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Mastering data pre-processing for accurate quantitative molecular profiling with liquid chromatography coupled to mass spectrometry

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List of publications

Part of this thesis

1. **Mitra V**, Govorukhina N, Zwanenburg G, Hoefsloot H, Westra I, Smilde A, Reijmers T, van der Zee AG, Suits F, Bischoff R, Horvatovich P. Identification of Analytical Factors Affecting Complex Proteomics Profiles Acquired in a Factorial Design Study with Analysis of Variance: Simultaneous Component Analysis. *Anal Chem*. 2016 Apr 19;88(8):4229-38. doi: 10.1021/acs.analchem.5b03483. Epub 2016 Mar28. PubMed PMID: 26959230.
2. **Mitra V**, Smilde A, Hoefsloot H, Suits F, Bischoff R, Horvatovich P. Inversion of peak elution order prevents uniform time alignment of complex liquid-chromatography coupled to mass spectrometry datasets. *J Chromatogr A*. 2014 Dec 19;1373:61- 72. doi: 10.1016/j.chroma.2014.10.101. Epub 2014 Nov 13. PubMed PMID: 25482036

Other publications

1. Russell CL, Heslegrave A, **Mitra V**, Zetterberg H, Pocock JM, Ward MA, Pike I. Combined tissue and fluid proteomics with Tandem Mass Tags to identify low abundant protein biomarkers of disease in peripheral body fluid: An Alzheimer's Disease case study. *Rapid Commun Mass Spectrom*. 2016 Nov 4. doi:10.1002/rcm.7777. PMID: 27813239.
2. Russell CL, **Mitra V**, Hansson K, Blennow K, Gobom J, Zetterberg H, Hiltunen M, Ward M, Pike I. Comprehensive Quantitative Profiling of Tau and Phosphorylated Tau Peptides in Cerebrospinal Fluid by Mass Spectrometry Provides New Biomarker Candidates. *J Alzheimers Dis*. 2016 Sep 14 PMID: 27636850.
3. Liang HC, Russell C, **Mitra V**, Chung R, Hye A, Bazenet C, Lovestone S, Pike I, Ward M. Correction to "Glycosylation of Human Plasma Clusterin Yields a Novel Candidate Biomarker of Alzheimer's Disease". *J Proteome Res*. 2016 Mar 4;15(3):1114. doi: 10.1021/acs.jproteome.6b00080. Epub 2016 Feb 1. PubMed PMID: 26828705.
4. Zen Y, Britton D, **Mitra V**, Pike I, Heaton N, Quaglia A. A global proteomic study identifies distinct pathological features of IgG4- related and primary sclerosing cholangitis. *Histopathology*. 2016 May;68(6):796-809. doi:10.1111/his.12813. Epub 2015 Nov 2. PubMed PMID: 26308372.
5. Böhm G, Prefot P, Jung S, Selzer S, **Mitra V**, Britton D, Kuhn K, Pike I, Thompson AH. Low-pH Solid-Phase Amino Labeling of Complex Peptide Digests with TMTs Improves Peptide Identification Rates for Multiplexed Global Phosphopeptide Analysis. *J Proteome Res*. 2015 Jun 5;14(6):2500-10. doi:10.1021/acs.jproteome.5b00072. Epub 2015 May 13. PubMed PMID: 25939058.
6. Zen Y, Britton D, **Mitra V**, Pike I, Sarker D, Itoh T, Heaton N, Quaglia A. Tubulin β -III: a novel immunohistochemical marker for intrahepatic peripheral cholangiocarcinoma. *Histopathology*. 2014 Dec;65(6):784-92. doi:10.1111/his.12497. Epub 2014 Aug 5. PubMed PMID: 25039376.
7. Britton D, Zen Y, Quaglia A, Selzer S, **Mitra V**, Löbner C, Jung S, Böhm G, Schmid P, Prefot P, Hoehle C, Koncarevic S, Gee J, Nicholson R, Ward M, Castellano L, Stebbing J, Zucht HD, Sarker D, Heaton N, Pike I. Quantification of pancreatic cancer proteome and phosphorylome: indicates molecular events likely contributing to cancer and activity of drug targets. *PLoS One*. 2014 Mar 26;9(3):e90948. doi: 10.1371/journal.pone.0090948. eCollection 2014. Erratum in: *PLoS One*. 2014;9(8):e107077. PubMed PMID: 24670416; PubMed Central PMCID: PMC3966770.