

List of publications 2014

List of proteomics centred/related publications with involvement of GPF members. GPF authors are labelled as bold type. Publications headed by authors from scientific groups of the GRC (first or last author) are additionally labelled with ❖.

- (1) Wohlgemuth, I., **Lenz, C., Urlaub, H.** (2014) Studying macromolecular complex stoichiometries by peptide-based mass spectrometry”, *Proteomics*, doi: 10.1002/pmic.201400466 [Epub ahead of print]. ❖
- (2) Jorrín-Novo, J., Pascual, J., Sanchez Lucas, R., Romero Rodriguez, C., Rodríguez Ortega, M.J., **Lenz, C.**, Valledor, L. (2014) Fourteen years of plant proteomics reflected in “Proteomics”: Moving from model species and 2-DE based approaches to orphan species and gel-free platforms, *Proteomics* doi: 10.1002/pmic.201400349 [Epub ahead of print].
- (3) Timm, T., **Lenz, C.**, Merkel, D., Sadiﬀo, C., Grabitzki, J., Klein, J., Lochnit, G. (2014) Detection and Site Localization of Phosphorylcholine-Modified Peptides by NanoLC-ESI-MS/MS Using Precursor Ion Scanning and MRM Experiments. *J. Am. Soc. Mass Spectrom.* PMID: 25487775 [Epub ahead of print].
- (4) Lin, T.Y., Voronovsky, A., Raabe, M., **Urlaub, H.**, Sander, B., Golas, M.M. (2014). Dual tagging as an approach to isolate endogenous chromatin remodeling complexes from *Saccharomyces cerevisiae*. *Biochim Biophys Acta*. doi: 10.1016/j.bbapap.2014.11.009 [Epub ahead of print].
- (5) Petrova, D.T., Schultze, F.C., Brandhorst, G., Luchs, K.-D., **Lenz, C., Urlaub, H.**, Rubel, D., Gross, O., Walson, P.D., M. Oellerich, M. (2014) Effects of Mycophenolate Mofetil on Kidney Function and Phosphorylation Status of Renal Proteins in Alport COL4A3-deficient Mice. *Proteome Sci* 12, 56-65. ❖
- (6) Hrlle, A., Maier, L.K., Sharma, K., Ebert, J., Basquin, C., **Urlaub, H.**, Marchfelder, A., Conti, E. (2014) Structural analyses of the CRISPR protein Csc2 reveal the RNA-binding interface of the type I-D Cas7 family. *RNA Biol* 11, 1072-82.
- (7) Staals, R.H., Zhu, Y., Taylor, D.W., Kornfeld, J.E., Sharma, K., Barendregt, A., Koehorst, J.J., Vlot, M., Neupane, N., Varossieau, K., Sakamoto, K., Suzuki, T., Dohmae, N., Yokoyama, S., Schaap, P.J., **Urlaub, H.**, Heck, A.J., Nogales, E., Doudna, J.A., Shinkai, A., van der Oost, J. (2014) RNA Targeting by the Type III-A CRISPR-Cas Csm Complex of *Thermus thermophilus*. *Mol Cell* 56, 518-30.
- (8) Lugassy, J., Corso, J., Beach, D., Petrik, T., Oellerich, T., **Urlaub, H.**, Yablonski, D. (2014) Modulation of TCR responsiveness by the Grb2-family adaptor, Gads. *Cell Signal* 27, 125-134.
- (9) Kramer, K., Sachsenberg, T., Beckmann, B.M., Qamar, S., Boon, K.L., Hentze, M.W., Kohlbacher, O., **Urlaub, H.** (2014) Photo-cross-linking and high-resolution mass spectrometry for assignment of RNA-binding sites in RNA-binding proteins. *Nat Methods* 11, 1064-70. ❖
- (10) Schmidt, C., Raabe, M., Lührmann, R., **Urlaub, H.** (2014) Analyzing the protein assembly and dynamics of the human spliceosome with SILAC. *Methods Mol Biol* 1188, 227-44. ❖
- (11) Wilhelm, B.G., Mandad, S., Truckenbrodt, S., Kröhnert, K., Schäfer, C., Rammner, B., Koo, S.J., Claßen, G.A., Krauss, M., Haucke, V., **Urlaub, H.**, Rizzoli, S.O. (2014) Composition of isolated synaptic boutons reveals the amounts of vesicle trafficking proteins. *Science* 344, 1023-8. ❖
- (12) **Lenz, C., Urlaub, H.** (2014) Separation methodology to improve proteome coverage depth. *Expert Rev. Proteomics* 11, 409-14. ❖
- (13) Vazquez-Pianzola, P., Adam, J., Haldemann, D., Hain, D., **Urlaub, H.**, Suter, B. (2014) Clathrin heavy chain plays multiple roles in polarizing the *Drosophila* oocyte downstream of Bic-D. *Development* 141, 1915-26.
- (14) Loedige, I., Stotz, M., Qamar, S., Kramer, K., Hennig, J., Schubert, T., Löffler, P., Längst, G., Merkl, R., **Urlaub, H.**, Meister, G. (2014) The NHL domain of BRAT is an RNA-binding domain that directly contacts the hunchback mRNA for regulation. *Genes Dev* 28, 749-64.

- (15) Plagens, A., Tripp, V., Daume, M., Sharma, K., Klingl, A., Hrle, A., Conti, E., **Urlaub, H.**, Randau, L. (2014) In vitro assembly and activity of an archaeal CRISPR-Cas type I-A Cascade interference complex. *Nucleic Acids Res* 42, 5125-38.
- (16) Brendel, J., Stoll, B., Lange, S.J., Sharma, K., **Lenz, C.**, Stachler, A.E., Maier, L.K., Richter, H., Nickel, L., Schmitz, R.A., Randau, L., Allers, T., **Urlaub, H.**, Backofen, R., Marchfelder, A. (2014) A complex of Cas proteins 5, 6, and 7 is required for the biogenesis and stability of clustered regularly interspaced short palindromic repeats (crispr)-derived mas (crrnas) in *Haloflex volcanii*. *J Biol Chem* 289, 7164-77.
- (17) Schmidt, C., Grønberg, M., Deckert, J., Bessonov, S., Conrad, T., Lührmann, R., **Urlaub, H.** (2014) Mass spectrometry-based relative quantification of proteins in precatalytic and catalytically active spliceosomes by metabolic labeling (SILAC), chemical labeling (iTRAQ), and label-free spectral count. *RNA* 20, 406-20. ❖
- (18) Biesemann, C., Grønberg, M., Luquet, E., Wichert, S.P., Bernard, V., Bungers, S.R., Cooper, B., Varoqueaux, F., Li, L., Byrne, J.A., **Urlaub, H.**, **Jahn, O.**, Brose, N., Herzog, E. (2014) Proteomic screening of glutamatergic mouse brain synaptosomes isolated by fluorescence activated sorting. *EMBO J* 33, 157-70. ❖
- (19) Christian, H., Hofele, R.V., **Urlaub, H.**, Ficner, R. (2014) Insights into the activation of the helicase Prp43 by biochemical studies and structural mass spectrometry. *Nucleic Acids Res* 42, 1162-79. ❖
- (20) Dettmann, A., Heilig, Y., **Valerius, O.**, Ludwig, S., Seiler, S. (2014) Fungal communication requires the MAK-2 pathway elements STE-20 and RAS-2, the NRC-1 adapter STE-50 and the MAP kinase scaffold HAM-5. *PLoS Genet* 10, e1004762.
- (21) Petutschnig, E.K., Stolze, M., Lipka, U., Kopischke, M., Horlacher, J., **Valerius, O.**, Rozhon, W., Gust, A.A., Kemmerling, B., Poppenberger, B., Braus, G.H., Nürnberger, T., Lipka, V. (2014) A novel Arabidopsis CHITIN ELICITOR RECEPTOR KINASE 1 (CERK1) mutant with enhanced pathogen-induced cell death and altered receptor processing. *New Phytol* 204, 955-67. ❖
- (22) Heilig, Y., Dettmann, A., Mouriño-Pérez, R.R., Schmitt, K., **Valerius, O.**, Seiler, S. (2014) Proper actin ring formation and septum constriction requires coordinated regulation of SIN and MOR pathways through the germinal centre kinase MST-1. *PLoS Genet* 10, e1004306.
- (23) Tran, V.T., Braus-Stromeyer, S.A., Kusch, H., Reusche, M., Kaefer, A., Kühn, A., **Valerius, O.**, Landesfeind, M., Aßhauer, K., Tech, M., Hoff, K., Pena-Centeno, T., Stanke, M., Lipka, V., Braus, G.H. (2014) Verticillium transcription activator of adhesion Vta2 suppresses microsclerotia formation and is required for systemic infection of plant roots. *New Phytol* 201, 565-81-70. ❖
- (24) Kratzke, M., Candello, E., **Schmidt, B.**, Jahn, O. and Schu, P. (2014), AP-1/σ1B-Dependent SV protein recycling is regulated in early endosomes and is coupled to AP-2 endocytosis. *Mol Neurobiol* Epub ahead of print DOI 10.1007/s12035-014-8852-0. ❖
- (25) Melin, J., Schulz, C., Wrobel, L., Bernhard, O., Chacinska, A., **Jahn, O.**, **Schmidt, B.**, Rehling, P. (2014), Presequence recognition by the tom40 channel contributes to precursor translocation into the mitochondrial matrix. *Mol Cell Biol* 34, 3473-85. ❖
- (26) Lytovchenko, O., Naumenko, N., Oeljeklaus, S., **Schmidt, B.**, von der Malsburg, K., Deckers, M., Warscheid, B., van der Laan, M., Rehling, P. (2014), The INA complex facilitates assembly of the peripheral stalk of the mitochondrial F1Fo-ATP synthase. *EMBO J* 33, 1624-38. ❖
- (27) Firasat, S., Hecker, M., Binder, L., **Asif, A.R.** (2014) Advances in endothelial shear stress proteomics. *Expert Rev Proteomics* 11, 611-9.
- (28) Qasim, M., Rahman, H., Ahmed, R., Oellerich, M., **Asif, A.R.** (2014) Mycophenolic acid mediated disruption of the intestinal epithelial tight junctions. *Exp Cell Res* 322, 277-89.
- (29) Rahman, H., Qasim, M., Oellerich, M., **Asif, A.R.** (2014) Crosstalk between Edc4 and mammalian target of rapamycin complex 1. *Int J Mol Sci* 15, 23179-95. ❖
- (30) Rahman, H., Qasim, M., Oellerich, M., **Asif, A.R.** (2014) Identification of the novel interacting partners of the mammalian target of rapamycin complex 1 in human CCRF-CEM and HEK293 cells. *Int J Mol Sci* 18, 4823-36. ❖

- (31) Reichard, U., Herrmann, S., **Asif, A.R.** (2014) Vaccination Approaches Against Opportunistic Fungal Infections Caused by *Aspergillus fumigatus*. *Curr Protein Pept Sci* 15, 424-9. ❖
- (32) Reuss, B., **Asif, A.R.** (2014) Antibodies Directed to the Gram-Negative Bacterium *Neisseria gonorrhoeae* Cross-React with the 60 kDa Heat Shock Protein and Lead to Impaired Neurite Outgrowth in NTERA2/D1 Cells. *J Mol Neurosci* 54, 125-36. ❖
- (33) Singh, B., Singh, S., **Asif, A.R.**, Oellerich, M., Sharma, G.L. (2014) Allergic Aspergillosis and the Antigens of *Aspergillus fumigatus*. *Curr Protein Pept Sci* 15, 403-23.
- (34) Zafar, S., **Asif, A.R.**, Ramljak, S., Tahir, W., Schmitz, M., Zerr, I. (2014) Anchorless 23-230 PrP^C Interactomics for Elucidation of PrP^C Protective Role. *Mol Neurobiol* 49, 1385-99. ❖
- (35) Zahid, S., Khan, R., Oellerich, M., Ahmed, N., **Asif, A.R.** (2014) Differential S-nitrosylation of proteins in Alzheimer's disease. *Neuroscience* 3, 126-36. ❖
- (36) Zahid, S., Oellerich, M., ***Asif, A.R.**, *Ahmed, N. (2014) Differential expression of proteins in brain regions of Alzheimer's disease patients. *Neurochem Res* 39, 208-15. ❖
- (37) Pettelkau, J., Ihling, C.H., Froberg, P., van Werven, L., ***Jahn, O.**, *Sinz, A. (2014) Reliable identification of cross-linked products in protein interaction studies by ¹³C-labeled *p*-benzoylphenylalanine. *J Am Soc Mass Spectrom* 25, 1628-41. ❖
- (38) Herbst, S., Lipstein, N., **Jahn, O.**, Sinz, A. (2014) Structural insights into calmodulin/Munc13 interaction. *Biol Chem* 395, 763-8.
- (39) Buhl, T., Braun, A., Forkel, S., Möbius, W., van Werven, L., **Jahn, O.**, Rezaei-Ghaleh, N., Zweckstetter, M., Mempel, M., Schön, M.P., Haenssle, H.A. (2014) Internalization routes of cell-penetrating melanoma antigen peptides into human dendritic cells. *Exp Dermatol* 23, 20-6. ❖
- (40) Heurich, A., Hofmann-Winkler, H., Gierer, S., Liepold, T., **Jahn, O.**, Pöhlmann, S. (2014) TMPRSS2 and ADAM17 cleave ACE2 differentially and only proteolysis by TMPRSS2 augments entry driven by the severe acute respiratory syndrome coronavirus spike protein. *J Virol* 88, 1293-307. ❖
- (41) Stefanović, V., Pešić, I., Cukuranović, R., Müller, G., **Dihazi, H.** (2014) Proteomic studies in endemic nephropathy. *Prilozi* 35, 35-42. ❖
- (42) Jung, K., **Dihazi, H.**, Bibi, A., Dihazi, G.H., Beißbarth, T. (2014) Adaption of the global test idea to proteomics data with missing values. *Bioinformatics* 30, 1424-30. ❖