

List of publications 2017

GPF authors are labeled as bold type. Publications headed by authors from scientific groups of the GC (first or last author) are additionally labeled with ❖.

1. Ahdash Z., Lau A.M., Byrne R.T., Lammens K., Stuetzer A., **Urlaub H.**, Booth P.J., Reading E., Hopfner K.P. and Politis A. (2017) Mechanistic insight into the assembly of the HerA-NurA helicase-nuclease DNA end resection complex. *Nucleic Acids Res* 45, 12025-12038.
2. Almamy A., Schwerk C., Schroten H., Ishikawa H., **Asif A.R.** and Reuss B. (2017) Interactions of antisera to different Chlamydia and Chlamydophila species with the ribosomal protein RPS27a correlate with impaired protein synthesis in a human choroid plexus papilloma cell line. *Immunol Res* 65, 1110-1123. ❖
3. Almamy A., Schwerk C., Schroten H., Ishikawa H., **Asif A.R.** and Reuss B. (2017) Crossreactivity of an Antiserum Directed to the Gram-Negative Bacterium Neisseria gonorrhoeae with the SNARE-Complex Protein Snap23 Correlates to Impaired Exocytosis in SH-SY5Y Cells. *J Mol Neurosci*, 62, 163-180. ❖
4. Altas B., **Jahn O.** and Kawabe H. (2017) Biochemical Purification of Binding Partners of Synaptic Scaffold Proteins. *Methods Mol Biol* 1538, 69-82. ❖
5. Bao P., Will C.L., **Urlaub H.**, Boon K.L. and Lührmann R. (2017) The RES complex is required for efficient transformation of the precatalytic B spliceosome into an activated B^{act} complex. *Genes Dev* 31, 2416-2429. ❖
6. Batschkus S., Atanassov I., **Lenz C.**, Meyer-Marcotty P., Cingöz G., Kirschneck C., **Urlaub H.** and Miosge N. (2017) Mapping the secretome of human chondrogenic progenitor cells with mass spectrometry. *Ann Anat* 212, 4-10. ❖
7. Batschkus S., Cingöz G., **Urlaub H.**, Miosge N., Kirschneck C., Meyer-Marcotty P. and **Lenz C.** (2017) A new albumin-depletion strategy improves proteomic research of gingival crevicular fluid from periodontitis patients. *Clin Oral Investig.* ❖
8. Bayerlová M., Menck K., Klemm F., Wolff A., Pukrop T., Binder C., **Beissbarth T.** and Bleckmann A. (2017) Ror2 Signaling and Its Relevance in Breast Cancer Progression. *Front Oncol* 7, 135. ❖
9. Bernhardt S., Bayerlová M., Vetter M., Wachter A., Mitra D., Hanf V., Lantzsch T., Uleer C., Peschel S., John J., Buchmann J., Weigert E., Bürrig K.F., Thomssen C., Korf U., **Beissbarth T.**, Wiemann S. and Kantelhardt E.J. (2017) Proteomic profiling of breast cancer metabolism identifies SHMT2 and ASCT2 as prognostic factors. *Breast Cancer Res* 19, 112.
10. Bertram K., Agafonov D.E., Liu W.T., Dybkov O., Will C.L., Hartmuth K., **Urlaub H.**, Kastner B., Stark H. and Lührmann R. (2017) Cryo-EM structure of a human spliceosome activated for step 2 of splicing. *Nature* 542, 318-323. ❖
11. Bertram K., Agafonov D.E., Dybkov O., Haselbach D., Leelaram M.N., Will C.L., **Urlaub H.**, Kastner B., Lührmann R. and Stark H. (2017) Cryo-EM structure of a Pre-Catalytic Human Spliceosome Primed for Activation. *Cell* 170, 701-713. ❖
12. Bocuk D., Wolff A., Krause P., Salinas G., Bleckmann A., Hackl C., **Beissbarth T.** and Koenig S. (2017) The adaptation of colorectal cancer cells when forming metastases in the liver: expression of associated genes and pathways in a mouse model. *BMC Cancer* 17, 342. ❖

13. Buddeweg A., Sharma K., **Urlaub H.** and Schmitz R.A. (2017) sRNA₄₁ affects ribosome binding sites within polycistronic mRNAs in *Methanosarcina mazei* Gö1. *Mol Microbiol.*
14. Candiello E., Mishra R., **Schmidt B.**, **Jahn O.** and Schu P. (2017) Differential regulation of synaptic AP-2/clathrin vesicle uncoating in synaptic plasticity. *Sci Rep* 7, 15781. ❖
15. Dango S., **Beissbarth T.**, Weiss E., Seif Amir Hosseini A., Raddatz D., Ellenrieder V., Lotz J., Ghadimi B.M. and Beham A. (2017) Relevance of surgery in patients with non-variceal upper gastrointestinal bleeding. *Langenbecks Arch Surg* 402, 509-519. ❖
16. Emons G., Spitzner M., Reineke S., Möller J., Auslander N., Kramer F., Hu Y., **Beissbarth T.**, Wolff H.A., Rave-Fränk M., Hessmann E., Gaedcke J., Ghadimi B.M., Johnsen S.A., Ried T. and Grade M. (2017) Chemoradiotherapy Resistance in Colorectal Cancer Cells is Mediated by Wnt/beta-catenin Signaling. *Mol Cancer Res* 15, 1481-1490. ❖
17. Fard M.K., van der Meer F., Sánchez P., Cantuti-Castelvetri L., Mandad S., Jäkel S., Fornasiero E.F., Schmitt S., Ehrlich M., Starost L., Kuhlmann T., Sergiou C., Schultz V., Wrzos C., Brück W., **Urlaub H.**, Dimou L., Stadelmann C. and Simons M. (2017) BCAS1 expression defines a population of early myelinating oligodendrocytes in multiple sclerosis lesions. *Sci Transl Med*, 9. ❖
18. Fledrich R., Mannil M., Leha A., Ehbrecht C., Solari A., Pelayo-Negro A.L., Berciano J., Schlotter-Weigel B., Schnizer T.J., Prukop T., Garcia-Angarita N., Czesnik D., Haberlová J., Mazanec R., Paulus W., **Beissbarth T.**, Walter M.C., Triaal C., Hogrel J.Y., Dubourg O., Schenone A., Baets J., De Jonghe P., Shy M.E., Horvath R., Pareyson D., Seeman P., Young P. and Sereda M.W. (2017) Biomarkers predict outcome in Charcot-Marie-Tooth disease 1A. *J Neurol Neurosurg Psychiatry* 88, 941-952. ❖
19. Göllner S., Oellerich T., Agrawal-Singh S., Schenk T., Klein H.U., Rohde C., Pabst C., Sauer T., Lerdrup M., Tavor S., Stölzel F., Herold S., Ehninger G., Köhler G., Pan K.T., **Urlaub H.**, Serve H., Dugas M., Spiekermann K., Vick B., Jeremias I., Berdel W.E., Hansen K., Zelent A., Wickenhauser C., Müller L.P., Thiede C. and Müller-Tidow C. (2017) Loss of the histone methyltransferase EZH2 induces resistance to multiple drugs in acute myeloid leukemia. *Nat Med* 23, 69-78.
20. Henning L.M., Santos K.F., Sticht J., Jehle S., Lee C.T., Wittwer M., **Urlaub H.**, Stelzl U., Wahl M.C. and Freund C. (2017) A new role for FBP21 as regulator of Brr2 helicase activity. *Nucleic Acids Res* 45, 7922-7937.
21. Hillen H.S., Parshin A.V., Agaronyan K., Morozov Y.I., Graber J.J., Chernev A., Schwinghammer K., **Urlaub H.**, Anikin M., Cramer P. and Temiakov D. (2017) Mechanism of Transcription Anti-termination in Human Mitochondria. *Cell* 171, 1082-1093 e1013. ❖
22. Hinz J., Büttner B., Kriesel F., Steinau M., Frederik Popov A., Ghadimi M., **Beissbarth T.**, Tzvetkov M., Bergmann I. and Mansur A. (2017) The FER rs4957796 TT genotype is associated with unfavorable 90-day survival in Caucasian patients with severe ARDS due to pneumonia. *Sci Rep* 7, 9887. ❖
23. Jakhanwal S., Lee C.T., **Urlaub H.** and Jahn R. (2017) An activated Q-SNARE/SM protein complex as a possible intermediate in SNARE assembly. *EMBO J* 36, 1788-1802. ❖
24. Jo P., Azizian A., Salendo J., Kramer F., Bernhardt M., Wolff H.A., Gruber J., Grade M., **Beissbarth T.**, Ghadimi B.M. and Gaedcke J. (2017) Changes of Microrna Levels

in Plasma of Patients with Rectal Cancer during Chemoradiotherapy. *Int J Mol Sci*, 18. ❖

25. Khan N., Binder L., Pantakani D.V.K. and **Asif A.R.** (2017) MPA Modulates Tight Junctions' Permeability via Midkine/PI3K Pathway in Caco-2 Cells: A Possible Mechanism of Leak-Flux Diarrhea in Organ Transplanted Patients. *Front Physiol* 8, 438. ❖
26. Kramer F. and **Beissbarth T.** (2017) Working with Ontologies. *Methods Mol Biol* 1525, 123-135. ❖
27. Kusch K., Uecker M., Liepold T., Möbius W., Hoffmann C., Neumann H., Werner H.B. and **Jahn O.** (2017) Partial Immunoblotting of 2D-Gels: A Novel Method to Identify Post-Translationally Modified Proteins Exemplified for the Myelin Acetylome. *Proteomes*, 5. ❖
28. Linke F., Harenberg M., Nietert M.M., Zaunig S., von Bonin F., Arlt A., Szczepanowski M., Weich H.A., Lutz S., Dullin C., Janovská P., Krafčíková M., Trantírek L., Ovesná P., Klapper W., **Beissbarth T.**, Alves F., Bryja V., Trümper L., Wilting J. and Kube D. (2017) Microenvironmental interactions between endothelial and lymphoma cells: a role for the canonical WNT pathway in Hodgkin lymphoma. *Leukemia* 31, 361-372. ❖
29. Linke F., Zaunig S., Nietert M.M., von Bonin F., Lutz S., Dullin C., Janovská P., **Beissbarth T.**, Alves F., Klapper W., Bryja V., Pukrop T., Trümper L., Wilting J. and Kube D. (2017) WNT5A: a motility-promoting factor in Hodgkin lymphoma. *Oncogene* 36, 13-23. ❖
30. Lipphardt M., Song J.W., Matsumoto K., Dadafarin S., **Dihazi H.**, Müller G. and Goligorsky M.S. (2017) The third path of tubulointerstitial fibrosis: aberrant endothelial secretome. *Kidney Int* 92, 558-568.
31. Lipphardt M., Song J.W., Ratliff B.B., **Dihazi H.**, Müller G.A. and Goligorsky M.S. (2017) Endothelial Dysfunction is a Super-Inducer of Syndecan 4: fibrogenic role of its ectodomain. *Am J Physiol Heart Circ Physiol*, ajpheart005482017.
32. Lipstein N., Göth M., Piotrowski C., Pagel K., Sinz A. and **Jahn O.** (2017) Presynaptic Calmodulin targets: lessons from structural proteomics. *Expert Rev Proteomics* 14, 223-242. ❖
33. Lipstein N., Verhoeven-Duif N.M., Michelassi F.E., Calloway N., van Hasselt P.M., Pienkowska K., van Haften G., van Haelst M.M., van Empelen R., Cuppen I., van Teeseling H.C., Evelein A.M., Vorstman J.A., Thoms S., **Jahn O.**, Duran K.J., Monroe G.R., Ryan T.A., Taschenberger H., Dittman J.S., Rhee J.S., Visser G., Jans J.J. and Brose N. (2017) Synaptic UNC13A protein variant causes increased neurotransmission and dyskinetic movement disorder. *J Clin Invest* 127, 1005-1018. ❖
34. Losensky G., Jung K., **Urlaub H.**, Pfeifer F., Fröls S. and **Lenz C.** (2017) Shedding light on biofilm formation of *Halobacterium salinarum* R1 by SWATH-LC/MS/MS analysis of planktonic and sessile cells. *Proteomics* 17. ❖
35. Lowes M., Kleiss M., Lueck R., Detken S., Koenig A., Nietert M., **Beissbarth T.**, Stanek K., Langer C., Ghadimi M., Conradi L.C. and Homayounfar K. (2017) The utilization of multidisciplinary tumor boards (MDT) in clinical routine: results of a health care research study focusing on patients with metastasized colorectal cancer. *Int J Colorectal Dis* 32, 1463-1469. ❖
36. Märtens B., Sharma K., **Urlaub H.** and Bläsi U. (2017) The SmAP2 RNA binding motif in the 3'UTR affects mRNA stability in the crenarchaeum *Sulfolobus solfataricus*. *Nucleic Acids Res* 45, 8957-8967.

37. Mohr S., Doebele C., Comoglio F., Berg T., Beck J., Bohnenberger H., Alexe G., Corso J., Ströbel P., Wachter A., **Beissbarth T.**, Schnütgen F., Cremer A., Haetscher N., Gollner S., Rouhi A., Palmqvist L., Rieger M.A., Schroeder T., Bönig H., Muller-Tidow C., Kuchenbauer F., Schütz E., Green A.R., **Urlaub H.**, Stegmaier K., Humphries R.K., Serve H. and Oellerich T. (2017) Hoxa9 and Meis1 Cooperatively Induce Addiction to Syk Signaling by Suppressing miR-146a in Acute Myeloid Leukemia. *Cancer Cell* 31, 549-562 e511.
38. Opitz N., **Schmitt K.**, Hofer-Pretz V., Neumann B., Krebber H., Braus G.H. and **Valerius O.** (2017) Capturing the Asc1p/Receptor for Activated C Kinase 1 (RACK1) Microenvironment at the Head Region of the 40S Ribosome with Quantitative BioID in Yeast. *Mol Cell Proteomics* 16, 2199-2218. ❖
39. Pan K.T., Chen C.C., **Urlaub H.** and Khoo K.H. (2017) Adapting Data-Independent Acquisition for Mass Spectrometry-Based Protein Site-Specific N-Glycosylation Analysis. *Anal Chem* 89, 4532-4539. ❖
40. Pozzi B., Bragado L., Will C.L., Mammi P., Risso G., **Urlaub H.**, Lührmann R. and Srebrow A. (2017) SUMO conjugation to spliceosomal proteins is required for efficient pre-mRNA splicing. *Nucleic Acids Res* 45, 6729-6745.
41. Pyc M., Cai Y., Gidda S.K., Yurchenko O., Park S., Kretzschmar F.K., Ischebeck T., **Valerius O.**, Braus G.H., Chapman K.D., Dyer J.M. and Mullen R.T. (2017) Arabidopsis lipid droplet-associated protein (LDAP) - interacting protein (LDIP) influences lipid droplet size and neutral lipid homeostasis in both leaves and seeds. *Plant J* 92, 1182-1201.
42. Roth C., Lüdke D., Klenke M., Quathammer A., **Valerius O.**, Braus G.H. and Wiermer M. (2017) The truncated NLR protein TIR-NBS13 is a MOS6/IMPORTIN- α 3 interaction partner required for plant immunity. *Plant J* 92, 808-821. ❖
43. Rühlmann F., Nietert M., Sprenger T., Wolff H.A., Homayounfar K., Middel P., Bohnenberger H., **Beissbarth T.**, Ghadimi B.M., Liersch T. and Conradi L.C. (2017) The Prognostic Value of Tyrosine Kinase SRC Expression in Locally Advanced Rectal Cancer. *J Cancer* 8, 1229-1237. ❖
44. Sahlmann C.O., Homayounfar K., Niessner M., Dyczkowski J., Conradi L.C., Bräulke F., Meller B., **Beissbarth T.**, Ghadimi B.M., Meller J., Goldenberg D.M. and Liersch T. (2017) Repeated adjuvant anti-CEA radioimmunotherapy after resection of colorectal liver metastases: Safety, feasibility, and long-term efficacy results of a prospective phase 2 study. *Cancer* 123, 638-649. ❖
45. Said N., Krupp F., Anedchenko E., Santos K.F., Dybkov O., Huang Y.H., Lee C.T., Loll B., Behrmann E., Bürger J., Mielke T., Loerke J., **Urlaub H.**, Spahn C.M.T., Weber G. and Wahl M.C. (2017) Structural basis for λ N-dependent processive transcription antitermination. *Nat Microbiol* 2, 17062.
46. Scacioc A., Schmidt C., Hofmann T., **Urlaub H.**, Kühnel K. and Pérez-Lara Á. (2017) Structure based biophysical characterization of the PROPPIN Atg18 shows Atg18 oligomerization upon membrane binding. *Sci Rep* 7, 14008. ❖
47. Schilbach S., Hantsche M., Tegunov D., Dienemann C., Wigge C., **Urlaub H.** and Cramer P. (2017) Structures of transcription pre-initiation complex with TFIID and Mediator. *Nature* 551, 204-209. ❖
48. Schmidt C. and **Urlaub H.** (2017) Combining cryo-electron microscopy (cryo-EM) and cross-linking mass spectrometry (CX-MS) for structural elucidation of large protein assemblies. *Curr Opin Struct Biol* 46, 157-168. ❖

49. **Schmitt K.**, Smolinski N., Neumann P., Schmaul S., Hofer-Pretz V., Braus G.H. and **Valerius O.** (2017) Asc1p/RACK1 Connects Ribosomes to Eukaryotic Phosphosignaling. *Mol Cell Biol*, 37. ❖
50. Sidarovich A., Will C.L., Anokhina M.M., Ceballos J., Sievers S., Agafonov D.E., Samatov T., Bao P., Kastner B., **Urlaub H.**, Waldmann H. and Lührmann R. (2017) Identification of a small molecule inhibitor that stalls splicing at an early step of spliceosome activation. *Elife*, 6. ❖
51. Siegler H., **Valerius O.**, Ischebeck T., Popko J., Tourasse N.J., Vallon O., Khozin-Goldberg I., Braus G.H. and Feussner I. (2017) Analysis of the lipid body proteome of the oleaginous alga *Lobosphaera incisa*. *BMC Plant Biol* 17, 98. ❖
52. Sonnleitner E., Wulf A., Campagne S., Pei X.Y., Wolfinger M.T., Forlani G., Prindl K., Abdou L., Resch A., Allain F.H., Luisi B.F., **Urlaub H.** and Bläsi U. (2017) Interplay between the catabolite repression control protein Crc, Hfq and RNA in Hfq-dependent translational regulation in *Pseudomonas aeruginosa*. *Nucleic Acids Res*.
53. Treiber T., Treiber N., Plessmann U., Harlander S., Daiss J.L., Eichner N., Lehmann G., Schall K., **Urlaub H.** and Meister G. (2017) A Compendium of RNA-Binding Proteins that Regulate MicroRNA Biogenesis. *Mol Cell* 66, 270-284 e213.
54. Walter R., Pan K.T., Doebele C., Comoglio F., Tomska K., Bohnenberger H., Young R.M., Jacobs L., Keller U., Bönig H., Engelke M., Rosenwald A., **Urlaub H.**, Staudt L.M., Serve H., Zenz T. and Oellerich T. (2017) HSP90 promotes Burkitt lymphoma cell survival by maintaining tonic B-cell receptor signaling. *Blood*, 129, 598-608.
55. Warda A.S., Kretschmer J., Hackert P., **Lenz C.**, **Urlaub H.**, Höbartner C., Sloan K.E. and Bohnsack M.T. (2017) Human METTL16 is a N⁶-methyladenosine (m⁶A) methyltransferase that targets pre-mRNAs and various non-coding RNAs. *EMBO Rep* 18, 2004-2014. ❖
56. Wottawa M., Naas S., Böttger J., van Belle G.J., Möbius W., Revelo N.H., Heidenreich D., von Ahlen M., Zieseniss A., Kröhnert K., Lutz S., **Lenz C.**, **Urlaub H.**, Rizzoli S.O. and Katschinski D.M. (2017) Hypoxia-stimulated membrane trafficking requires T-plastin. *Acta Physiol (Oxf)* 221, 59-73. ❖
57. Xu Y., Bernecky C., Lee C.T., Maier K.C., Schwalb B., Tegunov D., Plietzko J.M., **Urlaub H.** and Cramer P. (2017) Architecture of the RNA polymerase II-Paf1C-TFIIS transcription elongation complex. *Nat Commun* 8, 15741. ❖
58. Zafar S., Behrens C., **Dihazi H.**, Schmitz M., Zerr I., Schulz-Schaeffer W.J., Ramljak S. and **Asif A.R.** (2017) Cellular prion protein mediates early apoptotic proteome alternation and phospho-modification in human neuroblastoma cells. *Cell Death Dis* 8, e2557. ❖
59. Zaman U., **Urlaub H.** and Abbasi A. (2017) Protein Profiling of Non-model Plant *Cuminum cyminum* by Gel-Based Proteomic Approach. *Phytochem Anal.* ❖
60. Zhu W., Ronen M., Gur Y., Minz-Dub A., Masrati G., Ben-Tal N., Savidor A., Sharon I., Eizner E., **Valerius O.**, Braus G.H., Bowler K., Bar-Peled M. and Sharon A. (2017) BcXYG1, a Secreted Xyloglucanase from *Botrytis cinerea*, Triggers Both Cell Death and Plant Immune Responses. *Plant Physiol* 175, 438-456.