

Diploma Theses

2009

Ballek Ondřej	Rack1 as a candidate protein involved in the regulation of translocation of Lck to lipid rafts (Supervisor: Dominik Filipp; Faculty of Science, Charles University Prague)
Černohorská Markéta	The role of JAK/STAT signalling pathway in cellular senescence (Supervisor: Zdeněk Hodný; Faculty of Science, Charles University Prague)
Dušková Pavlína	The role of DNA damage in chemically induced senescence (Supervisor: Zdeněk Hodný; Faculty of Science, Charles University Prague)
Dzúr-Gejdošová Mária	Regulation of gene expression on the model of mouse consomic strains (Supervisor: Jiří Forejt; Faculty of Science, Charles University Prague)
Flachs Petr	Construction of three congenic strains and their phenotypisation (Supervisor: Zdeněk Trachtulec; Faculty of Science, Charles University Prague)
Hejhal Tomáš	Epigenetic regulation of immunactive gene expression in tumour cells (Supervisor: Milan Reiniš; Faculty of Science, Charles University Prague)
Kopová Ivana	The role of sumoylation in premature chemically induced cellular senescence (Supervisor: Zdeněk Hodný; Faculty of Science, Charles University Prague)
Kotáb Jan	Integration preferences of avian sarcoma and leUKosis viruses (Supervisor: Jiří Hejnar; Faculty of Science, Charles University Prague)
Kovářová Denisa	RNAi and reversion of Rous sarcoma virus-induced tumorigenesis (Supervisors: Jiří Hejnar, Kateřina Trejbalová; Faculty of Science, Charles University Prague)

Machyna Martin	Dual role of CD9 protein in mast cell activation (Supervisor: Petr Dráber; Faculty of Science, Charles University Prague)
Mayer Alexandra	Pathophysiological role of matrix metalloproteinase 19 in development of liver fibrosis (Supervisor: Radislav Sedláček; Faculty of Science, Charles University Prague)
Nevařil Leonard	TRAIL-induced apoptosis in populations of colon cancer cell lines under various cultivation conditions (Supervisor: Ladislav Anděra; Faculty of Science, Charles University Prague)
Plesníková Michaela	The separation, characterization and cultivation of limbal stem cells (Supervisor: Vladimír Holáň; Faculty of Science, Charles University Prague)
Sarnová Lenka	Transgenic RNAi in mouse oocytes (Supervisor: Petr Svoboda; Faculty of Science, Charles University Prague)
Slávik Branislav	Targeting of genes of interest via avian retroviral receptor Tvc (Supervisor: Radislav Sedláček; Faculty of Science, Charles University Prague)
Svoboda Ondřej	Cloning, expression and characterization of recombinant growth factors (Supervisor: Petr Bartůňek; Faculty of Science, Charles University Prague)
Svobodová Eliška	Immunomodulation properties of mesenchymal stem cells (Supervisor: Magdalena Krulová; Faculty of Science, Charles University Prague)

2010

Auxt Miroslav	<i>De novo</i> DNA methyltransferases in the silencing of retroviral vectors (Supervisors: Jiří Hejnar, Filip Šenigl; Faculty of Science, Charles University Prague)
Dušková Eva	Regulation of alternative splicing (Supervisor: David Staněk; Faculty of Science, Charles University Prague)

Faltýsková Helena	Experimental models of the stem cell transfers for therapeutic purposes (Supervisor: Magdalena Krulová; Faculty of Pharmacy in Hradec Králové, Charles University)
Chudíčková Milada	Recombinant congenic strains – model for biomedical research (Supervisor: Marie Lipoldová; Faculty of Biomedical Engineering CTU in Prague)
John Václav	Genes for hybrid sterility in mice: mapping of epistatic interactions (Supervisor: Jiří Forejt; Faculty of Science, Charles University Prague)
Kašpárek Petr	Generation of a transgenic mouse model to study biological role of KLK5 in epidermis (Supervisor: Radislav Sedláček; Faculty of Science, Charles University Prague)
Marášek Pavel	Function of paxillin complexes in cell nucleus (Supervisor: Pavel Hozák; University of Chemistry and Technology, Prague)
Pitule Pavel	Comparative genomic prediction of novel transmembrane adaptor proteins and their expression analysis (Supervisor: Karel Drbal; Faculty of Science, Charles University Prague)
Přistoupilová Anna	Development of real-time PCR assay for detection of <i>Amphibocystidium ranae</i> as a model approach for studying rhinosporidiosis (Supervisor: Jan Pačes; 1 st Faculty of Medicine, Charles University)
Šíma Matyáš	Genetic influence on <i>Trypanosoma brucei brucei</i> infection in mice (Supervisor: Marie Lipoldová; Faculty of Science, Charles University Prague)
Šimíček Michal	FcεRI and Kit signal to actin cytoskeleton via different pathways (Supervisor: Petr Dráber; Faculty of Science, Charles University Prague)
Šulcová Jitka	Analysis of candidate transmembrane adaptor proteins (Supervisor: Karel Drbal; Faculty of Science, Charles University Prague)
Těšina Petr	Structure and function of hPrp31 mutant in <i>Retinitis pigmentosa</i> (Supervisor: David Staněk; Faculty of Science, Charles University Prague)

Vavrochová Tereza Expression and function of molecules of innate immune system in embryonic phagocytes.
(Supervisor: Dominik Filipp; Faculty of Science, Charles University Prague)

Vonková Ivana Biochemical and functional characterization of a novel transmembrane adaptor protein Nvl
(Supervisor: Tomáš Brdička; Faculty of Science, Charles University Prague)

2011

Antošová Barbora Characterization of mice with constitutively active Wnt/beta-catenin signaling pathway in lens
(Supervisor: Zbyněk Kozmik; Faculty of Science, Charles University Prague)

Buryova Halka Characterization of the role of SPINK6 in the epidermis using transgenic models
(Supervisor: Radislav Sedláček; Faculty of Science, Charles University Prague)

Dobeš Jan The study on the physiological importance of enteric alpha-defensin expression in the thymus
(Supervisor: Dominik Filipp; Faculty of Science, Charles University Prague)

Eitler Jiří Involvement of asthma-associated protein ORMDL3 in mast cell signalling
(Supervisor: Petr Dráber; Faculty of Science, Charles University Prague)

Gurská Daniela The functional analysis of invertebrate promoters in heterologous systems
(Supervisor: Zbyněk Kozmik; Faculty of Science, Charles University Prague)

Hájková Zuzana The effect of mast cell activation on microtubule organization
(Supervisor: Pavel Dráber; Faculty of Science, Charles University Prague) – The Dean's Award for Outstanding diploma Theses

Hauserová Viola Spliceosome assembly (Supervisor: David Staněk; Faculty of Science, Charles University Prague)

Novák Jakub	Analysis of regulation of cytoplasmic poly(A) polymerase complexes (Supervisor: David Staněk; Faculty of Science, Charles University Prague)
Oltová Jana	Mapping of regulatory elements within 5' region of the <i>Disp3</i> locus (Supervisor: Petr Bartůněk; Faculty of Science, Charles University Prague)
Písačková Jana	Monoclonal antibodies and characterization of their antigen-binding properties (Supervisor: Pavlína Řezáčová; Faculty of Science, Charles University Prague)
Šimandlová Jitka	Characterization of antirecombinase activity of human FBH1 helicase (Supervisor: Pavel Janščák; Faculty of Science, Charles University Prague)
Vágnerová Lenka	The use of CAM assay for characterization and study of cancer cell invasive properties (Supervisor: Michal Dvořák; Faculty of Science, Charles University Prague)
2012	
Hanusová Zdenka	Physiological role of SIGIRR in early embryonic development (Supervisor: Dominik Filipp; Faculty of Science, Charles University Prague)
Hradilová Naďa	Role of endocytosis and endosomal acidification in TRAIL-induced apoptosis (Supervisor: Ladislav Anděra; Faculty of Science, Charles University Prague)
Icha Jaroslav	The role of acetylation in the RNA recognition motif of SRSF5 (Supervisor: David Staněk; Faculty of Science, Charles University Prague)
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; Faculty of Science, Charles University Prague)

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- Pavlíková Michaela** The role of selected cell populations and molecules in inflammatory reaction and rejection of skin allograft
(Supervisor: Magdaléna Krulová; Faculty of Science, Charles University Prague)
- Peřinová Lucie** Modulation of properties of mesenchymal stem cells and their use for regulation of transplantation immunity
(Supervisor: Magdaléna Krulová; Faculty of Science, Charles University Prague)
- Žlabová Anna** Characterisation of the cell line TRAMP-C2, murine model of prostate cancer
(Supervisor: Milan Reiniš; Faculty of Science, Charles University Prague)

2013

- Dalibor Miklík** Functional genome analysis using the retroviral integration sites permissive for provirus expression in human cells
(Supervisors: 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 Příklad** 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 parameters and in analysis of gene expression
(Supervisor: Marie 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: Marie 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: Marie 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** Mapping 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)

2019

Jitka Vojáčková	Functional analysis of the TSSC4 chaperone during snRNP formation (Supervisor: David Staněk; Charles University in Prague)
Tereza Chadimová	Do regulatory T cells reduce the risk of CD8 + T cell-induced autoimmunity? (Supervisor: Ondřej Štěpánek; Charles University in Prague)
Michaela Přibíková	Characterization of T-cell clones from native and virtual memory compartment (Supervisor: Ondřej Štěpánek; Charles University in Prague)
Klára Křivánková	The role of histone modifications and gene expression in mouse spermatogenesis (Supervisor: Ondřej Mihola; Charles University in Prague)
Nuria Cuadrado García	Genetic and functional analysis of host response to Leishmania parasites (Supervisor: Marie Lipoldová; Universidad de Alcalá, Madrid, Spain)
Martina Pružincová	Stability of protein complexes in the cytoskeleton of the eukaryotic flagellum (Supervisor: Vladimír Varga; Charles University in Prague)
Lucie Fryntová	Transdifferentiation of somatic cells into hepatocytes and clinical relevant edition of the Tight junction protein 2 gene (Supervisor: Lucie Janečková; Faculty of Science, Charles University in Prague)
Rozalie Nováková	Application of new methods and technologies in mice models of autism research (Supervisor: Agnieszka Kubik-Zahorodna; Charles University in Prague)
Marta Šlaufová	Programmable nucleases in human therapy (Supervisor: Petr Kašpárek; Charles University in Prague)
Tereza Michalčíková	Development of advanced in-vivo imaging methods for non-invasive study of tumour growth dynamic (Supervisor: Jan Procházka; Charles University in Prague)
Marek Jedlicka	The transcription factor C/EBP γ as a novel regulator in mast cell development and function

(Supervisor: Meritxell Alberich Jordà; Faculty of Science, Charles University in Prague)

Mária Gašpareková

Identification of genes responsible for tumor induction by avian subgroup J retroviruses
(Supervisor: Vladimír Pečenka; Charles University in Prague)

Sára Černohouzová

The role of ORMDL family proteins in mast cell signaling
(Supervisor: Petra Lovecká; University of Chemistry and Technology, Prague)

2020

Kristýna Ilievová

The role of protein tyrosine phosphatase CD45 and Src-family kinases in murine model of chronic autoinflammatory osteomyelitis
(Supervisor: Tomáš Brdička; Charles University in Prague)

Jaroslav Kurfurst

Identification of new insertions of chicken endogenous retroviruses
(Supervisor: Jan Pačes; University of Chemistry and Technology, Prague)

Mariana Šatrová

Detection of selection pressure on human endogenous retroviruses
(Supervisor: Jan Pačes; University of Chemistry and Technology, Prague)

Jiří Reiniš

Analysis of expression of endogenous retroviruses in thymus: relevance for antigen presentation and autoimmunity
(Supervisor: Jan Pačes; University of Chemistry and Technology, Prague)

Jarmila Havelková

The source of endogenous DNA damage in neurodegenerative disease
(Supervisor: Hana Hanzlíková; Charles University in Prague)

Sarka Jarosova

Role of DISP3 in malignancy of medulloblastoma cell line
(Supervisor: Martina Zíková; Charles University in Prague)

Michal Punčochář

Design of new bioactive molecules using deep generators and molecular docking
(Supervisor: Daniel Svozil; University of Chemistry and Technology, Prague)

Ondřej Smolka

Synthesis of nucleoside analogues based on 2-deoxy-2-fluoro- and 3-deoxy-3-fluoro-D-ribose and pyrazine derivatives
(Supervisor: Jindřich Jindřich; Charles University in Prague)

Attila Palágyi

A new method of peptide separation using electrostatic bonding
(Supervisor: Jindřich Jindřich; Charles University in Prague)