[Tamara Knific](#)

**P11 66** Sepsis, non-canonocal inflammasome activation and cystatins

[Nataša Kopitar-Jerala](#)

**P11 67** Circulating plasma placenta specific miR-518b could serve as a potential biomarker for  
discriminating pre-eclampsia and healthy pregnancies

[Rok Košir](#)

**P11 68** Insight into genome methylation patterns of suicide victims: potential association with  
brain plasticity

[Katarina Kouter](#)

**P11 69** Understanding metabolic changes in schizophrenics through AKT/FOXO signaling pathway

[Barbara Kramar](#)

**P11 70** Diagnosis of familial erythrocytosis in clinical practice

[Aleša Kristan](#)

**P11 71** Extracellular vesicle cargo and morphology as potential diagnostic tools for  
neurodegenerative diseases and cancer

[Teja Lavrin](#)

**P11 72** Cannabidiol and  $\Delta^9$ -tetrahydrocannabinol affect human glioblastoma cell proliferation and  
survival

[Bernarda Majc](#)

**P11 73** Antisense RNA transcript from C9orf72 gene mutation binds RNA binding proteins

[Mirjana Malnar](#)

**PII 74** Synergistic activity of 15-lipoxygenase and sPLA2 promotes inflammation by formation of TLR4 agonists from extracellular vesicles

[Mateja Manček-Keber](#)

**PII 75** The effects of *Cimicifuga racemosa* extract on hormone-dependent malignant gynaecological diseases

[Kristina Marton](#)

**PII 76** Kinase mediated Y526 phosphorylation of FUS afflicts its inclusions formation

[Helena Motaln](#)

**PII 77** Serum Adiponectin, Resistin and Leptin Levels in Peripheral Arterial Disease (PAD) and Buerger's Disease

[Elif Özkök](#)

**PII 78** PPAR- $\gamma$  serum levels and PPAR- $\gamma$  Pro12Ala polymorphism in Peripheral Arterial Disease

[Elif Özkök](#)

**PII 79** Important roles of OATP, OAT and ABC transporters in endometrial cancer

[Renata Pavlič](#)

**PII 80** Is the action of amyloid beta peptide in SH-SY5Y cells associated with profilin 1?

[Urša Pečar Fonović](#)

**PII 81** Resolving the puzzle: How NLPs disrupt plant plasma membranes?

[Katja Pirc](#)

**PII 82** Effects of acute versus long-term treatment with antipsychotics in liver cell model

[Tinkara Pirc Marolt](#)

**PII 83** Cytotoxicity of cytotoxic T cells is affected by endogenous as well as extracellular cystatin F

[Mateja Prunk](#)

**PII 84** Identification of dipeptide repeat proteins interacting protein targets by proximity-dependent labeling

[Anja Pucer Janež](#)

**PII 85** Genetic variation in cell cycle related genes and gastric cancer risk

[Pia Pužar Dominkuš](#)

**PII 86** Identification of biomarkers for early detection of kidney allograft dysfunction

[Ivana Sedej](#)

**PII 87** Risk factor assessment for cryptorchidism in Slovenian population using array comparative genomic hybridisation (aCGH)

[Alenka Hodžić](#)

**PII 88** Characterization of cell lines with CRISPR-Cas9 mediated deletion of late genes from cholesterol synthesis

[Cene Skubic](#)

**PII 89** Expression of potassium ion channel and calcium handling proteins in aorta of fructose and walnuts fed rats

[Jelena Stanišić](#)

**PII 90** Association of polymorphisms in selected matrix metalloproteinase genes with histological subtype and TNM stage of malignant mesothelioma

[Danijela Štrbac, Katja Goričar](#)

**PII 91** Glucose transport and metabolism in the heart of vitamin D treated rats

[Snežana Tepavčević](#)

**PII 92** Microscopic imaging of the activity of cathepsin B and K in human glioblastoma tumors with metabolic mapping (enzyme histochemistry)

[Cornelis Van Noorden](#)

**PII 93** Nanobodies Anti-TufM (Nb225) and anti-vimentin (Nb79) are cytotoxic to glioblastoma (stem) cells and reduce cell migration

[Alja Zottel](#)

**PII 94** The characterization of DNA sequence containing G4C2 repeats

[Karmen Žbogar](#)

### **Cell signaling and membranes**

**PII 95** Autophagy is a Prosurvival Pathway in Chronic Lymphocytic Leukemia

[Damjan Avsec](#)

**PII 96** Effect of Ouabain on IL-6 Signaling in Human Skeletal Muscle Cells

[Katja Bezjak](#)

**PII 97** 5-hydroxymethylcytosine alterations in peritumoral melanocytes and in normal melanocytes after skin exposure to UV irradiation

[Simon Caserman](#)

**PII 98** Efficacy of C87, a small molecular inhibitor of Tumour necrosis factor, in human cells

[Boris Gole](#)

**PII 99** Effects of alanosine and mercaptopurine on AMPK activity in skeletal muscle cells

[Matic Kolar, Tim Hropot](#)

**PII 100** Effect of fructose enriched diet and walnut consumption on iNOS and phospho-ERK1/2 protein expression in rat aorta

[Tamara Ivkovic](#)

**PII 101** Targeting lipid droplets and autophagy to reduce cancer cell resistance to stress

[Eva Jarc](#)

**PII 102** Increased intracellular production and cell-to-cell transfer of serum amyloid A1 in IL-1 $\beta$  stimulated coronary endothelial cells

[Tadeja Kuret](#)

**PII 103** Oestrane Derivatives as New Inhibitors of Steroidogenic Enzymes and as Anti-Proliferative Agents

[Neža Lipušček](#)

**PII 104** Functional characterization of Tyr10 phosphorylation site of the Na<sup>+</sup>, K<sup>+</sup>-ATPase  $\alpha$ 1-subunit in skeletal muscle cells

[Metka Petrič](#)

**PII 105** Hormonal and pharmacological regulation of AMP-activated protein kinase in cultured skeletal muscle cells

[Tina Požun](#)

**PII 106** Quorum sensing and quorum quenching in *Campylobacter jejuni* – selection of the reporter strains of *Vibrio harveyi* for optimized studying

[Dina Ramić](#)

**PII 107** Distribution of purinergic receptors and transient receptor potential channels in urinary bladder wall – the role in urothelial signalling

[Rok Romih](#)

**PII 108** The variation of intracellular calcium concentration in different endothelial cells in response to several vasoactive substances

[Barbara Starešinič](#)

**PII 109** NLRP3 inflammasome is triggered by trimerisation of pyrin domains and can be specifically inhibited by designed peptides

[Petra Sušjan](#)

**PII 110** The effect of sulfasalazine on the regulation of glucose metabolism in skeletal muscle

[Anja Vidović](#)

**PII 111** Regulation of LPS/TLR4/IL-6 signalling pathway in human skeletal muscle cells

[Maja Zupanc](#)

**PII 112** Mycophenolate mofetil promotes activation of AMP-activated protein kinase in cultured skeletal muscle cells

[Katja Šopar](#)

**PII 113** Engineering atypical tetracycline formation in *Amycolatopsis sulphurea* for the production of modified chelocardin antibiotic

[Špela Piki](#)