

# **Diploma theses**

#### 2009

**Ballek Ondřej** Rack1 as a candidate protein involved in the regulation of

translocation of Lck to lipid rafts

(Supervisor: Dominik Filipp; PřF UK Praha)

Černohorská Markéta The role of JAK/STAT signalling pathway in cellular senescence

(Supervisor: Zdeněk Hodný; PřF UK Praha)

**Dušková Pavlína** The role of DNA damage in chemically induced senescence

(Supervisor: Zdeněk Hodný; PřF UK Praha)

**Dzúr-Gejdošová Mária** Regulation of gene expression on the model of mouse consomic

strains

(Supervisor: Jiří Forejt; PřF UK Praha)

Flachs Petr Construction of three congenic strains and their phenotypisation

(Supervisor: Zdeněk Trachtulec; PřF UK Praha)

Hejhal Tomáš Epigenetic regulation of immunactive gene expression in tumour cells

(Supervisor: Milan Reiniš; PřF UK Praha)

**Kopová Ivana** The role of sumoylation in premature chemically induced cellular

senescence

(Supervisor: Zdeněk Hodný; PřF UK Praha)

Kotáb Jan Integration preferences of avian sarcoma and leUKosis viruses

(Supervisor: Jiří Hejnar; PřF UK Praha)

**Kovářová Denisa** RNAi and reversion of Rous sarcoma virus-induced tumorigenesis

(Supervisors: Jiří Hejnar, Kateřina Trejbalová; PřF UK Praha)

Machyna Martin Dual role of CD9 protein in mast cell activation

(Supervisor: Petr Dráber; PřF UK Praha)

Mayer Alexandra Pathophysiological role of matrix metalloproteinase 19 in

development of liver fibrosis

(Supervisor: Radislav Sedláček; PřF UK Praha)

**Nevařil Leonard** TRAIL-induced apoptosis in populations of colon cancer cell lines

under various cultivation conditions

(Supervisor: Ladislav Anděra; PřF UK Praha)



Plesníková Michaela The separation, characterization and cultivation of limbal stem cells

(Supervisor: Vladimír Holáň; PřF UK Praha)

Sarnová Lenka Transgenic RNAi in mouse oocytes

(Supervisor: Petr Svoboda; PřF UK Praha)

Slávik Branislav Targeting of genes of interest via avian retroviral receptor Tvc

(Supervisor: Radislav Sedláček; PřF UK Praha)

**Svoboda Ondřej** Cloning, expression and characterization of recombinant growth

factors

(Supervisor: Petr Bartůňek; PřF UK Praha)

Svobodová Eliška Immunomodulation properties of mesenchymal stem cells

(Supervisor: Magdalena Krulová; PřF UK Praha)

2010

**Auxt Miroslav**De novo DNA methyltransferases in the silencing of retroviral vectors

(Supervisors: Jiří Hejnar, Filip Šenigl; PřF UK Praha)

**Dušková Eva** Regulation of alternative splicing

(Supervisor: David Staněk; PřF UK Praha)

Faltýsková Helena Experimental models of the stem cell transfers for therapeutic

purposes

(Supervisor: Magdalena Krulová; Farmaceutická fakulta UK, Hradec

Králové)

Chudíčková Milada Recombinant congenic strains – model for biomedical research

(Supervisor: Marie Lipoldová; fakulta biomedicínského inženýrství,

VŠCHT Praha)

John Václav Genes for hybrid sterility in mice: mapping of epistatic interactions

(Supervisor: Jiří Forejt; PřF UK Praha)

Kašpárek Petr Generation of a transgenic mouse model to study biological role of

KLK5 in epidermis

(Supervisor: Radislav Sedláček; PřF UK Praha)

Marášek Pavel Function of paxillin complexes in cell nucleus

(Supervisor: Pavel Hozák, VŠCHT Praha)

Pitule Pavel Comparative genomic prediction of novel transmembrane adaptor

proteins and their expression analysis (Supervisor: Karel Drbal; PřF UK Praha)



**Přistoupilová Anna** Development of real-time PCR assay for detection of

Amphibiocystidium ranae as a model approach for studying

rhinosporidiosis

(Supervisor: Jan Pačes; 1. LF UK Praha)

Šíma Matyáš Genetic influence on Trypanosoma brucei brucei infection in mice

(Supervisor: Marie Lipoldová; PřF UK Praha)

Šimíček Michal FceRI and Kit signal to actin cytoskeleton via different pathways

(Supervisor: Petr Dráber; PřF UK Praha)

**Šulcová Jitka** Analysis of candidate transmembrane adaptor proteins

(Supervisor: Karel Drbal; PřF UK Praha)

**Těšina Petr** Structure and function of hPrp31 mutant in *Retinitis pigmentosa* 

(Supervisor: David Staněk; PřF UK Praha)

Vavrochová Tereza Expression and function of molecules of innate immune system in

embryonic phagocytes.

(Supervisor: Dominik Filipp; PřF UK Praha)

**Vonková Ivana**Biochemical and functional characterization of a novel

transmembrane adaptor protein Nvl (Supervisor: Tomáš Brdička; PřF UK Praha)

#### 2011

Antošová Barbora Characterization of mice with constitutively active Wnt/beta-catenin

signaling pathway in lens

(Supervisor: Zbyněk Kozmik; PřF UK Praha)

**Buryova Halka** Characterization of the role of SPINK6 in the epidermis using

transgenic models

(Supervisor: Radislav Sedláček; PřF UK Praha)

**Dobeš Jan** The study on the physiological importance of enteric alpha-defensin

expression in the thymus

(Supervisor: Dominik Filipp; PřF UK Praha)

Eitler Jiří Involvement of asthma-associated protein ORMDL3 in mast cell

signalling

(Supervisor: Petr Dráber; PřF UK Praha)



Gurská Daniela The functional analysis of invertebrate promoters in heterologous

systems

(Supervisor: Zbyněk Kozmik; PřF UK Praha)

Hájková Zuzana The effect of mast cell activation on microtubule organization

(Supervisor: Pavel Dráber; PřF UK Praha) – Cena děkana za nejlepší

diplomovou práci

Hauserová Viola Spliceosome assembly (Supervisor: David Staněk; PřF UK Praha)

Novák Jakub Analysis of regulation of cytoplasmic poly(A) polymerase complexes

(Supervisor: David Staněk; PřF UK Praha)

Oltová Jana Mapping of regulatory elements within 5' region of the Disp3 locus

(Supervisor: Petr Bartůněk; PřF UK Praha)

Písačková Jana Monoclonal antibodies and characterization of their antigen-binding

properties

(Supervisor: Pavlína Řezáčová; PřF UK Praha)

Šimandlová Jitka Characterization of antirecombinase activity of human FBH1 helicase

(Supervisor: Pavel Janščák; PřF UK Praha)

Vágnerová Lenka The use of CAM assay for characterization and study of cancer cell

invasive properties

(Supervisor: Michal Dvořák; PřF UK Praha)

### 2012

Hanusová Zdenka Physiological role of SIGIRR in early embryonic development

(Supervisor: Dominik Filipp; PřF UK Praha)

Hradilová Naďa Role of endocytosis and endosomal acidification in TRAIL-induced

apoptosis

(Supervisor: Ladislav Anděra; PřF UK Praha)

Icha Jaroslav The role of acetylation in the RNA recognition motif of SRSF5

(Supervisor: David Staněk; PřF UK Praha)

**Knopf Corinna** Genetic analysis of genomic recombination rate

(Supervisor: Jiří Forejt; Veterinärmedizinische Universität Wien)

Moravec Martin Analysis of pluripotent gene expression program in early embryos and

embryonic stem cells

(Supervisor: Petr Svoboda; PřF UK Praha)



Pavlíková Michaela The role of selected cell populations and molecules in inflammatory

reaction and rejection of skin allograft

(Supervisor: Magdaléna Krulová; PřF UK Praha)

Peřinová Lucie Modulation of properties of mesenchymal stem cells and their use for

regulation of transplantation immunity

(Supervisor: Magdaléna Krulová; PřF UK Praha)

Žlabová Anna Characterisation of the cell line TRAMP-C2, murine model of prostate

cancer

(Supervisor: Milan Reiniš; PřF UK Praha)

2013

**Dalibor Miklík** Functional genome analysis using the retroviral integration sites

permissive for provirus expression in human cells

(Supervisor: Jiří Hejnar and Filip Šenigl, Faculty of Science, Charles

University in Prague)

Daniel Matějů Functional analysis of hPrp8 mutations linked to retinitis pigmentosa

(Supervisor: Zuzana Cvačková, Faculty of Science, Charles University

in Prague?)

Martin Peterka Characterization of TRAIL-induced, receptor-specific signalling in

cancer cells

(Supervisor: Ladislav Anděra, Faculty of Science, Charles University in

Prague)

**Terezie Imrichová** The response of metastatic prostate cancer cell lines to genotoxic

stress

(Supervisor: Zdeněk Hodný, Faculty of Science, Charles University in

Prague?)

Klára Kotlabová The role of Src-family kinases in the immunological synapse of

antigen presenting cells

(Supervisor: Tomáš Brdička, Faculty of Science, Charles University in

Prague)



#### 2014

Martina Benešová Human endogenous retrovirus ERVWE1: transcriptional activation

and modifications of promoter DNA methylation

(Supervisor: Kateřina Trejbalová, Faculty of Science, Charles

University in Prague)

Jan Valečka Identification of a new mechanism of Lck regulation via its C-terminal

sequence

(Supervisor: Dominik Filipp, Faculty of Science, Charles University in

Prague)

Matouš Vobořil Aire-expressing cells in immune peripheral tissues

(Supervisor: Dominik Filipp, Faculty of Science, Charles University in

Prague)

Michaela Dvořáková Molecular aspects of Cannabinoid receptor 1 signalling

(Supervisor: Jaroslav Blahoš, Faculty of Science, Charles University in

Prague)

Adriana Roithová Transport of U2 snRNA to Cajal bodies

(Supervisor: David Staněk, Faculty of Science, Charles University in

Prague)

Olga Babošová Characterization of novel synthetic inhibitors and activators of the

Wnt signalling pathway

(Supervisor: Vladimír Kořínek, Georg-August-Universität, Gottingen)

Gita Nováková Characterization of the role of senescence in the induction and

regulation of cancer cell death

(Supervisor: Ladislav Anděra, Faculty of Science, Charles University in

Prague)

František Pešina Comparison of the induction and regulation of autophagy in

proliferating and senescent cancer cells

(Supervisor: Ladislav Anděra, Faculty of Science, Charles University in

Prague)

**Veronika Machalová** The role of 5-azacytidine in therapy of myelodysplastic syndrome

(Supervisor: Zdeněk Hodný, Faculty of Science, Charles University in

Prague)

Jan Valášek A potential role of DAXX in cell cycle arrest and cellular senescence

(Supervisor: Hana Hanzlíková, Faculty of Science, Charles University in

Prague)



#### 2015

**David Přikryl** Study of replication and pathogenesis of retroviruses with extended

host range

(Supervisor: Vladimír Pečenka, Faculty of Science, Charles University

in Prague)

Klára Klimešová Mapping of SART3 interactions with spliceosomal snRNPs

(Supervisor: David Staněk, Faculty of Science, Charles University in

Prague)

Martina Slávková Reporter expression system for study of silencing of provirus

integrate inside transcriptionally active gene

(Supervisors: Jiří Hejnar, Filip Šenigl, Faculty of Science, Charles

University in Prague)

Jan Bartůněk The methods of biomedical research in mapping genes that modify

immunological parametres and in analysis of gene expression (Supervisor: M. Lipoldová, The Czech Technical University)

**Karin Heyduková** The methods of biomedical research in analysis of influence of

genetic background on functions of macrophages infected with

parasite Leishmania major

(Supervisor: M. Lipoldová, The Czech Technical University)

**Tereza Pokorná** Methods of the genetic engineering for genetic and functional

analysis of genes that modify response to parasite Leishmania major

(Supervisor: M. Lipoldová, The Czech Technical University)

Michaela Vaškovičová The Use of RNA Affinity Tags in RNA Biology

Radek Jankele TAL Effectors: Tools for DNA Targeting

Eliška Linhartová Maping of genes modifying the subspecies-specific roles of the

meiotic gene, Prdm9

Lenka Kašíková Charakterizace kandidátních genů hybridní sterility Hstx1 a Hstx2

(Supervisors: Petr Jansa, Faculty of Science, Charles University in

Prague)