

List of publications 2011

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) Pidoux, G., Witczak, O., Jarnæss, E., Myrvold, L., **Urlaub, H.**, Stokka, A.J., Küntziger, T., Taskén, K. (2011) Optic atrophy 1 is an A-kinase anchoring protein on lipid droplets that mediates adrenergic control of lipolysis. *EMBO J* 30, 4371-86.
- (2) Brakemann, T., Stiel, A.C., Weber, G., Andresen, M., Testa, I., Grotjohann, T., Leutenegger, M., Plessmann, U., **Urlaub, H.**, Eggeling, C., Wahl, M.C., Hell, S.W., Jakobs, S. (2011) A reversibly photoswitchable GFP-like protein with fluorescence excitation decoupled from switching. *Nat Biotechnol* 29, 942-7. ❖
- (3) Nikolov, M., Stützer, A., Mosch, K., Krasauskas, A., Soeroes, S., Stark, H., **Urlaub, H.**, Fischle, W. (2011) Chromatin affinity purification and quantitative mass spectrometry defining the interactome of histone modification patterns. *Mol Cell Proteomics* 10, M110.005371. doi: 10.1074/mcp.M110.005371. ❖
- (4) Oellerich, T., Bremes, V., Neumann, K., Bohnenberger, H., Dittmann, K., Hsiao, H.H., Engelke, M., Schnyder, T., Batista, F.D., **Urlaub, H.**, Wienands, J. (2011) The B-cell antigen receptor signals through a preformed transducer module of SLP65 and CIN85. *EMBO J* 30, 3620-34. ❖
- (5) Vazquez-Pianzola, P., **Urlaub, H.**, Suter, B. (2011) Pabp binds to the osk 3'UTR and specifically contributes to osk mRNA stability and oocyte accumulation. *Dev Biol* 357, 404-18.
- (6) Krumova, P., Meulmeester, E., Garrido, M., Tirard, M., Hsiao, H.H., Bossis, G., **Urlaub, H.**, Zweckstetter, M., Kügler, S., Melchior, F., Bähr, M., Weishaupt, J.H. (2011) Sumoylation inhibits alpha-synuclein aggregation and toxicity. *J Cell Biol* 194, 49-60. ❖
- (7) Sela, M., Bogin, Y., Beach, D., Oellerich, T., Lehne, J., Smith-Garvin, J.E., Okumura, M., Starosvetsky, E., Kosoff, R., Libman, E., Koretzky, G., Kambayashi, T., **Urlaub, H.**, Wienands, J., Chernoff, J., Yablonski, D. (2011) Sequential phosphorylation of SLP-76 at tyrosine 173 is required for activation of T and mast cells. *EMBO J* 30, 3160-72.
- (8) Schnyder, T., Castello, A., Feest, C., Harwood, N.E., Oellerich, T., **Urlaub, H.**, Engelke, M., Wienands, J., Bruckbauer, A., Batista, F.D. (2011) B cell receptor-mediated antigen gathering requires ubiquitin ligase Cbl and adaptors Grb2 and Dok-3 to recruit dynein to the signaling microcluster. *Immunity* 34, 905-18.
- (9) Sterkel, M., **Urlaub, H.**, Rivera-Pomar, R., Ons, S. (2011) Functional proteomics of neuropeptidome dynamics during the feeding process of *Rhodnius prolixus*. *J Proteome Res* 10, 3363-71.
- (10) Agafonov, D.E., Deckert, J., Wolf, E., Odenwälder, P., Bessonov, S., Will, C.L., **Urlaub, H.**, Lührmann, R. (2011) Semiquantitative proteomic analysis of the human spliceosome via a novel two-dimensional gel electrophoresis method. *Mol Cell Biol* 31, 2667-82. ❖
- (11) Müller, M., Heym, R.G., Mayer, A., Kramer, K., Schmid, M., Cramer, P., **Urlaub, H.**, Jansen, R.P., Niessing, D. (2011) A cytoplasmic complex mediates specific mRNA recognition and localization in yeast. *PLoS Biol* 9, e1000611. doi: 10.1371/journal.pbio.1000611.
- (12) Bohnenberger, H., Oellerich, T., Engelke, M., Hsiao, H.H., **Urlaub, H.**, Wienands, J. (2011) Complex phosphorylation dynamics control the composition of the Syk interactome in B cells. *Eur J Immunol* 41, 1550-62. ❖
- (13) Wehner, P., Shnitsar, I., **Urlaub, H.**, Borchers, A. (2011) RACK1 is a novel interaction partner of PTK7 that is required for neural tube closure. *Development* 138, 1321-7. ❖
- (14) Neumann, K., Oellerich, T., Heine, I., **Urlaub, H.**, Engelke, M. (2011) Fc gamma receptor lib modulates the molecular Grb2 interaction network in activated B cells. *Cell Signal* 23, 893-900. ❖

- (15) Zhang, Z., Kelemen, O., van Santen, M.A., Yelton, S.M., Wendlandt, A.E., Sviripa, V.M., Bollen, M., Beullens, M., **Urlaub, H.**, Lührmann, R., Watt, D.S., Stamm, S. (2011) Synthesis and characterization of pseudocantharidins, novel phosphatase modulators that promote the inclusion of exon 7 into the SMN (survival of motoneuron) pre-mRNA. *J Biol Chem* 286, 10126-36.
- (16) Eilebrecht, S., Brysbaert, G., Wegert, T., **Urlaub, H.**, Benecke, B.J., Benecke, A. (2011) 7SK small nuclear RNA directly affects HMGA1 function in transcription regulation. *Nucleic Acids Res* 39, 2057-72.
- (17) Rüdell, S., Wang, Y., Lenobel, R., Körner, R., Hsiao, H.H., **Urlaub, H.**, Patel, D., Meister, G. (2011) Phosphorylation of human Argonaute proteins affects small RNA binding. *Nucleic Acids Res* 39, 2330-43.
- (18) Ons, S., Sterkel, M., Diambra, L., **Urlaub, H.**, Rivera-Pomar, R. (2011) Neuropeptide precursor gene discovery in the Chagas disease vector *Rhodnius prolixus*. *Insect Mol Biol* 20, 29-44.
- (19) Totaro, A., Renzi, F., La Fata, G., Mattioli, C., Raabe, M., **Urlaub, H.**, Achsel, T. (2011) The human Pat1b protein: a novel mRNA deadenylation factor identified by a new immunoprecipitation technique. *Nucleic Acids Res* 39, 635-47.
- (20) Tauber, S. C., Ribes, S., Ebert, S., Heinz, T., Fingerle, V., Bunkowski, S., Kugelstadt, D., Spreer, A., **Jahn, O.**, Eiffert, H., Nau, R. (2011) Long-term intrathecal infusion of outer surface protein C from *Borrelia burgdorferi* causes axonal damage. *J Neuropathol Exp Neurol* 70, 748-757. ♦
- (21) Sussulini, A., **Dihazi, H.**, Banzato, C. E., Arruda, M. A., Stuhmer, W., Ehrenreich, H., **Jahn, O.**, Kratzin, H. D. (2011) Apolipoprotein A-I as a candidate serum marker for the response to lithium treatment in bipolar disorder. *Proteomics* 11, 261-269. ♦
- (22) Schulz, C., Lytovchenko, O., Melin, J., Chacinska, A., Guiard, B., Neumann, P., Ficner, R., **Jahn, O.**, **Schmidt, B.**, Rehling, P. (2011) Tim50's presequence receptor domain is essential for signal driven transport across the TIM23 complex. *J Cell Biol* 195, 643-656. ♦
- (23) Schieb, H., Kratzin, H., **Jahn, O.**, Mobius, W., Rabe, S., Staufenbiel, M., Wiltfang, J., Klafki, H. W. (2011) Beta-amyloid peptide variants in brains and cerebrospinal fluid from amyloid precursor protein (APP) transgenic mice: comparison with human Alzheimer amyloid. *J Biol Chem* 286, 33747-33758.
- (24) Ribbe, K., Ackermann, V., Schwitulla, J., Begemann, M., Papiol, S., Grube, S., Sperling, S., Friedrichs, H., **Jahn, O.**, Sillaber, I., Gefeller, O., Krampe, H., Ehrenreich, H. (2011) Prediction of the risk of comorbid alcoholism in schizophrenia by interaction of common genetic variants in the corticotropin-releasing factor system. *Arch Gen Psychiatry* 68, 1247-1256. ♦
- (25) Pesic, I., Stefanovic, V., Muller, G. A., Muller, C. A., Cukuranovic, R., **Jahn, O.**, Bojanic, V., Koziolok, M., **Dihazi, H.** (2011) Identification and validation of six proteins as marker for endemic nephropathy. *J Proteomics* 74, 1994-2007. ♦
- (26) Pesic, I., Dihazi, G. H., Muller, G. A., **Jahn, O.**, Hoffmann, M., Eltoweissy, M., Koziolok, M., **Dihazi, H.** (2011) Short-term increase of glucose concentration in PDS results in extensive removal and high glycation level of vital proteins during continuous ambulatory peritoneal dialysis. *Nephrol Dial Transplant* 26, 2674-2683. ♦
- (27) Patzig, J., **Jahn, O.**, Tenzer, S., Wichert, S. P., de Monasterio-Schrader, P., Rosfa, S., Kuharev, J., Yan, K., Bormuth, I., Bremer, J., Aguzzi, A., Orfaniotou, F., Hesse, D., Schwab, M. H., Mobius, W., Nave, K. A., Werner, H. B. (2011) Quantitative and integrative proteome analysis of peripheral nerve myelin identifies novel myelin proteins and candidate neuropathy loci. *J Neurosci* 31, 16369-16386. ♦
- (28) Morgenroth, A., Urusova, E. A., Dinger, C., Al-Momani, E., Kull, T., Glatting, G., Frauendorf, H., **Jahn, O.**, Mottaghy, F. M., Reske, S. N., Zlatopolskiy, B. D. (2011) New molecular markers for prostate tumor imaging: a study on 2-methylene substituted fatty acids as new AMACR inhibitors. *Chemistry* 17, 10144-10150.
- (29) **Dihazi, H.**, Dihazi, G. H., **Jahn, O.**, Meyer, S., Nolte, J., **Asif, A. R.**, Mueller, G. A., Engel, W. (2011) Multipotent adult germline stem cells and embryonic stem cells functional proteomics

- revealed an important role of eukaryotic initiation factor 5A (Eif5a) in stem cell differentiation. *J Proteome Res* 10, 1962-1973. ❖
- (30) Bertram, S., Glowacka, I., Muller, M. A., Lavender, H., Gnirss, K., Nehlmeier, I., Niemeyer, D., He, Y., Simmons, G., Drosten, C., Soilleux, E. J., **Jahn, O.**, Steffen, I., Pohlmann, S. (2011) Cleavage and activation of the severe acute respiratory syndrome coronavirus spike protein by human airway trypsin-like protease. *J Virol* 85, 13363-13372. ❖
- (31) Eastwood, D.C., Floudas, D., Binder, M., **Majcherczyk, A.**, Schneider, P., et.al. (2011) The plant cell wall–decomposing machinery underlies the functional diversity of forest fungi. *Science* 333, 762-765. ❖
- (32) Rachfall, N., Heinemeyer, I., Morgenstern, B., **Valerius, O.**, and Braus, G.H. (2011) 5'TRU: Identification and analysis of translationally regulative 5'untranslated regions in amino acid starved yeast cells. *Mol Cell Proteomics* 10: M110.003350. ❖
- (33) Guo, J., Wang, S., **Valerius, O.**, Hall, H., Zeng, Q., Li, J.F., Weston, D.J., Ellis, B.E., and Chen, J.G. (2011) Involvement of Arabidopsis RACK1 in protein translation and its regulation by abscisic acid. *Plant Physiol* 155, 370-383.
- (34) Zafar, S., von Ahsen, N., Oellerich, M., Zerr, I., Schulz-Schaeffer, W.J., Armstrong, V.W., **Asif, A.R.** (2011) Proteomics approach to identify the interacting partners of cellular prion protein and characterization of Rab7a interaction in neuronal cells. *J Proteome Res* 10, 3123-35. ❖
- (35) Qasim, M., Rahman, H., Oellerich, M., **Asif, A.R.** (2011) Differential proteome analysis of human embryonic kidney cell line (HEK-293) following mycophenolic acid treatment. *Proteome Sci* 9, 57. ❖
- (36) Rahman, H., Qasim, M., Schultze, F.C., Oellerich, M., **Asif, A.R.** (2011) Fetal calf serum heat inactivation and lipopolysaccharide contamination influence the human T lymphoblast proteome and phosphoproteome. *Proteome Sci* 9, 71. ❖
- (37) Vasko, R., Mueller, G.A., von Jaschke, A.K., **Asif, A.R., Dihazi, H.** (2011) Impact of cisplatin administration on protein expression levels in renal cell carcinoma: A proteomic analysis. *Eur J Pharmacol* 670, 50-7. ❖
- (38) Hruzik, A., **Asif, A.R.**, Groß, U. (2011) Identification of Toxoplasma gondii antigen SUB1 as a marker for the acute infection using an innovative evaluation method. *J Clin Microbiol* 49, 2419-25.
- (39) **Dihazi, H.**, Dihazi, G.H., Mueller, C., Lahrichi, L., **Asif, A.R.**, Bibi, A., Eltoweissy, M., Vasko, R., Mueller, G.A. (2011) Proteomics Characterization of Cell model with Renal Fibrosis Phenotype: Osmotic Stress as Fibrosis Triggering Factor. *J Proteomics* 74, 304-18. ❖
- (40) Wakeel, A., **Asif, A.R.**, Pitann, B., Schubert, S. (2011) Proteome analysis of sugar beet (Beta vulgaris L.) elucidates the constitutive adaptation during the first phase of salt stress. *J Plant Physiol* 168, 519-26.
- (41) Petrova, D.T., Brehmer, F., Schultze, F.C., **Asif, A.R.**, Gross, O., Oellerich, M., Brandhorst, G. (2011) Differential Kidney Proteome Profiling in a Murine Model of Renal Fibrosis under Treatment with Mycophenolate Mofetil. *Pathobiology* 78, 162-170.
- (42) Bibi, A., Agarwal, N.K., Dihazi, G.H., Eltoweissy, M., Van Nguyen, P., Mueller, G.A., **Dihazi, H.** (2011) Calreticulin is crucial for calcium homeostasis mediated adaptation and survival of thick ascending limb of Henle's loop cells under osmotic stress. *Int J Biochem Cell Biol* 43, 1187-97. ❖
- (43) Eltoweissy, M., Müller, G.A., Bibi, A., Van Nguye, P., Dihazi, G.H., Müller, C.A., **Dihazi, H.** (2011) Proteomics analysis identifies PARK7 as an important player for renal cell resistance and survival under oxidative stress. *Mol Biosyst* 7. 1277-88. ❖
- (44) Zürbig, P., **Dihazi, H.**, Metzger, J., Thongboonkerd, V., Vlahou, A. (2011) Urine proteomics in kidney and urogenital diseases: moving towards clinical applications. *Proteomics Clin Appl* 5, 256-68.
- (45) Dihazi, A., Serghini, M.A., Jaiti, F., Daayf, F., Driouich, A., **Dihazi, H.**, El Hadrami, I. (2011) Structural and Biochemical Changes in Salicylic-Acid-Treated Date Palm Roots Challenged with Fusarium oxysporum f. sp. albedinis. *J Pathog* 2011, 280481.

- (46) Schlotawa, L., Ennemann, E. C., Radhakrishnan, K., **Schmidt, B.**, Chakrapani, A., Christen, H.-J., Moser, H., Steinmann, B., Dierks, T., and Gärtner, J. (2011) SUMF1 mutations affecting stability and activity of formylglycine generating enzyme predict clinical outcome in multiple sulfatase deficiency. *Eur J Human Gen* 19, 253-261. ♦