

## Struktura proteinov [3BK] – Križaj: Seminarji 2012/2013

### 1. Strategije določanja poteka disulfidnih vezi v proteinih bogatih z disulfidi.

Pripravijo: **Nejc Perme, Stupar Uroš**

Bingham, J.P., Broxton, N.M., Livett, B.G., Down, J.G., Jones, A. and Moczydlowski, E.G. (2005): Optimizing the connectivity in disulfide-rich peptides:  $\alpha$ -conotoxin SII as a case study. *Anal. Biochem.* 338, 48-61.

Gray, W.R. (1993): Disulfide structures of highly bridged peptides: a new strategy for analysis. *Protein Sci.* 2, 1732-1748.

### 2. Multidimenzionalna tehnologija za identifikacijo proteinov - MudPIT.

Pripravijo: **Taja Karner, Špela Umek, Škrjanc Monika**

Kislinger, T. and Emili, A. (2005): Multidimensional protein identification technology: Current status and future prospects. *Exp. Rev. Proteomics* 2, 27-39.

### 3. Kvantitativna proteomika na osnovi masne spektroskopije.

Pripravijo: **Tanja Korpar, Ines Šterbal, Filip Kolenc**

Ong, S.-E. and Mann, M. (2005): Mass spectrometry-based proteomics turns quantitative. *Nat. Chem. Biol.* 1, 252-262.

### 4. Analiza proteinskih kompleksov z masno spektroskopijo.

Pripravijo: **Andreja Bratovš, Tamara Marić, Matja Zalar**

Gingras, A.-C., Gstaiger, M., Raught, B. and Aebersold, R. (2007): Analysis of protein complexes using mass spectrometry. *Nat. Rev. Mol. Cell Biol.* 8, 645-654.

### 5. Dvo-dimenzionalna gelska elektroforeza v proteomiki.

Pripravita: **Mitja Crček, Rok Štemberger**

Rabilloud, T. and Lelong, C. (2011): Two-dimensional gel electrophoresis in proteomics: A tutorial. *J. Proteomics* 74, 1829-1841.

### 6. Proteomska analiza post-translacijskih modifikacij.

Pripravijo: **Andrej Vrankar, Dominik Kert, Jernej Mustar**

Kamath, K.S., Vasavada, M.S. and Srivastava, S. (2011): Proteomic databases and tools to decipher post-translational modifications. *J. Proteomics* 75, 127-144.

Pripravijo: **Teja Banič, Tina Gregorič, Sara Draščič**

Zhao, Y. and Jensen, O.N. (2009): Modification-specific proteomics: Strategies for characterization of post-translational modifications using enrichment techniques. *Proteomics* 9, 4632-4641.

Pripravita: **Eva Knapič, Alja Zottel**

Witze, E.S., Old, W.M., Resing, K.A. and Ahn, N.G. (2007): Mapping protein post-translational modifications with mass spectrometry. *Nature Meth.* 4, 798-806.

### 7. Proteomika membranskih proteinov.

Pripravijo: **Karmen Hrovat, Maja Grdadolnik, Iza Ogris**

Gilmore, J.M. and Washburn, M.P. (2010): Advances in shotgun proteomics and the analysis of membrane proteomes. *J. Proteomics* 73, 2078-2091.

### 8. Upodabljanje tkiv s pomočjo masne spektroskopije.

Pripravijo: **Ines Kerin, Petra Malavašič, Petra Zgaga**

Amstalden van Hove, E.R., Smith, D.F. and Heeren, R.M.A. (2010): A concise review of mass spectrometry imaging. *J. Chromatogr. A* 1217, 3946-3954.

Pripravita: **Katra Koman, Matevž Ambrožič, Kaja Javoršek**

Seeley, E.H. and Caprioli, R.M. (2012): 3D Imaging by Mass Spectrometry: A New Frontier. *Analit. Chem.* 84, 2105-2110.

Pripravita: **Kaja Rupar, Janja Juvančič**

Cornett, D.S., Reyzer, M.L., Chaurand, P. and Caprioli, R.M. (2007): MALDI imaging mass spectrometry: molecular snapshots of biochemical systems. *Nat. Methods* 4, 828-833.

Pripravijo: **Ana Dolinar, Veronika Jarc, Tjasa Goričan**

Schwamborn, K. and Caprioli, R.M. (2010): Molecular imaging by mass spectrometry — looking beyond classical histology. *Nat. Rev. Cancer* 10, 639-646.

### **9. Masna spektroskopija v medicini.**

Pripravijo: **Maja Remškar, Jana Verbančič, Špela Pohleven**

Hanash, L.A.S. and Taguchi, A. (2010): The grand challenge to decipher the cancer proteome. *Nat. Rev. Cancer* 10, 652-660.

Pripravijo: **Sandi Botonjić, Marko Radojković, Đorđe Dimitrijević**

Nomura, D.K., Dix, M.M. and Cravatt, B.F. (2010): Activity-based protein profiling for biochemical pathway discovery in cancer. *Nat. Rev. Cancer* 10, 630-638.

Pripravijo: **Mirjam Kmetec, Ula Štok, Sara Primec**

Meléndez, L.M., Colon, K., Rivera, L., Rodriguez-Franco, E. and Toro-Nieves, D. (2011): Proteomic Analysis of HIV-Infected Macrophages. *J. Neuroimmune Pharmacol.* 6, 89-106.