

Seznam publikací ústavu v roce 2016:

Laboratoř biomolekulárního rozpoznávání – Bohdan Schneider

1. **Mikulecky P, Zahradník J, Kolenko P, Cerny J, Charnavets T, Kolarova L, Necasova I, Pham PN, Schneider B.** Crystal structure of human interferon- γ receptor 2 reveals the structural basis for receptor specificity. *Acta Crystallogr D Struct Biol.* 2016 Sep;72(Pt 9):1017-25.
2. Novakova Z, **Cerny J**, Choy CJ, Nedrow JR, Choi JK, Lubkowski J, Berkman CE, Barinka C. Design of composite inhibitors targeting glutamate carboxypeptidase II: the importance of effector functionalities. *FEBS J.* 2016, 283(1): 130 – 143.
3. **Biedermannova L, Schneider B.** Hydration of proteins and nucleic acids: Advances in experiment and theory. A review. *Biochim Biophys Acta.* 2016 May 27;1860 (9):1821-1835.
4. **Cerny J, Bozikova P, Schneider B.** DNATCO: assignment of DNA conformers at dnatco.org. *Nucleic Acids Res.* 2016 Jul 8;44 (W1):W284-7.
5. Rohlenova K, Sachaphibulkij K, Stursa J, Bezawork-Geleta A, Blecha J, Endaya B, Werner L, **Cerny J**, Zabalova R, Goodwin J, Spacek T, Alizadeh Pesdar E, Yan B, Nguyen MN, Vondrusova M, Sobol M, Jezek P, Hozak P, Truksa J, Rohlena J, Dong LF, Neuzil J. Selective Disruption of Respiratory Supercomplexes as a New Strategy to Suppress Her2high Breast Cancer. *Antioxid Redox Signal.* Epub 2016 Aug 22.
6. Taherkhani M., Armentano A., **Cerny J.**, Müller-Dethlefs. Threshold ionization spectroscopic investigation of supersonic jet-cooled, laser-desorbed Tryptophan. *Chemical Physics Letters*; 657; 142-147.
7. Boukalova S, Stursa J, Werner L, Ezrova Z, **Cerny J**, Bezawork-Geleta A, Pecinova A, Dong L, Drahota Z, Neuzil J. Mitochondrial Targeting of Metformin Enhances Its Activity against Pancreatic Cancer. *Mol Cancer Ther.* 2016 Dec; 15(12):2875-2886.

Laboratoř inženýrství vazebných proteinů - Petr Malý

1. Maly J, Stanek O, Frolik J, Maly M, Ennen F, Appelhans D, Semeradtova A, Wrobel D, Stofik M., Knapova T, **Kuchar M**, Stastna LC, Cermak J, Sebo P, **Maly P.** Biocompatible Size-Defined Dendrimer-Albumin Binding Protein Hybrid Materials as a Versatile Platform for Biomedical Applications. *Macromol Biosci.* 2016 Apr;16(4):553-66.

- Zadravec P, **Mareckova L**, **Petrokova H**, Hodnik V, Perisić Nanut M, Anderluh G, Strukelj B, **Maly P**, Berlec A. Development of Recombinant *Lactococcus lactis* Displaying Albumin-Binding Domain Variants against Shiga Toxin 1 B Subunit. *PLoS One*. 2016 Sep 8;11(9):e0162625.

Laboratoř strukturní biologie – Cyril Bařinka

- Conway RE, Rojas C, Alt J, **Novakova Z**, Richardson SM, Rodrick TC, Fuentes JL, Richardson NH, Attalla J, Stewart S, Fahmy B, **Barinka C**, Ghosh M, Shapiro LH, Slusher BS. Prostate-specific membrane antigen (PSMA)-mediated laminin proteolysis generates a pro-angiogenic peptide. *Angiogenesis*. 2016 Oct;19(4):487-500.
- Dannoon S, Ganguly T, Cahaya H, Geruntho JJ, Galliher MS, Beyer SK, Choy CJ, Hopkins M, Regan M, Blecha J, **Skultetyova L**, Drake CR, Jivan S, **Barinka C**, Jones EF, Berkman CE, VanBrocklin HF. Structure-Activity Relationship of (18)F-Labeled Phosphoramidate Peptidomimetic Prostate-Specific Membrane Antigen (PSMA)-Targeted Inhibitor Analogues for PET Imaging of Prostate Cancer. *J Med Chem*. 2016 Jun 23;59(12):5684-94.
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- Novakova Z**, Cerny J, Choy CJ, Nedrow JR, Choi JK, Lubkowski J, Berkman CE, **Barinka C**. Design of composite inhibitors targeting glutamate carboxypeptidase II: the importance of effector functionalities. *FEBS J*. 2016, 283(1): 130 – 143.

Laboratoř struktury a funkce biomolekul – Jan Dohnálek

1. Mikulecky P, Zahradník J, **Kolenko P**, Cerny J, Charnavets T, Kolarova L, Necasova I, Pham PN, Schneider B. Crystal structure of human interferon- γ receptor 2 reveals the structural basis for receptor specificity. *Acta Crystallogr D Struct Biol.* 2016 Sep;72(Pt 9):1017-25.
2. **Fejfarova K**, Kadek A, Mrazek H, Hausner J, Tretyachenko V, **Koval' T**, Man P, **Hasek J**, **Dohnalek J**. Crystallization of nepenthesin I using a low-pH crystallization screen. *Acta Crystallogr F Struct Biol Commun.* 2016 Jan;72(Pt 1):24-8.
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5. **Dohnálek J**, McAuley KE, Brzozowski AM, Østergaard PR, Svendsen A, Wilson KS. Stabilization of Enzymes by Metal Binding: Structures of Two Alkalophilic *Bacillus Subtilises* and Analysis of the Second Metal-Binding Site of the Subtilase Family. Chapter in *Understanding enzymes; Function, Design, Engineering and Analysis*, Pan Stanford Publishing, ed. A. Svendsen, 2016, 203-266, ISBN 789814669320.
6. Malý M, **Duřková J**, Østergaard LH, **Stránský J**, **Švecová L**, **Kolenko P**, **Dohnálek J**. Optimalizace parametrů zpracování difrakčních dat oxidázy z *Microdochium nivale*. In *Proceedings of SSCSSP6*, pp. 5-9, ISBN 978-80-01-06072-8.
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Laboratoř strukturních proteinů – Zdeněk Lánský

1. Braun M, **Lansky Z**, Hilitski F, Dogic Z, Diez S. Entropic forces drive contraction of cytoskeletal networks. *Bioessays.* 2016 May;38(5):474-81.

2. Jirku M, **Lansky Z**, Bednarova L, Sulc M, Monincova L, Majer P, Vyklicky L, Vondrasek J, Teisinger J, Bousova K. The characterization of a novel S100A1 binding site in the N-terminus of TRPM1. *Int J Biochem Cell Biol.* 2016 Sep;78: 186-93.
3. Braun M, Diez S, **Lansky Z**. Cell Biology: Kinesin-14 Backsteps to Organize Polymerizing Microtubules. *Curr Biol.* 2016 Dec 19;26(24):R1292-R1294.

Laboratoř molekulární terapie – Jiří Neuzil

1. Tomasetti M, Monaco F, Manzella N, **Rohlena J, Rohlenova K**, Staffolani S, Gaetani S, Ciarapica V, Amati M, Bracci M, Valentino M, Goodwin J, Nguyen M, Truksa J, Sobol M, Hozak P, Dong LF, Santarelli L, **Neuzil J**. MicroRNA-126 induces autophagy by altering cell metabolism in malignant mesothelioma. *Oncotarget.* 2016 Apr 22.
2. **Rohlenova K, Neuzil J, Rohlena J**. The role of Her2 and other oncogenes of the PI3K/AKT pathway in mitochondria. *Biol Chem.* 2016 Jul 1; 397(7):607-15.
3. Berridge MV, McConnell MJ, Grasso C, **Bajzikova M, Kovarova J, Neuzil J**. Horizontal transfer of mitochondria between mammalian cells: beyond co-culture approaches. *Curr Opin Genet Dev.* 2016 May 21; 38:75-82.
4. **Vanova K, Boukalova S**, Gbelcova H, Muchova L, **Neuzil J**, Gurlich R, Ruml T, Vitek L. Heme oxygenase is not involved in the anti-proliferative effects of statins on pancreatic cancer cells. *BMC Cancer* 2016; 16:309.
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Laboratoř reprodukční biologie – Kateřina Hortová

1. **Capkova J**, **Kubatova A**, **Ded L**, Tepla O, **Peknicova J**. Evaluation of the expression of sperm proteins in normozoospermic and asthenozoospermic men using monoclonal antibodies. *Asian J Androl.* 2016 Jan-Feb; 18(1):108-13.
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5. **Frolikova M, Sebkova N, Ded L, Dvorakova-Hortova K.** Characterization of CD46 and β 1 integrin dynamics during sperm acrosome reaction. *Sci Rep.* 2016 Sep 26; 6:33714.
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Laboratoř molekulární patogenetiky – Gabriela Pavlínková

1. **Bohuslavova R, Dodd N, Macova I, Chumak T, Horak M, Syka J, Fritzscht B, Pavlinkova G.** Pax2-Islet1 Transgenic Mice Are Hyperactive and Have Altered Cerebellar Foliation. *Mol Neurobiol.* 2016 Feb 3. [Epub ahead of print].
2. **Dvorakova M, Jahan I, Macova I, Chumak T, Bohuslavova R, Syka J, Fritzscht B, Pavlinkova G.** Incomplete and delayed Sox2 deletion defines residual ear neurosensory development and maintenance. *Sci Rep.* 2016 Dec 5; 6:38253.
3. Chumak T, **Bohuslavova R, Macova I, Dodd N, Buckiova D, Fritzscht B, Syka J, Pavlinkova G.** Deterioration of the Medial Olivocochlear Efferent System Accelerates Age-Related Hearing Loss in Pax2-Is11 Transgenic Mice. *Molecular Neurobiology*, 2016 May; 53(4):2368-83.

Laboratoř nádorové rezistence – Jaroslav Truksa

1. Tomasetti M, Monaco F, Manzella N, Rohlena J, Rohlenova K, Staffolani S, Gaetani S, Ciarapica V, Amati M, Bracci M, Valentino M, Goodwin J, Nguyen M, **Truksa J, Sobol M, Hozak P, Dong LF, Santarelli L, Neuzil J.** MicroRNA-126 induces autophagy by altering cell metabolism in malignant mesothelioma. *Oncotarget.* 2016 Apr 22.
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Laboratoř genové exprese – Mikael Kubista

1. **Korenkova V**, Slyskova J, **Novosadova V**, Pizzamiglio S, **Langerova L**, Bjorkman J, Vycital O, Liska V, Levy M, Veskrna K, Vodicka P, Vodickova L, **Kubista M**, Verderio P. The focus on sample quality: Influence of colon tissue collection on reliability of qPCR data. *Sci Rep.* 2016 Jul 7;6:29023.
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