

## FMP Publications 2014 – 2020

### Section Chemical Biology

→ [2019](#) → [2018](#) → [2017](#) → [2016](#) → [2015](#) → [2014](#)

## 2020

*S*, # equal contribution; \* corresponding author(s); **bold**: FMP members

- Alsalm, R., P. Lindemann, M. P. Lopez-Alberca, S. Miksche, W. Czechtizky, N. Halland\*, M. Nazare\***, A Palladium-Catalyzed Domino Reaction To Access 3-Amino-2H-indazoles from Hydrazines and 2-Halobenzonitriles. *Org Lett online ahead of print* (2020). <https://doi.org/10.1021/acs.orglett.0c02766>
- Barone, M., M. Müller, S. Chiha, J. Ren, D. Albat, A. Soicke, S. Dohmen, M. Klein, J. Bruns, M. van Dinther, R. Opitz, P. Lindemann, M. Beerbaum, K. Motzny, Y. Roske, P. Schmieder, R. Volkmer, M. Nazare, U. Heinemann, H. Oschkinat, P. Ten Dijke\*, H. G. Schmalz\*, R. Kühne\***, Designed nanomolar small-molecule inhibitors of Ena/VASP EVH1 interaction impair invasion and extravasation of breast cancer cells. *Proc Natl Acad Sci USA online ahead of print* (2020). <https://doi.org/10.1073/pnas.2007213117>
- Baumann, A. L., S. Schwagerus, K. Broi, K. Kemnitz-Hassanin, C. E. Stieger, N. Trieloff, P. Schmieder, C. P. R. Hackenberger\***, Chemically Induced Vinylphosphonothiolate Electrophiles for Thiol-Thiol Bioconjugations. *J Am Chem Soc* **142**, 9544-9552 (2020). <https://doi.org/10.1021/jacs.0c03426>
- Braun\*, B. C., N. Halaski, J. Painer, **E. Krause**, K. Jewgenow, The antioxidative enzyme SOD2 is important for physiological persistence of corpora lutea in lynxes. *Sci Rep* **10**, 3681 (2020). <https://doi.org/10.1038/s41598-020-60634-x>
- Brennecke, B.**, Q. Wang, Q. Zhang, H. Y. Hu\*, **M. Nazaré\***, An Activatable Lanthanide Luminescent Probe for Time-Gated Detection of Nitroreductase in Live Bacteria. *Angew Chem Int Ed* **59**, 8512-8516 (2020). <https://doi.org/10.1002/anie.202002391>
- Chin, A. C., Z. Gao, A. M. Riley, **D. Furkert**, C. Wittwer, A. Dutta, T. Rojas, E. R. Semenza, R. A. Felder, J. L. Pluznick, H. J. Jessen, **D. Fiedler**, B. V. L. Potter, S. H. Snyder\*, C. Fu\*, The inositol pyrophosphate 5-InsP7 drives sodium-potassium pump degradation by relieving an autoinhibitory domain of PI3K p85alpha. *Sci Adv* **6**, eabb8542 (2020). <https://doi.org/10.1126/sciadv.abb8542>
- Dema, A., D. Faust, **K. Lazarow, M. Wippich, M. Neuenschwander**, K. Zühlke, A. Geelhaar, T. Pallien, E. Hallscheidt, **J. Eichhorst, B. Wiesner**, H. Cernecka, O. Popp, P. Mertins, G. Dittmar, **J. P. von Kries**, E. Klussmann, Cyclin-Dependent Kinase 18 Controls Trafficking of Aquaporin-2 and Its Abundance through Ubiquitin Ligase STUB1, Which Functions as an AKAP. *Cells* **9**, E673 (2020). <https://doi.org/10.3390/cells9030673>
- Desmarini, D., S. Lev, **D. Furkert**, B. Crosssett, A. Saiardi, K. Kaufman-Francis, C. Li, T. C. Sorrell, L. Wilkinson-White, J. Matthews, **D. Fiedler**, J. T. Djordjevic\*, IP7-SPX Domain Interaction Controls Fungal Virulence by Stabilizing Phosphate Signaling Machinery. *mBio* **11** (2020). <https://doi.org/10.1128/mBio.01920-20>
- Ernst, S., F. Ecker, M. S. Kaspers, **P. Ochtrop**, C. Hedberg, M. Groll, A. c. Itzen, Legionella effector AnkX displaces the switch II region for Rab1b phosphocholination. *Sci Adv* **6**, eaaz8041 (2020). <https://doi.org/10.1126/sciadv.aaz8041>
- Fang, Z., S. Chen, Y. Manchanda, P. Bitsi, P. Pickford, A. David, M. M. Shchepinova, I. Corrêa Jr, D. J. Hodson, **J. Broichhagen**, E. W. Tate, F. Reimann, V. Salem, G. A. Rutter, **T. Tan**, S. R. Bloom, A. Tomas, B. J. Jones, Ligand-specific factors influencing GLP-1R post-endocytic trafficking and degradation. *Int J Mol Sci*, accepted (2020).

- Fang, Z., S. Chen, P. Pickford, **J. Broichhagen**, D. J. Hodson, I. R. Correa, Jr., S. Kumar, F. Görlitz, C. Dunsby, P. M. W. French, G. A. Rutter, T. Tan, S. R. Bloom, A. Tomas, B. Jones, The Influence of Peptide Context on Signaling and Trafficking of Glucagon-like Peptide-1 Receptor Biased Agonists. *ACS Pharmacol Transl Sci* **3**, 345-360 (2020). <https://doi.org/10.1021/acsptsci.0c00022>
- Finger, S., A. M. Kerth, **M. Dathe**, A. Blume, The impact of non-ideality of lipid mixing on peptide induced lipid clustering. *Biochim Biophys Acta Biomembr* **1862**, 183248 (2020). <https://doi.org/10.1016/j.bbamem.2020.183248>
- Furkert, D., S. Hostachy, M. Nadler-Holly, D. Fiedler**, Triplexed Affinity Reagents to Sample the Mammalian Inositol Pyrophosphate Interactome. *Cell Chem Biol* **27**, 1097-1108 (2020). <https://doi.org/10.1016/j.chembiol.2020.07.017>
- Furkert, D., M. Nadler-Holly, D. Fiedler**, Affinity-enrichment and identification of inositol poly- and pyrophosphate interactomes. *STAR Methods* **in press**, (2020).
- Hackenberger, C. P. R.**, P. E. Dawson, Y. X. Chen, H. Hojo, Modern Peptide and Protein Chemistry: Reaching New Heights. *J Org Chem* **85**, 1328-1330 (2020). Editorial, <https://doi.org/10.1021/acs.joc.0c00104>
- Hauser, A., S. Hwang, H. Sun\*, C. P. R. Hackenberger\***, Combining free energy calculations with tailored enzyme activity assays to elucidate substrate binding of a phospho-lysine phosphatase. *Chem Sci* (2020). <https://doi.org/10.1039/D0SC03930F>
- Hauser, A., E. Poulou, F. Müller, P. Schmieder, C. P. R. Hackenberger**, Synthesis and evaluation of non-hydrolyzable phospho-lysine peptide mimics. *Chemistry Online ahead of print*, (2020). <https://doi.org/10.1002/chem.202003947>
- Hecht-Höger, A. M., B. C. Braun, **E. Krause**, A. Meschede, R. Krahe, C. C. Voigt, A. D. Greenwood, G. A. Czirjak, Plasma proteomic profiles differ between European and North American myotid bats colonized by *Pseudogymnoascus destructans*. *Mol Ecol* **29**, 1745-1755 (2020). <https://doi.org/10.1111/mec.15437>
- Heidenreich, S., P. Weber, **H. Stephanowitz**, K. M. Petricek, T. Schütte, M. Oster, A. M. Salo, M. Knauer, I. Goehring, N. Yang, N. Witte, A. Schumann, M. Sommerfeld, M. Muenzner, J. Myllyharju, **E. Krause**, M. Schupp, The glucose-sensing transcription factor ChREBP is targeted by proline hydroxylation. *J Biol Chem* **295**, 17158-17168 (2020). <https://doi.org/10.1074/jbc.RA120.014402>
- Kasper\*, M. A.**, M. Gerlach, **A. F. L. Schneider**, C. Groneberg, **P. Ochtrop**, S. Boldt, **D. Schumacher**, J. Helma, H. Leonhardt, M. Christmann, **C. P. R. Hackenberger\***, N-Hydroxysuccinimide-Modified Ethynylphosphonamidates Enable the Synthesis of Configurationally Defined Protein Conjugates. *ChemBioChem* **21**, 113-119 (2020). <https://doi.org/10.1002/cbic.201900587>
- Kircher, T., T. Pantsar, **A. Oder, J. P. von Kries**, M. Juchum, B. Pfaffenrot, P. Kloevekorn, W. Albrecht, R. Selig, S. Laufer, Design and synthesis of novel fluorescently labeled analogs of vemurafenib targeting MKK4. *Eur J Med Chem Online ahead of print*, 112901 (2020). <https://doi.org/10.1016/j.ejmech.2020.112901>
- Kuijpers, M., G. Kochlamazashvili, A. Stumpf, D. Puchkov, A. Swaminathan, M. T. Lucht, E. Krause, T. Maritzen, D. Schmitz, V. Haucke**, Neuronal Autophagy Regulates Presynaptic Neurotransmission by Controlling the Axonal Endoplasmic Reticulum. *Neuron* **109**, 1-15 (2020). <https://doi.org/10.1016/j.neuron.2020.10.005>
- Lämmle, C. A., A. Varady, T. G. Müller, C. Sturtzel, M. Riepl, B. Mathes, **J. Eichhorst**, A. Sporbart, **M. Lehmann**, H. G. Kräusslich, M. Distel, **J. Broichhagen**, Photocaged Hoechst Enables Subnuclear Visualization and Cell Selective Staining of DNA in vivo. *ChemBioChem* **21**, 1-10 (2020). <https://doi.org/10.1002/cbic.202000465>
- Lauster<sup>§</sup>, D., **S. Klenk<sup>§</sup>**, K. Ludwig, S. Nojoui, **S. Behren, L. Adam**, M. Stadtmüller, S. Saenger, S. Zimmer, K. Honzke, L. Yao, U. Hoffmann, M. Bardua, A. Hamann, M. Witzenrath, L. E. Sander, T. Wolff, A. C. Hocke, S. Hippenstiel, S. De Carlo, J. Neudecker, K. Osterrieder, N. Budisa, R. R. Netz, C. Böttcher, S. Liese\*, A. Herrmann\*, **C. P. R. Hackenberger\***, Phage capsid nanoparticles with defined ligand arrangement block influenza virus entry. *Nat Nanotechnol* **15**, 373-379 (2020). <https://doi.org/10.1038/s41565-020-0660-2>

- Leippe<sup>§</sup>, P., **J. Broichhagen**<sup>§</sup>, K. Cailliau, A. Mougel, M. Morel, C. Dissous, D. Trauner, J. Vicogne, Transformation of Receptor Tyrosine Kinases into Glutamate Receptors and Photoreceptors. *Angew Chem Int Ed* **59**, 6720-6723 (2020). Communications, <https://doi.org/10.1002/anie.201915352>
- Li, M., **R. Puschmann**, A. Herdlitschka, **D. Fiedler**, H. Wennemers, Delivery of myo-Inositol Hexakisphosphate to the Cell Nucleus with a Proline-Based Cell-Penetrating Peptide. *Angew Chem Int Ed* **59**, 15586-15589 (2020). <https://doi.org/10.1002/anie.202006770>
- Li, X. Y., C. F. Gu, **S. Hostachy**, S. Sahu, C. Wittwer, H. J. Jessen, **D. Fiedler**, H. C. Wang, S. B. Shears, Control of XPR1-dependent cellular phosphate efflux by InsP(8) is an exemplar for functionally-exclusive inositol pyrophosphate signaling. *Proc. Natl. Acad. Sci. U.S.A.* **117**, 3568-3574 (2020). <https://doi.org/10.1073/pnas.1908830117>
- Li<sup>§</sup>, X. L.**, L. P. Chi<sup>§</sup>, A. Navarro-Vazquez, **S. Hwang**, **P. Schmieder**, X. M. Li, X. Li, S. Q. Yang, X. X. Lei\*, B. G. Wang\*, **H. Sun\***, Stereochemical Elucidation of Natural Products from Residual Chemical Shift Anisotropies in a Liquid Crystalline Phase. *J Am Chem Soc* **142**, 2301-2309 (2020). <https://doi.org/10.1021/jacs.9b10961>
- Liu, H., P. Chen, X. L. Li, **H. Sun**, X. X. Lei\*, Practical aspects of oligopeptide AAKLVFF as an alignment medium for the measurements of residual dipolar coupling of organic molecules. *Magn Reson Chem* **58**, 404-410 (2020). <https://doi.org/10.1002/mrc.4825>
- Lopez-Hernandez\***, T., **D. Puchkov**, **E. Krause**, **T. Maritzen\***, **V. Haucke\***, Endocytic regulation of cellular ion homeostasis controls lysosome biogenesis. *Nat Cell Biol* **22**, 815-827 (2020). <https://doi.org/10.1038/s41556-020-0535-7>
- Morrison, E., T. Wegner, A. E. Zucchetti, M. Alvaro-Benito, A. Zheng, S. Kliche, **E. Krause**, B. Brugger, C. Hivroz, C. Freund, Dynamic palmitoylation events following T-cell receptor signaling. *Communications Biology* **3**, 368 (2020). <https://doi.org/10.1038/s42003-020-1063-5>
- Mostinski, Y.**, G. Heynen, **M. P. Lopez-Alberca**, **J. Paul**, **S. Miksche**, **S. Radetzki**, D. Schaller, E. Shanina, **C. Seyffarth**, **Y. Kolomeets**, **N. Ziebart**, **J. de Schryver**, **S. Oestreich**, **M. Neuenschwander**, Y. Roske, U. Heinemann, C. Rademacher, A. Volkamer, **J. P. von Kries**, W. Birchmeier, **M. Nazare**, From Pyrazolones to Azaindoles: Evolution of Active-Site SHP2 Inhibitors Based on Scaffold Hopping and Bioisosteric Replacement. *J Med Chem Online ahead of print*, (2020). <https://doi.org/10.1021/acs.jmedchem.0c01265>
- Nematian-Ardestani, E., F. Abd-Wahab, F. C. Chatelain, **H. Sun**, M. Schewe, T. Baukrowitz, S. J. Tucker, Selectivity filter instability dominates the low intrinsic activity of the TWIK-1 K2P K<sup>+</sup> channel. *J Biol Chem* **295**, 610-618 (2020). <https://doi.org/10.1074/jbc.RA119.010612>
- Ochtrop, P.**, **C. P. R. Hackenberger**, Recent advances of thiol-selective bioconjugation reactions. *Curr Opin Chem Biol* **58**, 28-36 (2020). Review, <https://doi.org/10.1016/j.cbpa.2020.04.017>
- Pickford, P., M. Lucey, Z. J. Fang, S. Bitsi, J. B. de la Serna, **J. Broichhagen**, D. J. Hodson, J. Minnion, G. A. Rutter, S. R. Bloom, A. Tomas\*, B. Jones, Signalling, trafficking and glucoregulatory properties of glucagon-like peptide-1 receptor agonists exendin-4 and lixisenatide. *Br J Pharmacol* **177**, 3905-3923 (2020). <https://doi.org/10.1111/bph.15134>
- Poc, P., V. A. Gutzeit, J. Ast, J. Lee, B. Jones, E. D'Este, B. Mathes, **M. Lehmann**, D. J. Hodson, J. Levitz, **J. Broichhagen**, Interrogating surface versus intracellular transmembrane receptor populations using cell-impermeable SNAP-tag substrates. *Chem Sci* **11**, 7871-7883 (2020). <https://doi.org/10.1039/d0sc02794d>
- Preussner, M., Q. S. Gao, E. Morrison, O. Herdt, F. Finkernagel, **M. Schümann**, **E. Krause**, C. Freund, W. Chen, F. Heyd, Splicing-accessible coding 3' UTRs control protein stability and interaction networks. *Genome Biol* **21**, 186 (2020). <https://doi.org/10.1186/s13059-020-02102-3>
- Puschmann, R.**, **R. K. Harmel**, **D. Fiedler**, *Methods Enzymol* **641**, 35-52. Book Chapter, <https://doi.org/10.1016/bs.mie.2020.04.035>
- Qin, S. Y., Y. Jiang, **H. Sun**, H. Liu, A. Q. Zhang, X. X. Lei, Measurement of Residual Dipolar Couplings of Organic Molecules in Multiple Solvent Systems Using a Liquid-Crystalline-Based Medium. *Angew Chem Int Ed Online ahead of print* (2020). <https://doi.org/10.1002/anie.202007243>

- Qiu, D., M. S. Wilson, V. B. Eisenbeis, **R. K. Harmel**, E. Riemer, T. M. Haas, C. Wittwer, N. Jork, S. B. Shears, G. Schaaf, B. Kammerer, **D. Fiedler**, A. Saiardi, H. J. Jessen, Analysis of inositol phosphate metabolism by capillary electrophoresis electrospray ionization mass spectrometry. *Nat Commun* **11**, 6035 (2020).
- Ried, M. K., R. Wild, J. Zhu, L. Broger, **R. Harmel**, L. A. Hothorn, **D. Fiedler**, S. Hiller, M. Hothorn, Inositol pyrophosphates promote the interaction of SPX domains with the coiled-coil motif of PHR transcription factors to regulate plant phosphate homeostasis. *Nat Commun* **in press** (2020).
- Rizalar, F. S., D. A. Roosen, V. Haucke**, A Presynaptic Perspective on Transport and Assembly Mechanisms for Synapse Formation. *Neuron Online ahead of print* (2020). Review, <https://doi.org/10.1016/j.neuron.2020.09.038>
- Sahu, S., Z. Wang, X. Jiao, C. Gu, N. Jork, C. Wittwer, X. Li, **S. Hostachy, D. Fiedler**, H. Wang, H. J. Jessen, M. Kiledjian, S. B. Shears, InsP7 is a small-molecule regulator of NUDT3-mediated mRNA decapping and processing-body dynamics. *Proc Natl Acad Sci USA* **117** (2020).
- Sarott, R. C., M. V. Westphal, P. Pfaff, C. Korn, D. A. Sykes, **T. Gazzi, B. Brennecke**, K. Atz, M. Weise, **Y. Mostinski, P. Hompluem, E. Koers, T. Miljus, N. J. Roth, H. Asmelash, M. C. Vong, J. Piovesan, W. Guba, A. C. Rufer, E. A. Kuszniir, S. Huber, C. Raposo, E. A. Zirwes, A. Osterwald, A. Pavlovic, S. Moes, J. Beck, I. Benito-Cuesta, T. Grande, S. R. D. Esteban, A. Yeliseev, F. Drawnel, G. Widmer, D. Holzer, T. van der Wel, H. Mandhair, C. Y. Yuan, W. R. Drobyski, Y. Saroz, N. Grimsey, M. Honer, J. Fingerle, K. Gawrisch, J. Romero, C. J. Hillard, Z. V. Varga, M. van der Stelt, P. Pacher, J. Gertsch, P. J. McCormick, C. Ullmer, S. Oddi, M. Maccarrone, D. B. Veprintsev, **M. Nazaré, U. Grether\*, E. M. Carreira\*,** Development of High-Specificity Fluorescent Probes to Enable Cannabinoid Type 2 Receptor Studies in Living Cells. *J Am Chem Soc* **142**, 16953-16964 (2020). <https://doi.org/10.1021/jacs.0c05587>**
- Schneider, A. F. L., M. Kithil, M. C. Cardoso, M. Lehmann, C. P. R. Hackenberger**, Cellular uptake of Large Biomolecules Enabled by Thiol-reactive Cell-penetrating Peptide Additives. *Nat Chem* **in press** (2020).
- Schwiebs, A., Y. Wang, A. M. Moore, X. D. Zhu, **K. Pankow, W. E. Siems**, T. Walther, The virtually mature B-type natriuretic peptide (BNP1-32) is a precursor for the more effective BNP1-30. *Br J Pharmacol* **177**, 1424-1433 (2020). <https://doi.org/10.1111/bph.14890>
- Sreeramulu, S., C. Richter, T. Kuehn, K. Azzaoui, M. J. J. Blommers, R. Del Conte, M. Fragai, **N. Trieloff, P. Schmieder, M. Nazaré, E. Specker, V. Ivanov, H. Oschkinat, L. Banci, H. Schwalbe**, NMR quality control of fragment libraries for screening. *J Biomol NMR*, 10.1007/s10858-10020-00327-10859 (2020). <https://doi.org/10.1007/s10858-020-00327-9>
- Tu, Z. X., E. G. Donskyi, H. S. Qiao, Z. L. Zhu, W. E. S. Unger, **C. P. R. Hackenberger**, W. Chen, M. Adeli, R. Haag, Graphene Oxide-Cyclic R10 Peptide Nuclear Translocation Nanoplatfoms for the Surmounting of Multiple-Drug Resistance. *Adv Funct Mater*, 2000933 (2020). <https://doi.org/10.1002/adfm.202000933>
- Waalder\*, J., R. G. G. Leenders, S. T. Sowa, S. A. Brinch, M. Lycke, P. Nieczykpor, S. Aertssen, S. Murthy, A. Galera-Prat, E. Damen, A. Wegert, **M. Nazaré, L. Lehtio, S. Krauss**, Preclinical Lead Optimization of a 1,2,4-Triazole Based Tankyrase Inhibitor. *J Med Chem* **63**, 6834-6846 (2020). <https://doi.org/10.1021/acs.jmedchem.0c00208>
- Webel, H. E., T. B. Kimber, **S. Radetzki, M. Neuenschwander, M. Nazaré, A. Volkamer**, Revealing cytotoxic substructures in molecules using deep learning. *J Comput Aid Mol Des* **34**, 731-746 (2020). <https://doi.org/10.1007/s10822-020-00310-4>
- Xu, S. N., Q. Y. Zhang, X. W. Han, Y. L. Wang, X. Wang, **M. Nazaré, J. D. Jiang, H. Y. Hu**, Dual-Mode Detection of Bacterial 16S Ribosomal RNA in Tissues. *ACS Sensors* **5**, 1650-1656 (2020). <https://doi.org/10.1021/acssensors.0c00252>
- Ye, M. Y., S. Li, X. J. Zhao, N. V. Tarakina, C. Teutloff, **W. Y. Chow, R. Bittl, A. Thomas**, Cobalt-Exchanged Poly(Heptazine Imides) as Transition Metal-N-x Electrocatalysts for the Oxygen Evolution Reaction. *Adv Mater* **32**, e1903942 (2020). <https://doi.org/10.1002/adma.201903942>
- Yusenko, M. V., A. Trentmann, M. K. Andersson, L. A. Ghani, A. Jakobs, M. F. Arteaga Paz, J. H. Mikesch, **J. P. von Kries, G. Stenman, K. H. Klempnauer, Monensin**, a novel potent MYB inhibitor, suppresses proliferation of acute

myeloid leukemia and adenoid cystic carcinoma cells. *Cancer Letters* **479**, 61-70 (2020).

<https://doi.org/10.1016/j.canlet.2020.01.039>

**Zong, G., N. Jork, S. Hostachy, D. Fiedler**, H. J. Jessen, S. B. Shears, **H. Wang**, New structural insights reveal an expanded reaction cycle for inositol pyrophosphate hydrolysis by human DIPP1. *FASEB J* in press (2020).

2019

[→ top](#)

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Apel<sup>§</sup>, C., **M. A. Kasper<sup>§\*</sup>**, **C. E. Stieger**, **C. P. R. Hackenberger\***, M. Christmann\*, Protein Modification of Lysine with 2-(2-Styrylcyclopropyl)ethanal. *Org Lett* **21**, 10043-10047 (2019).

<https://doi.org/10.1021/acs.orglett.9b03982>

Artarini, A., M. Meyer, Y. J. Shin, K. Huber, N. Hilz, F. Bracher, D. Eros, L. Orfi, G. Keri, S. Goedert, **M. Neuenschwander**, **J. von Kries**, Y. Domovich-Eisenberg, N. Dekel, I. Szabadkai, M. Lebendiker, Z. Horvath, T. Danielie, O. Livnahe, O. Moncorge, R. Frise, W. Barclay, T. F. Meyer, A. Karlas, Regulation of influenza A virus mRNA splicing by CLK1. *Antivir Res* **168**, 187-196 (2019). <https://doi.org/10.1016/j.antiviral.2019.06.003>

**Baumann, A. L., C. P. R. Hackenberger**, Tag and release: strategies for the intracellular cleavage of protein conjugates. *Curr Opin Chem Biol* **52**, 39-46 (2019). Review, <https://doi.org/10.1016/j.cbpa.2019.04.019>

**Birke, R., E. Krause, M. Schümann, I. E. Blasig, R. F. Haseloff**, Quantitative Evaluation of Different Protein Fractions of Cerebrospinal Fluid Using (18)O Labeling. *Methods Mol Biol* **2044**, 119-128 (2019). Book Chapter,

[https://doi.org/10.1007/978-1-4939-9706-0\\_8](https://doi.org/10.1007/978-1-4939-9706-0_8)

Brennecke, P., D. Rasina, O. Aubi, K. Herzog, J. Landskron, B. Cautain, F. Vicente, J. Quintana, J. Mestres, B. Stechmann, B. Ellinger, J. Brea, J. L. Kolanowski, R. Pilarski, M. Orzaez, A. Pineda-Lucena, L. Laraia, F. Nami, P. Zielenkiewicz, K. Paruch, E. Hansen, **J. P. von Kries, M. Neuenschwander, E. Specker**, P. Bartunek, S. Simova, Z. Lesnikowski, S. Krauss, L. Lehtio, U. Bilitewski, M. Bronstrup, K. Tasken, A. Jirgensons, H. Lickert, M. H. Clausen, J. H. Andersen, M. J. Vicent, O. Genilloud, A. Martinez, **M. Nazaré**, W. Fecke\*, P. Gribbon\*, EU-OPENSREEN: A Novel Collaborative Approach to Facilitate Chemical Biology. *Slas Discov* **24**, 398-413 (2019).

<https://doi.org/10.1177/2472555218816276>

Gerlach, M., T. Stoschek, H. Leonhardt, **C. P. R. Hackenberger**, D. Schumacher, J. Helma, Tubulin Tyrosine Ligase-Mediated Modification of Proteins. *Methods Mol Biol* **2012**, 327-355 (2019). Book Chapter,

[https://doi.org/10.1007/978-1-4939-9546-2\\_17](https://doi.org/10.1007/978-1-4939-9546-2_17)

Gohlke, S., V. Zagoriy, A. C. Inostroza, M. Meret, C. Mancini, L. Japtok, F. Schumacher, D. Kuhlow, A. Graja, **H. Stephanowitz**, M. Jahnert, **E. Krause**, A. Wernitz, K. J. Petzke, A. Schürmann, B. Kleuser, T. J. Schulz, Identification of functional lipid metabolism biomarkers of brown adipose tissue aging. *Mol Metab* **24**, 1-17 (2019). <https://doi.org/10.1016/j.molmet.2019.03.011>

**Harmel<sup>§</sup>, R. K., R. Puschmann<sup>§</sup>, M. N. Trung**, A. Saiardi, **P. Schmieder, D. Fiedler**, Harnessing C-13-labeled myo-inositol to interrogate inositol phosphate messengers by NMR. *Chem Sci* **10**, 5267-5274 (2019).

<https://doi.org/10.1039/c9sc00151d>

Höfer, C. T., S. Di Lella, I. Dahmani, N. Jungnick, **N. Bordag**, S. Bobone, Q. Huang, S. Keller, A. Herrmann, S. Chiantia, Structural determinants of the interaction between influenza A virus matrix protein M1 and lipid membranes.

*Biochim Biophys Acta Biomembr* **1861**, 1123-1134 (2019). <https://doi.org/10.1016/j.bbamem.2019.03.013>

Horsch, J., P. Wilke, **H. Stephanowitz, E. Krause**, H. G. Börner, Fish and Clips: A Convenient Strategy to Identify Tyrosinase Substrates with Rapid Activation Behavior for Materials Science Applications. *ACS Macro Lett* **8**, 724-729 (2019). <https://doi.org/10.1021/acsmacrolett.9b00244>

- Kasper, M. A., M. Glanz, A. Stengl, M. Penkert, S. Klenk, T. Sauer, D. Schumacher, J. Helma, E. Krause, M. C. Cardoso, H. Leonhardt, C. P. R. Hackenberger**, Cysteine-Selective Phosphoramidate Electrophiles for Modular Protein Bioconjugations. *Angew Chem Int Ed* **58**, 11625-11630 (2019). <https://doi.org/10.1002/anie.201814715>
- Kasper<sup>§</sup>, M. A., M. Glanz<sup>§</sup>, A. Oder, P. Schmieder, J. P. von Kries, C. P. R. Hackenberger**, Vinylphosphonites for Staudinger-induced chemoselective peptide cyclization and functionalization. *Chem Sci* **10**, 6322-6329 (2019). <https://doi.org/10.1039/c9sc01345h>
- Kasper, M. A., A. Stengl, P. Ochtrup, M. Gerlach, T. Stoschek, D. Schumacher, J. Helma, M. Penkert, E. Krause, H. Leonhardt\*, C. P. R. Hackenberger\***, Ethynylphosphoramidates for the Rapid and Cysteine-Selective Generation of Efficacious Antibody-Drug Conjugates. *Angew Chem Int Ed* **58**, 11631-11636 (2019). <https://doi.org/10.1002/anie.201904193>
- Li, X. L., S. W. Li, L. G. Yao, E. Mollo, M. Gavagnin, Y. W. Guo**, The chemical and chemo-ecological studies on Weizhou nudibranch *Glossodoris atomarginata*. *Magn Reson Chem*, (2019). <https://doi.org/10.1002/mrc.4949>
- Liu, C. P., C. Y. Xie, J. X. Zhao, K. L. Ji, X. X. Lei, H. Sun\*, L. G. Lou\*, J. M. Yue\***, Dysoxylactam A: A Macrocyclolipopeptide Reverses P-Glycoprotein-Mediated Multidrug Resistance in Cancer Cells. *J Am Chem Soc* **141**, 6812-6816 (2019). Article <https://doi.org/10.1021/jacs.9b02259>
- Marcinkowski, P., I. Hoyer, E. Specker, J. Furkert, C. Rutz, M. Neuenschwander, S. Sobottka, H. Sun, M. Nazaré, U. Berchner-Pfannschmidt, J. P. Von Kries, A. Eckstein, R. Schülein, G. Krause**, A New Highly Thyrotropin Receptor-Selective Small-Molecule Antagonist with Potential for the Treatment of Graves' Orbitopathy. *Thyroid* **29**, 111-123 (2019). Article <https://doi.org/10.1089/thy.2018.0349>
- Merkert, S., M. Schubert, R. Olmer, L. Engels, S. Radetzki, M. Veltman, B. J. Scholte, J. Zöllner, N. Pedemonte, L. J. V. Galletta, J. P. von Kries, U. Martin**, High-Throughput Screening for Modulators of CFTR Activity Based on Genetically Engineered Cystic Fibrosis Disease-Specific iPSCs. *Stem Cell Rep* **12**, 1389-1403 (2019). <https://doi.org/10.1016/j.stemcr.2019.04.014>
- Nojoumi, S., Y. Ma, S. Schwagerus, C. P. R. Hackenberger, N. Budisa**, In-Cell Synthesis of Bioorthogonal Alkene Tag S-Allyl-Homocysteine and Its Coupling with Reprogrammed Translation. *Int J Mol Sci* **20**, 2299 (2019). <https://doi.org/10.3390/ijms20092299>
- Öster<sup>§</sup>, C., K. Hendriks<sup>§</sup>, W. Kopec, V. Chevelkov, C. W. Shi, D. Michl, S. Lange, H. Sun, B. L. de Groot, A. Lange**, The conduction pathway of potassium channels is water free under physiological conditions. *Sci Adv* **5**, eaaw6756 (2019). <https://doi.org/10.1126/sciadv.aaw6756>
- Penkert\*, M., A. Hauser, R. Harmel, D. Fiedler, C. P. R. Hackenberger, E. Krause\***, Electron Transfer/Higher Energy Collisional Dissociation of Doubly Charged Peptide Ions: Identification of Labile Protein Phosphorylations. *J Am Soc Mass Spectr* **30**, 1578-1585 (2019). <https://doi.org/10.1007/s13361-019-02240-4>
- Plastira, I., L. Joshi, E. Bernhart, J. Schoene, E. Specker, M. Nazaré, W. Sattler**, Small-Molecule Lysophosphatidic Acid Receptor 5 (LPAR5) Antagonists: Versatile Pharmacological Tools to Regulate Inflammatory Signaling in BV-2 Microglia Cells. *Front Cell Neurosci* **13**, 531 (2019). <https://doi.org/10.3389/fncel.2019.00531>
- Puschmann<sup>§</sup>, R., R. K. Harmel<sup>§</sup>, D. Fiedler**, Scalable Chemoenzymatic Synthesis of Inositol Pyrophosphates. *Biochemistry* **58**, 3927-3932 (2019). <https://doi.org/10.1021/acs.biochem.9b00587>
- Schewe<sup>§\*</sup>, M., H. Sun<sup>§</sup>, U. Mert, A. Mackenzie, A. C. W. Pike, F. Schulz, C. Constantin, K. S. Vowinkel, L. J. Conrad, A. K. Kiper, W. Gonzalez, M. Musinszki, M. Tegtmeyer, D. C. Pryde, H. Belabed, M. Nazaré, B. L. de Groot, N. Decher, B. Fakler, E. P. Carpenter, S. J. Tucker, T. Baukowitz**, A pharmacological master key mechanism that unlocks the selectivity filter gate in K<sup>+</sup> channels. *Science* **363**, 875-880 (2019). <https://doi.org/10.1126/science.aav0569>
- Schneider, A. F. L., A. L. D. Wallabregue, L. Franz, C. P. R. Hackenberger**, Targeted Subcellular Protein Delivery Using Cleavable Cyclic Cell-Penetrating Peptides. *Bioconjugate Chem* **30**, 400-404 (2019). <https://doi.org/10.1021/acs.bioconjchem.8b00855>

- Schoene, J., T. Gazzi, P. Lindemann,** M. Christmann, A. Volkamer\*, **M. Nazaré\***, Probing 2H-Indazoles as Templates for SGK1, Tie2, and SRC Kinase Inhibitors. *ChemMedChem* **14**, 1514-1527 (2019). <https://doi.org/10.1002/cmdc.201900328>
- Schumacher, D., H. Leonhardt, **C. P. R. Hackenberger,** J. Helma, One-Step Fluorescent Protein Labeling by Tubulin Tyrosine Ligase. *Methods Mol Biol* **2033**, 167-189 (2019). Book Chapter, [https://doi.org/10.1007/978-1-4939-9654-4\\_12](https://doi.org/10.1007/978-1-4939-9654-4_12)
- Smith, D., A. G. Buddie, R. J. M. Goss, J. Overmann, C. Lepleux, M. Bronstrup, B. Kloaregs, **T. Meiners, P. Brennecke,** A. Ianora, F. Y. Bouget, P. Gribbon, M. Pina, Discovery pipelines for marine resources: an ocean of opportunity for biotechnology? *World J Microb Biot* **35**, 107 (2019). Review, <https://doi.org/10.1007/s11274-019-2685-y>
- Stengl, A., M. Gerlach, **M. A. Kasper, C. P. R. Hackenberger,** H. Leonhardt, D. Schumacher, J. Helma, TuPPL: Tub-tag mediated C-terminal protein-protein-ligation using complementary click-chemistry handles. *Org Biomol Chem* **17**, 4964-4969 (2019). <https://doi.org/10.1039/c9ob00508k>
- Ullrich, F., S. Blin, K. Lazarow, T. Daubitz, J. P. von Kries, T. J. Jentsch,** Identification of TMEM206 proteins as pore of PAORAC/ASOR acid-sensitive chloride channels. *Elife* **8**, e49187 (2019). <https://doi.org/10.7554/eLife.49187>
- van Husen, L. S., S. Schedin-Weiss, **M. Nguyen Trung,** M. A. Kazmi, B. Winblad, T. P. Sakmar, S. J. Elsässer, L. O. Tjernberg, Dual Bioorthogonal Labeling of the Amyloid-beta Protein Precursor Facilitates Simultaneous Visualization of the Protein and Its Cleavage Products. *J Alzheimers Dis* **72**, 537-548 (2019). <https://doi.org/10.3233/Jad-190898>
- Wong, E. L., E. Nawrotzky, C. Arkona, **B. G. Kim, S. Beligny,** X. N. Wang, S. Wagner, **M. Lisurek, D. Carstanjen, J. Rademann\***, The transcription factor STAT5 catalyzes Mannich ligation reactions yielding inhibitors of leukemic cell proliferation. *Nat Commun* **10**, 66 (2019). <https://doi.org/10.1038/s41467-018-07923-2>
- Wu, Q. H., F. Ye, **X. L. Li,** L. F. Liang, J. D. Sun, **H. Sun,** Y. W. Guo, H. Wang, Uncommon Polyoxygenated Sesquiterpenoids from South China Sea Soft Coral *Lemnalia flava*. *J Org Chem* **84**, 3083-3092 (2019). <https://doi.org/10.1021/acs.joc.8b02912>
- Yang<sup>§</sup>, M., X. L. Li<sup>§</sup>, J. R. Wang, X. X. Lei, W. Tang, X. W. Li\*, **H. Sun\***, Y. W. Guo\*, Sarcomililate A, an Unusual Diterpenoid with Tricyclo[11.3.0.0(2,16)]hexadecane Carbon Skeleton, and Its Potential Biogenetic Precursors from the Hainan Soft Coral Sarcophyton mililatensis. *J Org Chem* **84**, 2568-2576 (2019). <https://doi.org/10.1021/acs.joc.8b03020>
- Zhang, Q. Y., S. N. Xu, F. F. Lai, Y. L. Wang, N. Zhang, **M. Nazaré,** H. Y. Hu, Rapid Synthesis of gamma-Halide/Pseudohalide-Substituted Cyanine Sensors with Programmed Generation of Singlet Oxygen. *Org Lett* **21**, 2121-2125 (2019). <https://doi.org/10.1021/acs.orglett.9b00404>
- Zhu, J., K. Lau, **R. Puschmann, R. K. Harmel,** Y. J. Zhang, V. Pries, P. Gaugler, L. Broger, A. K. Dutta, H. J. Jessen, G. Schaaf, A. R. Fernie, L. A. Hothorn, **D. Fiedler,** M. Hothorn, Two bifunctional inositol pyrophosphate kinases/phosphatases control plant phosphate homeostasis. *Elife* **8**, e43582 (2019). <https://doi.org/10.7554/eLife.43582>

2018

→ [top](#)

§, # equal contribution; \* corresponding author(s); **bold**: FMP members

- Abed, H. B.,** N. Weissing, **J. Schoene,** J. Paulus, N. Sewald, **M. Nazaré,** Novel strategy for the preparation of 3-perfluoroalkylated-2H-indazole derivatives. *Tetrahedron Lett* **59**, 1813-1815 (2018). <https://doi.org/10.1016/j.tetlet.2018.03.051>

- Arellano, V. J., P. M. Garcia, J. G. R. Plaza, M. T. L. Ortiz, G. Schreiber, **R. Volkmer**, E. Klipp, G. Del Rio, An Antimicrobial Peptide Induces FIG1-Dependent Cell Death During Cell Cycle Arrest in Yeast. *Front Microbiol* **9**, 1240 (2018). <https://doi.org/10.3389/fmicb.2018.01240>
- Aretz, J., **U. R. Anumala**, F. F. Fuchsberger, **N. Molavi**, **N. Ziebart**, H. X. Zhang\*, **M. Nazaré\***, C. Rademacher\*, Allosteric Inhibition of a Mammalian Lectin. *J Am Chem Soc* **140**, 14915-14925 (2018). <https://doi.org/10.1021/jacs.8b08644>
- Bagheri, M., M. Amininasab, **M. Dathe**, Arginine/Tryptophan-Rich Cyclic /-Antimicrobial Peptides: The Roles of Hydrogen Bonding and Hydrophobic/Hydrophilic Solvent-Accessible Surface Areas upon Activity and Membrane Selectivity. *Chemistry* **24**, 14242-14253 (2018). Article <https://doi.org/10.1002/chem.201802881>
- Baumann, A. L., C. P. R. Hackenberger**, Modern Ligation Methods to Access Natural and Modified Proteins. *Chimia* **72**, 802-808 (2018). Review, <https://doi.org/10.2533/chimia.2018.802>
- Becker, M.**, A. Moore, M. Naughton, B. Boland, **W. E. Siems**, T. Walther, Neprilysin degrades murine Amyloid-beta (A beta) more efficiently than human A beta: Further implication for species-specific amyloid accumulation. *Neurosci Lett* **686**, 74-79 (2018). <https://doi.org/10.1016/j.neulet.2018.08.028>
- Brennecke, P.**, M. I. Ferrante, I. A. Johnston, D. Smith, A Collaborative European Approach to Accelerating Translational Marine Science. *J Mar Sci Eng* **6**, 81 (2018). <https://doi.org/10.3390/jmse6030081>
- Buhrke, T., L. Voss, A. Briese, **H. Stephanowitz**, **E. Krause**, A. Braeuning, A. Lampen, Oxidative inactivation of the endogenous antioxidant protein DJ-1 by the food contaminants 3-MCPD and 2-MCPD. *Arch Toxicol* **92**, 289-299 (2018). <https://doi.org/10.1007/s00204-017-2027-5>
- Czuban, M., S. Srinivasan, N. A. Yee, E. Agustin, A. Koliszak, E. Miller, I. Khan, I. Quinones, H. Noory, C. Motola, **R. Volkmer**, M. Di Luca, A. Trampuz\*, M. Royzen\*, J. M. M. Oneto\*, Bio-Orthogonal Chemistry and Reloadable Biomaterial Enable Local Activation of Antibiotic Prodrugs and Enhance Treatments against Staphylococcus aureus Infections. *ACS Central Sci* **4**, 1624-1632 (2018). <https://doi.org/10.1021/acscentsci.8b00344>
- Dema, A.**, F. Macaluso, F. Sgro, G. E. Berto, F. T. Bianchi, A. A. Chiotto, G. Pallavicini, F. Di Cunto, M. Gai, Citron kinase-dependent F-actin maintenance at midbody secondary ingression sites mediates abscission. *J Cell Sci* **131**, jcs209080 (2018). <https://doi.org/10.1242/jcs.209080>
- Diehl<sup>§</sup>, A.**, Y. Roske<sup>§</sup>, **L. Ball**, **A. Chowdhury**, **M. Hiller**, N. Moliere, R. Kramer, **D. Stöppler**, **C. L. Worth**, **B. Schlegel**, **M. Leidert**, **N. Cremer**, **N. Erdmann**, D. Lopez, **H. Stephanowitz**, **E. Krause**, **B. J. van Rossum**, **P. Schmieder**, U. Heinemann\*, K. Turgay\*, **U. Akbey**, **H. Oschkinat\***, Structural changes of TasA in biofilm formation of Bacillus subtilis. *Proc Natl Acad Sci USA* **115**, 3237-3242 (2018). <https://doi.org/10.1073/pnas.1718102115>
- Döpfert, J.**, **M. Schnurr**, **M. Kunth**, **H. M. Rose**, A. Hennig, **L. Schröder**, Time-resolved monitoring of enzyme activity with ultrafast Hyper-CEST spectroscopy. *Magn Reson Chem* **56**, 679-688 (2018). <https://doi.org/10.1002/mrc.4702>
- Dovey, C. M., J. Diep, B. P. Clarke, A. T. Hale, D. E. McNamara, H. Y. Guo, **N. W. Brown**, J. Y. Cao, C. R. Grace, P. J. Gough, J. Bertin, S. J. Dixon, **D. Fiedler**, E. S. Mocarski, W. J. Kaiser, T. Moldoveanu, J. D. York, J. E. Carette, MLKL Requires the Inositol Phosphate Code to Execute Necroptosis. *Mol Cell* **70**, 936-948 (2018). <https://doi.org/10.1016/j.molcel.2018.05.010>
- Duro-Castano, A., N. H. Lim, I. Tranchant, M. Amoura, F. Beau, H. Wieland, O. Kingler, M. Herrmann, **M. Nazaré**, O. Plettenburg, V. Dive\*, M. J. Vicent, H. Nagase, In Vivo Imaging of MMP-13 Activity Using a Specific Polymer-FRET Peptide Conjugate Detects Early Osteoarthritis and Inhibitor Efficacy. *Adv Funct Mater* **28**, 1802738 (2018). <https://doi.org/10.1002/adfm.201802738>
- Fleischer, I., F. Beuerle, T. Bach, **C. P. R. Hackenberger**, A. Walther, S. Herzon, U. T. Bornscheuer, T. Skrydstrup, ORCHEM Prizes for Ivana Fleischer and Florian Beuerle. *Angew Chem Int Ed* **57**, 11505-11506 (2018). News, <https://doi.org/10.1002/anie.201808525>
- Geiger, M. A., A. P. Jagtap, M. Kaushik, **H. Sun**, **D. Stöppler**, S. T. Sigurdsson\*, B. Corzilius\*, **H. Oschkinat\***, Efficiency of Water-Soluble Nitroxide Biradicals for Dynamic Nuclear Polarization in Rotating Solids at 9.4 T:



- bcTol-M and cyolyl-TOTAPOL as New Polarizing Agents. *Chemistry* **24**, 13485-13494 (2018).  
<https://doi.org/10.1002/chem.201801251>
- Harmel, R., D. Fiedler**, Features and regulation of non-enzymatic post-translational modifications. *Nat Chem Biol* **14**, 244-252 (2018). Review, <https://doi.org/10.1038/Nchembio.2575>
- Helma, J., H. Leonhardt, **C. P. R. Hackenberger, D. Schumacher**, Tub-Tag Labeling; Chemoenzymatic Incorporation of Unnatural Amino Acids. *Methods Mol Biol* **1728**, 67-93 (2018). Book Chapter, [https://doi.org/10.1007/978-1-4939-7574-7\\_4](https://doi.org/10.1007/978-1-4939-7574-7_4)
- Jiang, K., L. Faltova, S. S. Hua, G. Capitani, A. E. Prota, C. Landgraf, **R. Volkmer**, R. A. Kammerer, M. O. Steinmetz, A. Akhmanova, Structural Basis of Formation of the Microtubule Minus-End-Regulating CAMSAP-Katanin Complex. *Structure* **26**, 375-382 (2018). <https://doi.org/10.1016/j.str.2017.12.017>
- Klein<sup>5</sup>, W., C. Rutz<sup>5</sup>, J. Eckhard, B. Provinciael, E. Specker, M. Neuenschwander**, G. Kleinau, P. Scheerer, **J. P. von Kries, M. Nazaré**, K. Vermeire, **R. Schülein**, Use of a sequential high throughput screening assay to identify novel inhibitors of the eukaryotic SRP-Sec61 targeting/translocation pathway. *PLoS One* **13**, e0208641 (2018).  
<https://doi.org/10.1371/journal.pone.0208641>
- Li\*, W. Y.**, N. M. O'Brien-Simpson\*, J. A. Holden, L. Otvos, E. C. Reynolds, F. Separovic, M. A. Hossain, J. D. Wade\*, Covalent conjugation of cationic antimicrobial peptides with a beta-lactam antibiotic core. *Peptide Sci* **110**, (2018). <https://doi.org/10.1002/pep2.24059>
- Liss, M., M. H. Radke, **J. Eckhard, M. Neuenschwander**, V. Dauksaite, **J. P. von Kries**, M. Gotthardt, Drug discovery with an RBM20 dependent titin splice reporter identifies cardenolides as lead structures to improve cardiac filling. *PLoS One* **13**, e0198492 (2018). <https://doi.org/10.1371/journal.pone.0198492>
- Liu, Y., L. L. Zhang, **M. Nazaré**, Q. Q. Yao, H. Y. Hu, A novel nitroreductase-enhanced MRI contrast agent and its potential application in bacterial imaging. *Acta Pharm Sin B* **8**, 401-408 (2018).  
<https://doi.org/10.1016/j.apsb.2017.11.001>
- Marmelstein, A. M., J. A. M. Morgan, M. Penkert**, D. T. Rogerson, J. W. Chin, **E. Krause, D. Fiedler**, Pyrophosphorylation via selective phosphoprotein derivatization. *Chem Sci* **9**, 5929-5936 (2018).  
<https://doi.org/10.1039/c8sc01233d>
- Otten, C., J. Knox, G. Boulday, M. Eymery, M. Haniszewski, **M. Neuenschwander, S. Radetzki**, I. Vogt, K. Hahn, C. De Luca, C. Cardoso, S. Hamad, C. I. Gil, P. Roy, C. Albiges-Rizo, E. Faurobert, **J. P. von Kries**, M. Campillos, E. Tournier-Lasserre, W. B. Derry, S. Abdelilah-Seyfried, Systematic pharmacological screens uncover novel pathways involved in cerebral cavernous malformations. *EMBO Mol Med* **10**, e9155 (2018).  
<https://doi.org/10.15252/emmm.201809155>
- Ruess, D. A., G. J. Heynen, K. J. Ciecieski, J. Y. Ai, A. Berninger, D. Kabacaoglu, K. Görgülü, Z. Dantes, S. M. Wörmann, K. N. Diakopoulos, A. F. Karpathaki, M. Kowalska, E. Kaya-Aksoy, L. Song, E. A. Z. van der Laan, **M. P. Lopez-Alberca, M. Nazaré**, M. Reichert, D. Saur, M. M. Erkan, U. T. Hopt, B. Sainz, W. Birchmeier, R. M. Schmid, M. Lesina, H. Algül, Mutant KRAS-driven cancers depend on PTPN11/SHP2 phosphatase. *Nat Med* **24**, 954-960 (2018). <https://doi.org/10.1038/s41591-018-0024-8>
- Schoene, J., H. Bel Abed, P. Schmieder**, M. Christmann, **M. Nazaré**, A General One-Pot Synthesis of 2H-Indazoles Using an Organophosphorus-Silane System. *Chemistry* **24**, 9090-9100 (2018).  
<https://doi.org/10.1002/chem.201800763>
- Schrade, K., J. Tröger, A. Eldahshan, K. Zühlke, K. R. A. Azeez, J. M. Elkins, **M. Neuenschwander, A. Oder**, M. Elkewedi, S. Jaksch, K. Andrae, J. L. Li, J. Fernandes, P. M. Müller, S. Grunwald, S. F. Marino, T. Vukicevic, **J. Eichhorst, B. Wiesner**, M. Weber, M. Kapiloff, O. Rocks, O. Daumke, T. Wieland, S. Knapp, **J. P. von Kries**, E. Klussmann, An AKAP-Lbc-RhoA interaction inhibitor promotes the translocation of aquaporin-2 to the plasma membrane of renal collecting duct principal cells. *PLoS One* **13**, e0191423 (2018).  
<https://doi.org/10.1371/journal.pone.0191423>

- Schulz, J., N. Mah, **M. Neuenschwander**, T. Kischka, R. Ratej, P. M. Schlag, E. Castanos-Velez, I. Fichtner, P. U. Tunn, C. Denkert, O. Klaas, W. E. Berdel, **J. P. von Kries**, W. Makalowski, M. A. Andrade-Navarro, A. Leutz, K. Wethmar, Loss-of-function uORF mutations in human malignancies. *Sci Rep* **8**, 2395 (2018). <https://doi.org/10.1038/s41598-018-19201-8>
- Schulze, J., H. Baukmann, R. Wawrzinek, F. F. Fuchsberger, **E. Specker**, J. Aretz, **M. Nazaré**, C. Rademacher, CellFy: A Cell-Based Fragment Screen against C-Type Lectins. *ACS Chem Biol* **13**, 3229-3235 (2018). <https://doi.org/10.1021/acscchembio.8b00875>
- Schumacher, D.**, J. Helma, **A. F. L. Schneider**, H. Leonhardt, **C. P. R. Hackenberger**, Nanobodies: Chemical Functionalization Strategies and Intracellular Applications. *Angew Chem Int Ed* **57**, 2314-2333 (2018). Review, <https://doi.org/10.1002/anie.201708459>
- Schumacher\***, **D.**, J. Helma-Smets, **C. Hackenberger**, H. Leonhardt, New generation of antibody-drug conjugates: start-ups. *Chem Unserer Zeit* **52**, 80-82 (2018). <https://doi.org/10.1002/ciuz.201880013>
- Shi<sup>§</sup>. C. W.**, **Y. He<sup>§</sup>**, **K. Hendriks<sup>§</sup>**, B. L. de Groot, X. Y. Cai, C. L. Tian, **A. Lange\***, **H. Sun\***, A single NaK channel conformation is not enough for non-selective ion conduction. *Nat Commun* **9**, 717 (2018). <https://doi.org/10.1038/s41467-018-03179-y>
- Siebertz, K. D.**, **C. P. R. Hackenberger**, Chemoselective triazole-phosphonamidate conjugates suitable for photorelease. *Chem Commun* **54**, 763-766 (2018). <https://doi.org/10.1039/c7cc08605a>
- Su, J. J., A. S. Thomas, T. Grabiets, C. Landgraf, **R. Volkmer**, S. J. Marrink, C. Williarns, M. N. Melo, The N-terminal amphipathic helix of Pex11p self-interacts to induce membrane remodelling during peroxisome fission. *Biochimica Et Biophysica Acta-Biomembranes* **1860**, 1292-1300 (2018). <https://doi.org/10.1016/j.bbamem.2018.02.029>
- Utesch, T., A. de Miguel Catalina, C. Schattenberg, N. Paege, **P. Schmieder**, **E. Krause**, Y. L. Miao, A. McCammon, V. Meyer, S. Jung, M. A. Mroginski, A Computational Modeling Approach Predicts Interaction of the Antifungal Protein AFP from *Aspergillus giganteus* with Fungal Membranes via Its gamma-Core Motif. *MSphere* **3**, e00377-00318 (2018). <https://doi.org/10.1128/mSphere.00377-18>
- Weisshoff, H., K. Wenzel, S. Schulze-Rothe, **H. Nikolenko**, H. Davideit, N. P. Becker, P. Gottel, G. S. Srivatsa, **M. Dathe**, J. Müller, A. Haberland, Characterization of Aptamer BC 007 Substance and Product Using Circular Dichroism and Nuclear Magnetic Resonance Spectroscopy. *J Pharm Sci-Ur* **107**, 2033-2041 (2018). <https://doi.org/10.1016/j.xphs.2018.04.003>
- Wenskowsky, L., H. Schreuder, V. Derau, H. Matter, J. Volkmar, **M. Nazaré**, T. Opatz\*, S. Petry\*, Identification and Characterization of a Single High-Affinity Fatty Acid Binding Site in Human Serum Albumin. *Angew Chem Int Ed* **57**, 1044-1048 (2018). <https://doi.org/10.1002/anie.201710437>

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*§*, # equal contribution; \* corresponding author(s); **bold**: FMP members

- Anumala, U. R.**, J. Waaler, Y. Nkizinkiko, A. Ignatev, **K. Lazarow**, **P. Lindemann**, P. A. Olsen, S. Murthy, E. Obaii, A. G. Majouga, S. Leonov, **J. P. von Kries**, L. Lehtio, S. Krauss\*, **M. Nazaré\***, Discovery of a Novel Series of Tankyrase Inhibitors by a Hybridization Approach. *J Med Chem* **60**, 10013-10025 (2017). <https://doi.org/10.1021/acs.jmedchem.7b00883>
- Berger, T. K., D. Fuschöller, N. Goodwin, W. Bönigk, A. Müller, N. D. Khesroshahi, C. Brenker, D. Wachten, **E. Krause**, U. B. Kaupp, T. Strünker\*, Post-translational cleavage of Hv1 in human sperm tunes pH- and voltage-dependent gating. *J Physiol-London* **595**, 1533-1546 (2017). <https://doi.org/10.1113/Jp273189>

- Bormann, N., A. Koliszak, S. Kasper, L. Schoen, K. Hilpert, **R. Volkmer**, J. Kikhney, B. Wildemann, A short artificial antimicrobial peptide shows potential to prevent or treat bone infections. *Sci Rep* **7**, 1506 (2017). <https://doi.org/10.1038/s41598-017-01698-0>
- Carter, D. M., **E. Specker**, **J. Przygodda**, **M. Neuenschwander**, **J. P. von Kries**, U. Heinemann, **M. Nazare\***, U. Gohlke, Identification of a Novel Benzimidazole Pyrazolone Scaffold That Inhibits KDM4 Lysine Demethylases and Reduces Proliferation of Prostate Cancer Cells. *Slas Discov* **22**, 801-812 (2017). <https://doi.org/10.1177/2472555217699157>
- Chen, S., S. E. Palma-Vera, M. Langhammer, S. P. Galuska, B. C. Braun, **E. Krause**, A. Lucas-Hahn, J. Schoen, An air-liquid interphase approach for modeling the early embryo-maternal contact zone. *Sci Rep* **7**, 42298 (2017). <https://doi.org/10.1038/srep42298>
- Chenge, J. T., L. V. Duyet, S. Swami, K. J. McLean, M. E. Kavanagh, A. G. Coyne, S. E. J. Rigby, M. R. Cheesman, H. M. Girvan, C. W. Levy, **B. Rupp**, **J. P. von Kries**, C. Abell, D. Leys, A. W. Munro, Structural Characterization and Ligand/Inhibitor Identification Provide Functional Insights into the Mycobacterium tuberculosis Cytochrome P450 CYP126A1. *J Biol Chem* **292**, 1310-1329 (2017). <https://doi.org/10.1074/jbc.M116.748822>
- Du, J., **M. Neuenschwander**, Y. Yu, J. H. M. Dabritz, N. R. Neuendorff, K. Schleich, A. Bittner, M. Milanovic, G. Beuster, **S. Radetzki**, **E. Specker**, M. Reimann, F. Rosenbauer, S. Mathas, P. Lohneis, M. Hummel, B. Dorken, **J. P. von Kries**, S. Lee, C. A. Schmitt, Pharmacological restoration and therapeutic targeting of the B-cell phenotype in classical Hodgkin lymphoma. *Blood* **129**, 71-81 (2017). <https://doi.org/10.1182/blood-2016-02-700773>
- Exner, M. P., T. Kuenz, T. M. T. To, Z. F. Ouyan, **S. Schwagerus**, M. G. Hoesl, **C. P. R. Hackenberger**, M. C. Lensen, S. Panke, N. Budisa, Design of S-Allylcysteine in Situ Production and Incorporation Based on a Novel Pyrrolysyl-tRNA Synthetase Variant. *Chembiochem* **18**, 85-90 (2017). <https://doi.org/10.1002/cbic.201600537>
- Fetzer, C., V. S. Korotkov, R. Thanert, K. M. Lee, **M. Neuenschwander**, **J. P. von Kries**, E. Medina, S. A. Sieber, A Chemical Disruptor of the ClpX Chaperone Complex Attenuates the Virulence of Multidrug-Resistant Staphylococcus aureus. *Angew Chem Int Ed* **56**, 15746-15750 (2017). <https://doi.org/10.1002/anie.201708454>
- Fukuoka, A., G. Gasser, D. Guldi, **C. Hackenberger**, T. Hisatomi, P. Knochel, J. Kubota, S. Matile, F. Wuerthner, J. Yoon, Outstanding Reviewers for Chemical Science in 2016. *Chem Sci* **8**, 4158-4158 (2017). Editorial, <https://doi.org/10.1039/c7sc90023f>
- Griger, J. C., R. B. Schneider, L. Lahmann, V. Schöwel, C. Keller, S. Spuler, **M. Nazaré**, C. Birchmeier, Loss of Ptpn11 (Shp2) drives satellite cells into quiescence. *Elife* **6**, e21552 (2017). <https://doi.org/10.7554/eLife.21552>
- Hauser, A.**, **M. Penkert**, **C. P. R. Hackenberger**, Chemical Approaches to Investigate Labile Peptide and Protein Phosphorylation. *Accounts of Chemical Research* **50**, 1883-1893 (2017). Review, <https://doi.org/10.1021/acs.accounts.7b00170>
- Herce<sup>§\*</sup>, H. D., **D. Schumacher<sup>§\*</sup>**, **A. F. L. Schneider**, A. K. Ludwig, **F. A. Mann**, M. Fillies, **M. A. Kasper**, **S. Reinke**, **E. Krause**, H. Leonhardt, M. C. Cardoso\*, **C. P. R. Hackenberger\***, Cell-permeable nanobodies for targeted immunolabelling and antigen manipulation in living cells. *Nat Chem* **9**, 762-771 (2017). <https://doi.org/10.1038/Nchem.2811>
- Hinderlich, S., **M. Neuenschwander\***, P. R. Wratil, **A. Oder**, **M. Lisurek**, L. D. Nguyen, **J. P. von Kries**, **C. P. R. Hackenberger\***, Small Molecules Targeting Human N-Acetylmannosamine Kinase. *ChemBioChem* **18**, 1279-1285 (2017). <https://doi.org/10.1002/cbic.201700066>
- Hinderlich, S., R. Tauber, C. R. Bertozzi, **C. P. R. Hackenberger**, Werner Reutter: A Visionary Pioneer in Molecular Glycobiology. *Chembiochem* **18**, 1141-1145 (2017). Editorial, <https://doi.org/10.1002/cbic.201700277>
- Igual Gil, C., M. Jarius, **J. P. von Kries**, A. K. Rohlfing, Neuronal Chemosensation and Osmotic Stress Response Converge in the Regulation of aqp-8 in C. elegans. *Front Physiol* **8**, 380 (2017). <https://doi.org/10.3389/fphys.2017.00380>

- Juling, S., A. Niedzwiecka, L. Böhmert, D. Lichtenstein, S. Selve, A. Braeuning, A. F. Thünemann, **E. Krause**, A. Lampen, Protein Corona Analysis of Silver Nanoparticles Links to Their Cellular Effects. *J Proteome Res* **16**, 4020-4034 (2017). <https://doi.org/10.1021/acs.jproteome.7b00412>
- Juneja, M., D. Kobelt, W. Walther, C. Voss, J. Smith, **E. Specker**, **M. Neuenschwander**, B. O. Gohlke, M. Dahlmann, **S. Radetzki**, R. Preissner, **J. P. von Kries**, P. M. Schlag, U. Stein, Statin and rottlerin small-molecule inhibitors restrict colon cancer progression and metastasis via MACC1. *PLoS Biol* **15**, e2000784 (2017). <https://doi.org/10.1371/journal.pbio.2000784>
- Kumar, A., C. Manatschal, A. Rai, I. Grigoriev, M. S. Degen, R. Jaussi, **I. Kretzschmar**, A. E. Prota, **R. Volkmer**, R. A. Kammerer, A. Akhmanova, M. O. Steinmetz, Short Linear Sequence Motif LxxPTPh Targets Diverse Proteins to Growing Microtubule Ends. *Structure* **25**, 924-932 (2017). <https://doi.org/10.1016/j.str.2017.04.010>
- Lauster<sup>§</sup>, D., M. Glanz<sup>§</sup>, M. Bardua, K. Ludwig, M. Hellmund, U. Hoffmann, A. Hamann, C. Böttcher, R. Haag, **C. P. R. Hackenberger\***, A. Herrmann\*, Multivalent Peptide-Nanoparticle Conjugates for Influenza-Virus Inhibition. *Angew Chem Int Ed* **56**, 5931-5936 (2017). <https://doi.org/10.1002/anie.201702005>
- Liu, Q. Y., S. Remmelzwaal, A. J. R. Heck, A. Akhmanova\*, **F. Liu\***, Facilitating identification of minimal protein binding domains by cross-linking mass spectrometry. *Sci Rep* **7**, 13453 (2017). <https://doi.org/10.1038/s41598-017-13663-y>
- Liu<sup>§\*</sup>, **F.**, P. Lössl<sup>§</sup>, R. Scheltema, R. Viner, A. J. R. Heck, Optimized fragmentation schemes and data analysis strategies for proteome-wide cross-link identification. *Nat Commun* **8**, 15473 (2017). <https://doi.org/10.1038/ncomms15473>
- Marmelstein<sup>§</sup>, A. M., J. Moreno<sup>§</sup>, D. Fiedler**, Chemical Approaches to Studying Labile Amino Acid Phosphorylation. *Top Curr Chem (Cham)* **375**, 22 (2017). Review, <https://doi.org/10.1007/s41061-017-0111-1>
- Moreno, J.**, L. Grubert, J. Schwarz, D. Bleger, S. Hecht, Efficient Sensitized Z -> E Photoisomerization of an Iridium(III)-Azobenzene Complex over a Wide Concentration Range. *Chemistry* **23**, 14090-14095 (2017). <https://doi.org/10.1002/chem.201703376>
- Penkert, M.**, L. M. Yates, **M. Schümann**, D. Perlman, **D. Fiedler**, **E. Krause**, Unambiguous Identification of Serine and Threonine Pyrophosphorylation Using Neutral-Loss-Triggered Electron-Transfer/Higher-Energy Collision Dissociation. *Anal Chem* **89**, 3672-3680 (2017). <https://doi.org/10.1021/acs.analchem.6b05095>
- Reimann, O.**, C. Smet-Nocca, **C. P. Hackenberger**, *Methods Mol Biol* **1523**, 215-235. Book Chapter, [https://doi.org/10.1007/978-1-4939-6598-4\\_12](https://doi.org/10.1007/978-1-4939-6598-4_12)
- Scheinflug, K.**, **O. Krylova**, H. Strahl, *Methods Mol Biol* **1520**, 159-174. Book Chapter, [https://doi.org/10.1007/978-1-4939-6634-9\\_10](https://doi.org/10.1007/978-1-4939-6634-9_10)
- Scheinflug, K.**, M. Wenzel, **O. Krylova**, J. E. Bandow, **M. Dathe\***, H. Strahl\*, Antimicrobial peptide cWFW kills by combining lipid phase separation with autolysis. *Sci Rep* **7**, 44332 (2017). <https://doi.org/10.1038/srep44332>
- Schneider, A. F. L.**, **C. P. R. Hackenberger**, Fluorescent labelling in living cells. *Curr Opin Biotech* **48**, 61-68 (2017). Review, <https://doi.org/10.1016/j.copbio.2017.03.012>
- Schoene, J.**, **H. B. Abed**, M. Christmann, **M. Nazaré**, A straightforward approach to N-substituted-2H-indazol-2-amines through reductive cyclization. *Tetrahedron Lett* **58**, 1633-1635 (2017). <https://doi.org/10.1016/j.tetlet.2017.03.031>
- Schröter, F., K. Müller, P. Müller, **E. Krause**, B. C. Braun, Recombinant expression of porcine spermadhesin AWN and its phospholipid interaction: Indication for a novel lipid binding property. *Reprod Domest Anim* **52**, 585-595 (2017). <https://doi.org/10.1111/rda.12953>
- Schumacher, D.**, O. Lemke, J. Helma, L. Gerszonowicz, V. Waller, T. Stoschek, P. M. Durkin, N. Budisa, H. Leonhardt, B. G. Keller\*, **C. P. R. Hackenberger\***, Broad substrate tolerance of tubulin tyrosine ligase enables one-step site-specific enzymatic protein labeling. *Chem Sci* **8**, 3471-3478 (2017). <https://doi.org/10.1039/c7sc00574a>

Sun<sup>§</sup>, H., A. Horatscheck<sup>§</sup>, V. Martos, M. Bartetzko, U. Uhrig, D. Lentz, P. Schmieder\*, M. Nazaré\*, Direct Experimental Evidence for Halogen-Aryl pi Interactions in Solution from Molecular Torsion Balances. *Angew Chem Int Ed* **56**, 6454-6458 (2017). <https://doi.org/10.1002/anie.201700520>

Thaa, B., S. Kaufer, S. A. Neumann, B. Peibst, H. Nauwynck, E. Krause, M. Veit, The complex co-translational processing of glycoprotein GP5 of type 1 porcine reproductive and respiratory syndrome virus. *Virus Res* **240**, 112-120 (2017). <https://doi.org/10.1016/j.virusres.2017.08.004>

Wetzel, C., S. Pifferi, C. Picci, C. Gök, D. Hoffmann, K. K. Bali, A. Lampe, L. Lapatsina, R. Fleischer, E. S. Smith, V. Begay, M. Moroni, L. Estebanez, J. Kühnemund, J. Walcher, E. Specker, M. Neuenschwander, J. P. von Kries, V. Haucke, R. Kuner, J. F. A. Poulet, J. Schmoranzler, K. Poole, G. R. Lewin, Small-molecule inhibition of STOML3 oligomerization reverses pathological mechanical hypersensitivity. *Nat Neurosci* **20**, 209-218 (2017). <https://doi.org/10.1038/nn.4454>

## 2016

→ [top](#)

§, # equal contribution; \* corresponding author(s); **bold**: FMP members

Abed, H. B., J. Schoene, M. Christmann, M. Nazaré\*, Organophosphorus-mediated N-N bond formation: facile access to 3-amino-2H-indazoles. *Org Biomol Chem* **14**, 8520-8528 (2016). <https://doi.org/10.1039/c6ob01544a>

Amelkina, O., L. Zschockelt, J. Painer, R. Serra, F. Villaespesa, E. Krause, K. Jewgenow, B. C. Braun, Progesterone, estrogen, and androgen receptors in the corpus luteum of the domestic cat, Iberian lynx (*Lynx pardinus*) and Eurasian lynx (*Lynx lynx*). *Theriogenology* **86**, 2107-2118 (2016). <https://doi.org/10.1016/j.theriogenology.2016.06.026>

Aretz, J., Y. Kondoh, K. Honda, U. R. Anumala, M. Nazaré, N. Watanabe, H. Osada, C. Rademacher\*, Chemical fragment arrays for rapid druggability assessment. *Chem Commun* **52**, 9067-9070 (2016). <https://doi.org/10.1039/c5cc10457b>

Bel Abed, H., J. Schoene, M. Christmann, M. Nazaré\*, Organophosphorus-mediated N-N bond formation: facile access to 3-amino-2H-indazoles. *Org Biomol Chem* **14**, 8520-8528 (2016). <https://doi.org/10.1039/c6ob01544a>

Bertran-Vicente, J., M. Penkert, O. Nieto-Garcia, J. M. Jeckelmann, P. Schmieder, E. Krause, C. P. R. Hackenberger, Chemoselective synthesis and analysis of naturally occurring phosphorylated cysteine peptides. *Nat Commun* **7**, 12703 (2016). <https://doi.org/10.1038/ncomms12703>

Brown, N. W., A. M. Marmelstein, D. Fiedler, Chemical tools for interrogating inositol pyrophosphate structure and function. *Chem Soc Rev* **45**, 6311-6326 (2016). Review, <https://doi.org/10.1039/c6cs00193a>

Chanduri, M., A. Rai, A. B. Malla, M. X. Wu, D. Fiedler, R. Mallik, R. Bhandari, Inositol hexakisphosphate kinase 1 (IP6K1) activity is required for cytoplasmic dynein-driven transport. *Biochem J* **473**, 3031-3047 (2016). <https://doi.org/10.1042/Bcj20160610>

Eccles, R. L., M. T. Czajkowski, C. Barth, P. M. Müller, E. McShane, S. Grunwald, P. Beaudette, N. Mecklenburg, R. Volkmer, K. Zühlke, G. Dittmar, M. Selbach, A. Hammes, O. Daumke, E. Klussmann, S. Urbe, O. Rocks, Bimodal antagonism of PKA signalling by ARHGAP36. *Nat Commun* **7**, 12963 (2016). <https://doi.org/10.1038/ncomms12963>

Fang, L., Q. H. Zhu, M. Neuenschwander, E. Specker, A. Wulf-Goldenberg, W. I. Weis, J. P. von Kries, W. Birchmeier, A Small-Molecule Antagonist of the beta-Catenin/TCF4 Interaction Blocks the Self-Renewal of Cancer Stem Cells and Suppresses Tumorigenesis. *Cancer Res* **76**, 891-901 (2016). <https://doi.org/10.1158/0008-5472.Can-15-1519>

- Fritsch, J., R. Fickers, J. Klawitter, V. Sarchen, P. Zingler, D. Adam, O. Janssen, **E. Krause**, S. Schütze, TNF induced cleavage of HSP90 by cathepsin D potentiates apoptotic cell death. *Oncotarget* **7**, 75774-75789 (2016). <https://doi.org/10.18632/oncotarget.12411>
- Gabriel, C. H., F. Gross, M. Karl, **H. Stephanowitz**, A. F. Hennig, M. Weber, S. Gryzik, I. Bachmann, K. Hecklau, J. Wienands, J. Schuchhardt, H. Herzel, A. Radbruch, **E. Krause**, R. Baumgrass, Identification of Novel Nuclear Factor of Activated T Cell (NFAT)-associated Proteins in T Cells. *J Biol Chem* **291**, 24172-24187 (2016). <https://doi.org/10.1074/jbc.M116.739326>
- Geiger<sup>§</sup>, M. A., M. Orwick-Rydmark<sup>§</sup>, K. Marker, W. T. Franks**, D. Akhmetzyanov, **D. Stöppler, M. Zinke, E. Specker, M. Nazaré, A. Diehl, B. J. van Rossum**, F. Aussenac, T. Prisner, **U. Akbey, H. Oschkinat\***, Temperature dependence of cross-effect dynamic nuclear polarization in rotating solids: advantages of elevated temperatures. *Phys Chem Chem Phys* **18**, 30696-30704 (2016). <https://doi.org/10.1039/c6cp06154k>
- Hager, A., M. X. Wu, H. C. Wang, **N. W. Brown**, S. B. Shears, N. Veiga\*, **D. Fiedler\***, Cellular Cations Control Conformational Switching of Inositol Pyrophosphate Analogues. *Chem Eur J* **22**, 12406-12414 (2016). <https://doi.org/10.1002/chem.201601754>
- Hartl, D., G. Nebrich, O. Klein, **H. Stephanowitz, E. Krause**, M. Rohe, SORLA regulates calpain-dependent degradation of synapsin. *Alzheimers Dement* **12**, 952-963 (2016). <https://doi.org/10.1016/j.jalz.2016.02.008>
- Hauser, A.**, R. Bohlmann, Preparation of Aldehydes by Oxidation of Benzylic Amines with Selectfluor (F-TEDA-BF4). *Synlett* **27**, 1870-1872 (2016). <https://doi.org/10.1055/s-0035-1561642>
- Hoffmann, E., **K. Streichert, N. Nischan**, C. Seitz, T. Brunner, **S. Schwagerus, C. P. R. Hackenberger\***, M. Rubini\*, Stabilization of bacterially expressed erythropoietin by single site-specific introduction of short branched PEG chains at naturally occurring glycosylation sites. *Mol Biosyst* **12**, 1750-1755 (2016). <https://doi.org/10.1039/c5mb00857c>
- Khatri, Y., M. Ringle, **M. Lisurek, J. P. von Kries**, J. Zapp, R. Bernhardt, Substrate Hunting for the Myxobacterial CYP260A1 Revealed New 1-alpha Hydroxylated Products from C-19 Steroids. *ChemBioChem* **17**, 90-101 (2016). <https://doi.org/10.1002/cbic.201500420>
- Kozian\*, D. H., E. von Haefen, S. Joho, W. Czechtizky, **U. R. Anumala**, P. Roux, A. Dudda, A. Evers, **M. Nazaré\***, Modulation of Hexadecyl-LPA-Mediated Activation of Mast Cells and Microglia by a Chemical Probe for LPA5. *ChemBioChem* **17**, 861-865 (2016). <https://doi.org/10.1002/cbic.201500559>
- Kuropka, B.**, B. Schraven, S. Kliche, **E. Krause**, C. Freund, Tyrosine-phosphorylation of the scaffold protein ADAP and its role in T cell signaling. *Expert Rev Proteomic* **13**, 545-554 (2016). Review, <https://doi.org/10.1080/14789450.2016.1187565>
- Nieto-Garcia, O.**, P. R. Wratil, L. D. Nguyen, **V. Böhrsch**, S. Hinderlich, W. Reutter, **C. P. R. Hackenberger**, Inhibition of the key enzyme of sialic acid biosynthesis by C6-Se modified N-acetylmannosamine analogs. *Chem Sci* **7**, 3928-3933 (2016). <https://doi.org/10.1039/c5sc04082e>
- Nischan, N., M. A. Kasper**, T. Mathew, **C. P. R. Hackenberger**, Bis(arylmethyl)-substituted unsymmetrical phosphites for the synthesis of lipidated peptides via Staudinger-phosphite reactions. *Org Biomol Chem* **14**, 7500-7508 (2016). <https://doi.org/10.1039/c6ob00843g>
- Pfeiffer, A., **H. Stephanowitz, E. Krause**, C. Volkwein, C. Hirsch, E. Jarosch, T. Sommer, A Complex of Htm1 and the Oxidoreductase Pdi1 Accelerates Degradation of Misfolded Glycoproteins. *J Biol Chem* **291**, 12195-12207 (2016). <https://doi.org/10.1074/jbc.M115.703256>
- Rautenbach, M., A. M. Troskie, J. A. Vosloo, **M. E. Dathe**, Antifungal membranolytic activity of the tyrocidines against filamentous plant fungi. *Biochimie* **130**, 122-131 (2016). <https://doi.org/10.1016/j.biochi.2016.06.008>
- Schewe, M., E. Nematian-Ardestani, **H. Sun**, M. Musinszki, S. Cordeiro, G. Bucci, **B. L. de Groot**, S. J. Tucker, M. Rapedius, T. Baukowitz, A Non-canonical Voltage-Sensing Mechanism Controls Gating in K2P K+ Channels. *Cell* **164**, 937-949 (2016). <https://doi.org/10.1016/j.cell.2016.02.002>

- Schulze, M., **M. Dathe**, D. Waberski, K. Müller, Liquid storage of boar semen: Current and future perspectives on the use of cationic antimicrobial peptides to replace antibiotics in semen extenders. *Theriogenology* **85**, 39-46 (2016). <https://doi.org/10.1016/j.theriogenology.2015.07.016>
- Schumacher, D., C. P. R. Hackenberger**, H. Leonhardt, J. Helma, Current Status: Site-Specific Antibody Drug Conjugates. *J Clin Immunol* **36**, S100-S107 (2016). Review, <https://doi.org/10.1007/s10875-016-0265-6>
- Schwagerus<sup>§</sup>, S., O. Reimann<sup>§</sup>**, C. Despres, C. Smet-Nocca, **C. P. R. Hackenberger**, Semi-synthesis of a tag-free O-GlcNAcylated tau protein by sequential chemoselective ligation. *J Pept Sci* **22**, 327-333 (2016). <https://doi.org/10.1002/psc.2870>
- Spiesschaert, B., **H. Stephanowitz, E. Krause**, N. Osterrieder, W. Azab, Glycoprotein B of equine herpesvirus type 1 has two recognition sites for subtilisin-like proteases that are cleaved by furin. *J Gen Virol* **97**, 1218-1228 (2016). <https://doi.org/10.1099/jgv.0.000418>
- Steidle, E. A., **L. S. Chong, M. X. Wu**, E. Crooke, **D. Fiedler**, A. C. Resnick\*, R. J. Rolfes, A Novel Inositol Pyrophosphate Phosphatase in *Saccharomyces cerevisiae*: Siw14 PROTEIN SELECTIVELY CLEAVES THE -PHOSPHATE FROM 5-DIPHOSPHOINOSITOL PENTAKISPHOSPHATE (5PP-IP5). *J Biol Chem* **291**, 6772-6783 (2016). <https://doi.org/10.1074/jbc.M116.714907>
- Sydow, K., H. Nikolenko, D. Lorenz**, R. H. Müller, **M. Dathe**, Lipopeptide-based micellar and liposomal carriers: Influence of surface charge and particle size on cellular uptake into blood brain barrier cells. *Eur J Pharm Biopharm* **109**, 130-139 (2016). <https://doi.org/10.1016/j.ejpb.2016.09.019>
- Wu, M. X., **L. S. Chong**, D. H. Perlman, A. C. Resnick, **D. Fiedler**, Inositol polyphosphates intersect with signaling and metabolic networks via two distinct mechanisms. *Proc Natl Acad Sci USA* **113**, E6757-E6765 (2016). <https://doi.org/10.1073/pnas.1606853113>
- Yates<sup>§</sup>, L. M., **D. Fiedler\***, A Stable Pyrophosphoserine Analog for Incorporation into Peptides and Proteins. *ACS Chem Biol* **11**, 1066-1073 (2016). Article <https://doi.org/10.1021/acscchembio.5b00972>

## 2015

→ [top](#)

*§, # equal contribution; \* corresponding author(s); bold: FMP members*

- Agrawal, D., C. P. R. Hackenberger**, in *Chemistry of Organo-hybrids: Synthesis and Characterization of Functional Nano-Objects*, B. Charleux, C. Coporet, E. Lacote, Eds. (Wiley, 2015). Book Chapter
- Albert, G. I.**, C. Schell, K. M. Kirschner, S. Schäfer, R. Naumann, A. Müller, O. Kretz, B. Kuroopka, M. Girbig, N. Hübner, **E. Krause**, H. Scholz\*, T. B. Huber\*, K. P. Knobloch, C. Freund, The GYF domain protein CD2BP2 is critical for embryogenesis and podocyte function. *J Mol Cell Biol* **7**, 402-414 (2015). <https://doi.org/10.1093/jmcb/mjv039>
- Bertran-Vicente, J., M. Schümann, P. Schmieder, E. Krause, C. P. R. Hackenberger**, Direct access to site-specifically phosphorylated-lysine peptides from a solid-support. *Org Biomol Chem* **13**, 6839-6843 (2015). <https://doi.org/10.1039/c5ob00734h>
- Bertran-Vicente\*, J., M. Schümann, C. P. R. Hackenberger, E. Krause\***, Gas-Phase Rearrangement in Lysine Phosphorylated Peptides During Electron-Transfer Dissociation Tandem Mass Spectrometry. *Anal Chem* **87**, 6990-6994 (2015). <https://doi.org/10.1021/acs.analchem.5b01389>
- Broncel, M., R. A. Serwa, P. Ciepla, **E. Krause**, M. J. Dallman, A. I. Magee, E. W. Tate, Multifunctional Reagents for Quantitative Proteome-Wide Analysis of Protein Modification in Human Cells and Dynamic Profiling of Protein Lipidation During Vertebrate Development. *Angew Chem Int Ed* **54**, 5948-5951 (2015). <https://doi.org/10.1002/anie.201500342>

- Broncel, M., R. A. Serwa, P. Ciepla, **E. Krause**, M. J. Dallman, A. I. Magee, E. W. Tate, Myristoylation profiling in human cells and zebrafish. *Data Brief* **4**, 379-383 (2015). <https://doi.org/10.1016/j.dib.2015.06.010>
- Dabrowski<sup>§</sup>, S., C. Staat<sup>§</sup>, D. Zwanziger**, R. S. Sauer, **C. Bellmann**, **R. Günther**, **E. Krause**, **R. F. Haseloff**, H. Rittner, **I. E. Blasig**, Redox-Sensitive Structure and Function of the First Extracellular Loop of the Cell-Cell Contact Protein Claudin-1: Lessons from Molecular Structure to Animals. *Antioxid Redox Sign* **22**, 1-14 (2015). <https://doi.org/10.1089/ars.2013.5706>
- Feutlinske<sup>§</sup>, F., M. Browarski<sup>§</sup>**, M. C. Ku, P. Trnka, S. Waiczies, T. Niendorf, W. B. Stallcup, R. Glass, **E. Krause**, **T. Maritzen**, Stonin1 mediates endocytosis of the proteoglycan NG2 and regulates focal adhesion dynamics and cell motility. *Nat Commun* **6**, 8535 (2015). <https://doi.org/10.1038/ncomms9535>
- Finger, S., A. Kerth, **M. Dathe**, A. Blume, The efficacy of trivalent cyclic hexapeptides to induce lipid clustering in PG/PE membranes correlates with their antimicrobial activity. *Biochim Biophys Acta-Biomembr* **1848**, 2998-3006 (2015). <https://doi.org/10.1016/j.bbamem.2015.09.012>
- Grosskopf, S., C. Eckert**, C. Arkona, **S. Radetzki**, K. Böhm, U. Heinemann, G. Wolber, **J. P. von Kries**, W. Birchmeier, **J. Rademann**, Selective Inhibitors of the Protein Tyrosine Phosphatase SHP2 Block Cellular Motility and Growth of Cancer Cells in vitro and in vivo. *ChemMedChem* **10**, 815-826 (2015). <https://doi.org/10.1002/cmdc.201500015>
- Günther, R., E. Krause, M. Schümann, I. E. Blasig, R. F. Haseloff**, Depletion of highly abundant proteins from human cerebrospinal fluid: a cautionary note. *Mol Neurodegener* **10**, (2015). Editorial, <https://doi.org/10.1186/s13024-015-0050-7>
- Hackenberger, C. P. R.**, P. R. Chen, Editorial overview: Synthetic biomolecules: Synthetic protein modifications - a giant leap towards understanding and generating biological functions. *Curr Opin Chem Biol* **28**, VII-IX (2015). Editorial, <https://doi.org/10.1016/j.cbpa.2015.09.005>
- Halland\*, N., F. Schmidt, T. Weiss, J. Saas, Z. Y. Li, J. Czech, M. Dreyer, A. Hofmeister, K. Mertsch, U. Dietz, C. Strubing, **M. Nazaré**, Discovery of N-[4-(1H-Pyrazolo[3,4-b]pyrazin-6-yl)-phenyl]sulfonamides as Highly Active and Selective SGK1 Inhibitors. *ACS Med Chem Lett* **6**, 73-78 (2015). <https://doi.org/10.1021/ml5003376>
- Hecht, A. M., B. C. Braun, **E. Krause**, C. C. Voigt, A. D. Greenwood, G. A. Czirjak, Plasma proteomic analysis of active and torpid greater mouse-eared bats (*Myotis myotis*). *Sci Rep* **5**, 16604 (2015). <https://doi.org/10.1038/srep16604>
- Henning, L. M., S. Bhatia, M. Bertazzon, M. Marczyneke, O. Seitz, **R. Volkmer**, R. Haag, C. Freund, Exploring monovalent and multivalent peptides for the inhibition of FBP21-tWW. *Beilstein J Org Chem* **11**, 701-706 (2015). <https://doi.org/10.3762/bjoc.11.80>
- Hu, H. Y., N. H. Lim, D. Ding-Pfennigdorff, J. Saas, K. U. Wendt, O. Ritzeler, H. Nagase, O. Plettenburg, C. Schultz\*, **M. Nazaré\***, DOTAM Derivatives as Active Cartilage-Targeting Drug Carriers for the Treatment of Osteoarthritis. *Bioconjugate Chem* **26**, 383-388 (2015). <https://doi.org/10.1021/bc500557s>
- Hu, H. Y., N. H. Lim, H. P. Juretschke, D. Ding-Pfennigdorff, P. Florian, M. Kohlmann, A. Kandira, **J. P. von Kries**, J. Saas, K. A. Rudolphi, K. U. Wendt, H. Nagase, O. Plettenburg, **M. Nazaré\***, C. Schultz\*, In vivo visualization of osteoarthritic hypertrophic lesions. *Chem Sci* **6**, 6256-6261 (2015). <https://doi.org/10.1039/c5sc01301a>
- Klein, W., C. Westendorf, A. Schmidt, M. Conill-Cortes, C. Rutz, M. Blohs, M. Beyermann, J. Protze, G. Krause, E. Krause, R. Schülein**, Defining a Conformational Consensus Motif in Cotransin-Sensitive Signal Sequences: A Proteomic and Site-Directed Mutagenesis Study. *PLoS One* **10**, e0120886 (2015). <https://doi.org/10.1371/journal.pone.0120886>
- Klingberg, R., J. O. Jost, M. Schümann**, K. A. Gelato, W. Fischle, **E. Krause**, **D. Schwarzer**, Analysis of Phosphorylation-Dependent Protein-Protein Interactions of Histone H3. *ACS Chem Biol* **10**, 138-145 (2015). <https://doi.org/10.1021/cb500563n>
- Koschek, K., V. Durmaz, O. Krylova, M. Wiczorek**, S. Gupta, **M. Richter**, A. Bujotzek, C. Fischer, R. Haag, **C. Freund**, M. Weber, **J. Rademann**, Peptide-polymer ligands for a tandem WW-domain, an adaptive multivalent protein-



- protein interaction: lessons on the thermodynamic fitness of flexible ligands. *Beilstein J Org Chem* **11**, 837-847 (2015). <https://doi.org/10.3762/bjoc.11.93>
- Kuhlmann, M., **O. Reimann**, **C. P. R. Hackenberger**, J. Groll, Cysteine-Functional Polymers via Thiol-ene Conjugation. *Macromol Rapid Comm* **36**, 472-476 (2015). <https://doi.org/10.1002/marc.201400703>
- Kuropka, B.**, **N. Royla**, C. Freund, **E. Krause\***, Sortase A mediated site-specific immobilization for identification of protein interactions in affinity purification-mass spectrometry experiments. *Proteomics* **15**, 1230-1234 (2015). <https://doi.org/10.1002/pmic.201400395>
- Kuropka<sup>§</sup>, B., A. Witte<sup>§</sup>, J. Sticht, N. Waldt, **P. Majkut**, **C. P. R. Hackenberger**, B. Schraven, **E. Krause\***, S. Kliche\*, C. Freund\*, Analysis of Phosphorylation-dependent Protein Interactions of Adhesion and Degranulation Promoting Adaptor Protein (ADAP) Reveals Novel Interaction Partners Required for Chemokine-directed T cell Migration. *Mol Cell Proteomics* **14**, 2961-2972 (2015). <https://doi.org/10.1074/mcp.M115.048249>
- Lan, L. X., J. D. Holland, J. J. Qi, S. Grosskopf, **J. Rademann**, R. Vogel, B. Gyorffy, A. Wulf-Goldenberg, W. Birchmeier, Shp2 signaling suppresses senescence in PyMT-induced mammary gland cancer in mice. *EMBO J* **34**, 1493-1508 (2015). <https://doi.org/10.15252/emboj.201489004>
- Lehmann<sup>§\*</sup>**, **M.**, **B. Gottschalk<sup>§</sup>**, **D. Puchkov**, **P. Schmieder**, **S. Schwagerus**, **C. P. R. Hackenberger**, **V. Haucke**, **J. Schmoranzner\***, Multicolor Caged dSTORM Resolves the Ultrastructure of Synaptic Vesicles in the Brain. *Angew Chem Int Ed* **54**, 13230-13235 (2015). <https://doi.org/10.1002/anie.201505138>
- Marino, J., **N. Bordag**, S. Keller, O. Zerbe, Mistic's membrane association and its assistance in overexpression of a human GPCR are independent processes. *Protein Sci* **24**, 38-48 (2015). <https://doi.org/10.1002/pro.2582>
- Morrison, E., **B. Kuropka**, S. Kliche, B. Brügger, **E. Krause\***, C. Freund\*, Quantitative analysis of the human T cell palmitome. *Sci Rep* **5**, 11598 (2015). <https://doi.org/10.1038/srep11598>
- Mühlberg<sup>§</sup>**, **M.**, M. G. Hoesl<sup>§</sup>, C. Kuehne, J. Dervede, N. Budisa\*, **C. P. R. Hackenberger\***, Orthogonal dual-modification of proteins for the engineering of multivalent protein scaffolds. *Beilstein J Org Chem* **11**, 784-791 (2015). <https://doi.org/10.3762/bjoc.11.88>
- Nischan, N.**, H. D. Herce, F. Natale, N. Bohlke, N. Budisa, M. C. Cardoso, **C. P. R. Hackenberger**, Covalent Attachment of Cyclic TAT Peptides to GFP Results in Protein Delivery into Live Cells with Immediate Bioavailability. *Angew Chem Int Ed* **54**, 1950-1953 (2015). <https://doi.org/10.1002/anie.201410006>
- Opitz<sup>§</sup>**, **R.**, **M. Müller<sup>§</sup>**, C. Reuter<sup>§</sup>, **M. Barone<sup>§</sup>**, A. Soicke, Y. Roske, **K. Piotukh**, P. Huy, **M. Beerbaum**, **B. Wiesner**, **M. Beyermann**, **P. Schmieder**, C. Freund, **R. Volkmer**, **H. Oschkinat**, H. G. Schmalz\*, **R. Kühne\***, A modular toolkit to inhibit proline-rich motif-mediated protein-protein interactions. *Proc Natl Acad Sci USA* **112**, 5011-5016 (2015). <https://doi.org/10.1073/pnas.1422054112>
- Reimann, O.**, **M. Glanz**, **C. P. R. Hackenberger**, Native chemical ligation between asparagine and valine: Application and limitations for the synthesis of tri-phosphorylated C-terminal tau. *Bioorgan Med Chem* **23**, 2890-2894 (2015). <https://doi.org/10.1016/j.bmc.2015.03.028>
- Reimann, O.**, C. Smet-Nocca, **C. P. R. Hackenberger**, Traceless Purification and Desulfurization of Tau Protein Ligation Products. *Angew Chem Int Ed* **54**, 306-310 (2015). <https://doi.org/10.1002/anie.201408674>
- Rosenlöcher, J., **V. Böhrsch**, M. Sacharjat, V. Blanchard, C. Giese, V. Sandig, **C. P. R. Hackenberger**, S. Hinderlich, Applying Acylated Fucose Analogues to Metabolic Glycoengineering. *Bioengineering* **2**, 213-234 (2015). <https://doi.org/10.3390/bioengineering2040213>
- Scheinflug, K.**, **O. Krylova**, **H. Nikolenko**, **C. Thurm**, **M. Dathe**, Evidence for a Novel Mechanism of Antimicrobial Action of a Cyclic R<sub>2</sub>-W-Rich Hexapeptide. *PLoS One* **10**, e125056 (2015). <https://doi.org/10.1371/journal.pone.0125056>
- Schmitz, M., M. Kuhlmann, **O. Reimann**, **C. P. R. Hackenberger**, J. Groll, Side-Chain Cysteine-Functionalized Poly(2-oxazoline)s for Multiple Peptide Conjugation by Native Chemical Ligation. *Biomacromolecules* **16**, 1088-1094 (2015). <https://doi.org/10.1021/bm501697t>

- Schmohl, L., F. R. Wagner, **M. Schümann**, **E. Krause**, D. Schwarzer, Semisynthesis and initial characterization of sortase A mutants containing selenocysteine and homocysteine. *Bioorgan Med Chem* **23**, 2883-2889 (2015). <https://doi.org/10.1016/j.bmc.2015.03.057>
- Schnurr, M.**, **K. Sydow**, **H. M. Rose**, **M. Dathe**, **L. Schröder**, Brain Endothelial Cell Targeting Via a Peptide-Functionalized Liposomal Carrier for Xenon Hyper-CEST MRI. *Adv Healthc Mater* **4**, 40-45 (2015). <https://doi.org/10.1002/adhm.201400224>
- Schulze, M., M. Grobbel, K. Müller, C. Junkes, **M. Dathe**, K. Rüdiger, M. Jung, Challenges and Limits Using Antimicrobial Peptides in Boar Semen Preservation. *Reprod Domest Anim* **50**, 5-10 (2015). Review, <https://doi.org/10.1111/rda.12553>
- Schumacher<sup>§</sup>, D.**, J. Helma<sup>§</sup>, **F. A. Mann**, G. Pichler, F. Natale, **E. Krause**, M. C. Cardoso, **C. P. R. Hackenberger\***, H. Leonhardt\*, Versatile and Efficient Site-Specific Protein Functionalization by Tubulin Tyrosine Ligase. *Angew Chem Int Ed* **54**, 13787-13791 (2015). <https://doi.org/10.1002/anie.201505456>
- Serwa, R. A., F. Abaitua, **E. Krause**, E. W. Tate, P. O'Hare, Systems Analysis of Protein Fatty Acylation in Herpes Simplex Virus-Infected Cells Using Chemical Proteomics. *Chem Biol* **22**, 1008-1017 (2015). <https://doi.org/10.1016/j.chembiol.2015.06.024>
- Shymanets, A., Prajwal, O. Vadas, C. Czapalla, J. LoPiccolo, M. Brenowitz, A. Ghigo, E. Hirsch, **E. Krause**, R. Wetzker, R. L. Williams, C. Harteneck, B. Nürnberg, Different inhibition of G beta gamma-stimulated class IB phosphoinositide 3-kinase (PI3K) variants by a monoclonal antibody. Specific function of p101 as a G beta gamma-dependent regulator of PI3K gamma enzymatic activity. *Biochem J* **469**, 59-69 (2015). <https://doi.org/10.1042/Bj20150099>
- Thongwichian, R.**, **J. Kosten**, U. Benary, **H. M. Rose**, **M. Stuiver**, **F. X. Theillet**, **A. Dose**, B. Koch, H. Yokoyama, **D. Schwarzer**, J. Wolf, **P. Selenko\***, A Multiplexed NMR-Reporter Approach to Measure Cellular Kinase and Phosphatase Activities in Real-Time. *J Am Chem Soc* **137**, 6468-6471 (2015). <https://doi.org/10.1021/jacs.5b02987>
- Vallee, M. R. J.**, **P. Majkut**, **D. Krause**, M. Gerrits, **C. P. R. Hackenberger**, Chemoselective Bioconjugation of Triazole Phosphonites in Aqueous Media. *Chem Eur J* **21**, 970-974 (2015). <https://doi.org/10.1002/chem.201404690>
- Verkman, A. S., A. Edelman, M. Amaral, M. A. Mall, J. M. Beekman, **T. Meiners**, L. J. V. Galletta, C. E. Bear, Finding new drugs to enhance anion secretion in cystic fibrosis: Toward suitable systems for better drug screening. Report on the pre-conference meeting to the 12th ECFS Basic Science Conference, Albufeira, 25-28 March 2015. *J Cyst Fibros* **14**, 700-705 (2015). Conference Report, <https://doi.org/10.1016/j.jcf.2015.10.001>
- Waiczies\*<sup>§</sup>, S., S. Lepore\*<sup>§</sup>, **K. Sydow\*<sup>§</sup>**, S. Drechsler, M. C. Ku, C. Martin, **D. Lorenz**, **I. Schütz**, H. M. Reimann, B. Purfürst, M. A. Dieringer, H. Waiczies, **M. Dathe**, A. Pohlmann, T. Niendorf, Anchoring Dipalmitoyl Phosphoethanolamine to Nanoparticles Boosts Cellular Uptake and Fluorine-19 Magnetic Resonance Signal. *Sci Rep* **5**, 8427 (2015). <https://doi.org/10.1038/srep08427>
- Wang, Y., M. D. V. Moreira, S. Heringer-Walther, H. P. Schultheiss, **W. E. Siems**, N. Wessel, T. Walther, Beta Blockers Prevent Correlation of Plasma ACE2 Activity With Echocardiographic Parameters in Patients With Idiopathic Dilated Cardiomyopathy. *J Cardiovasc Pharm* **65**, 8-12 (2015). <https://doi.org/10.1097/Fjc.000000000000156>
- Williams, C., L. Opalinski, C. Landgraf, J. Costello, M. Schrader, A. M. Krikken, K. Knoops, A. M. Kram, **R. Volkmer**, J. van der Klei, The membrane remodeling protein Pex11p activates the GTPase Dnm1p during peroxisomal fission. *Proc Natl Acad Sci USA* **112**, 6377-6382 (2015). <https://doi.org/10.1073/pnas.1418736112>
- Witte<sup>§</sup>, C.**, **V. Martos<sup>§</sup>**, **H. M. Rose**, **S. Reinke**, **S. Klippel**, **L. Schröder\***, **C. P. R. Hackenberger\***, Live-cell MRI with Xenon Hyper-CEST Biosensors Targeted to Metabolically Labeled Cell-Surface Glycans. *Angew Chem Int Ed* **54**, 2806-2810 (2015). <https://doi.org/10.1002/anie.201410573>

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- Abel\***, S., B. Geltinger, N. Heinrich, D. Michl, A. Klose, M. Beyermann, D. Schwarzer, Semisynthesis and optimization of G protein-coupled receptor mimics. *J Pept Sci* **20**, 831-836 (2014). <https://doi.org/10.1002/psc.2680>
- Basters, A., P. P. Geurink, F. El Oualid, L. Ketscher, M. S. Casutt, E. Krause, H. Ovaa, K. P. Knobeloch, G. Fritz, Molecular characterization of ubiquitin-specific protease 18 reveals substrate specificity for interferon-stimulated gene 15. *FEBS J* **281**, 1918-1928 (2014). <https://doi.org/10.1111/febs.12754>
- Becker, C. F., A. Brik, P. Dawson, C. P. Hackenberger, Chemical protein synthesis. *J Pept Sci* **20**, 63 (2014). Editorial, <https://doi.org/10.1002/psc.2607>
- Bertran-Vicente, J., R. A. Serwa, M. Schümann, P. Schmieder, E. Krause, C. P. R. Hackenberger, Site-Specifically Phosphorylated Lysine Peptides. *J Am Chem Soc* **136**, 13622-13628 (2014). <https://doi.org/10.1021/ja507886s>
- Biller, L., J. Matthiesen, V. Kühne, H. Lotter, G. Handal, T. Nozaki, Y. Saito-Nakano, M. Schümann, T. Roeder, E. Tannich, E. Krause, I. Bruchhaus, The Cell Surface Proteome of *Entamoeba histolytica*. *Mol Cell Proteomics* **13**, 132-144 (2014). <https://doi.org/10.1074/mcp.M113.031393>
- Boldron, C., A. Besse, M. F. Bordes, S. Tissandie, X. Yvon, B. Gau, A. Badorc, T. Rousseaux, G. Barre, J. Meneyrol, G. Zech, M. Nazaré, V. Fossey, A. M. Pflieger, S. Bonnet-Lignon, L. Millet, C. Briot, F. Dol, J. P. Herault, P. Savi, G. Lassalle, N. Delesque, J. M. Herbert, F. Bono, N-[6-(4-Butanoyl-5-methyl-1H-pyrazol-1-yl)pyridazin-3-yl]-5-chloro-1-[2-(4-methylpiperazin-1-yl)-2-oxoethyl]-1H-indole-3-carboxamide (SAR216471), a Novel Intravenous and Oral, Reversible, and Directly Acting P2Y12 Antagonist. *J Med Chem* **57**, 7293-7316 (2014). <https://doi.org/10.1021/jm500588w>
- Chakrabarti, A., J. J. Witsenburg, M. D. Sinzinger, M. Richter, R. Wallbrecher, J. C. Cluitmans, W. P. R. Verdurmen, S. Tanis, M. J. W. Adjobo-Hermans, J. Rademann, R. Brock, Multivalent presentation of the cell-penetrating peptide nona-arginine on a linear scaffold strongly increases its membrane-perturbing capacity. *Biochim Biophys Acta Biomembr* **1838**, 3097-3106 (2014). <https://doi.org/10.1016/j.bbamem.2014.08.001>
- Christian, F., E. Krause, M. D. Houslay, G. S. Baillie, PKA phosphorylation of p62/SQSTM1 regulates PB1 domain interaction partner binding. *Bba-Mol Cell Res* **1843**, 2765-2774 (2014). <https://doi.org/10.1016/j.bbamcr.2014.07.021>
- El-Dahshan, A., S. I. Al-Gharabli, S. Radetzki, T. H. Al-Tel, P. Kumar, J. Rademann, Flexible, polymer-supported synthesis of sphingosine derivatives provides ceramides with enhanced biological activity. *Bioorgan Med Chem* **22**, 5506-5512 (2014). <https://doi.org/10.1016/j.bmc.2014.07.024>
- Engeland, C. E., N. P. Brown, K. Börner, M. Schümann, E. Krause, L. Kaderali, G. A. Müller, H. G. Kräusslich, Proteome analysis of the HIV-1 Gag interactome. *Virology* **460-461**, 194-206 (2014). <https://doi.org/10.1016/j.virol.2014.04.038>
- Frank, R., EU-OPENSREEN - A European Infrastructure of Open Screening Platforms for Chemical Biology. *ACS Chem Biol* **9**, 853-854 (2014). Editorial, <https://doi.org/10.1021/cb500189k>
- Fuchs, M., S. Kämpfer, S. Helmsing, R. Spallek, W. Oehlmann, W. Prilop, R. Frank, S. Dubel, M. Singh, M. Hust, Novel human recombinant antibodies against Mycobacterium tuberculosis antigen 85B. *BMC Biotechnol* **14**, 68 (2014). <https://doi.org/10.1186/1472-6750-14-68>
- Günther, R., E. Krause, M. Schümann, J. Ausseil, J. M. Heard, I. E. Blasig, R. F. Haseloff, Removal of albumin and immunoglobulins from canine cerebrospinal fluid using depletion kits: a feasibility study. *Fluids Barriers CNS* **11**, 14 (2014). <https://doi.org/10.1186/2045-8118-11-14>

- Hebel, K., S. Weinert, **B. Kuropka**, J. Knolle, B. Kosak, G. Jorch, C. Arens, **E. Krause**, R. C. Braun-Dullaeus, M. C. Brunner-Weinzierl, CD4(+) T Cells from Human Neonates and Infants Are Poised Spontaneously To Run a Nonclassical IL-4 Program. *J Immunol* **192**, 5160-5170 (2014). <https://doi.org/10.4049/jimmunol.1302539>
- Holland-Nell, K., M. I. Fernandez-Bachiller, Ahsanullah, **J. Rademann\***, Chemoselective Wittig and Michael Ligations of Unprotected Peptidyl Phosphoranes in Water Furnish Potent Inhibitors of Caspase-3. *Org Lett* **16**, 4428-4431 (2014). <https://doi.org/10.1021/ol501910x>
- Horvath, D., **M. Lisurek**, **B. Rupp**, **R. Kühne**, **E. Specker**, **J. von Kries**, D. Rognan, C. D. Andersson, F. Almqvist, M. Elofsson, P. A. Enqvist, A. L. Gustavsson, N. Remez, J. Mestres, G. Marcou, A. Varnek, M. Hibert, J. Quintana, **R. Frank**, Design of a General-Purpose European Compound Screening Library for EU-OPENSREEN. *ChemMedChem* **9**, 2309-2326 (2014). <https://doi.org/10.1002/cmdc.201402126>
- Jahnke, N.**, **O. O. Krylova**, T. Hoomann, C. Vargas, S. Fiedler, **P. Pohl**, S. Keller, Real-Time Monitoring of Membrane-Protein Reconstitution by Isothermal Titration Calorimetry. *Anal Chem* **86**, 920-927 (2014). <https://doi.org/10.1021/ac403723t>
- Koziol, M. J., T. K. Sievers, K. Smuda, Y. Xiong, A. Müller, F. Wojcik, A. Steffen, **M. Dathe**, R. Georgieva, H. Bäumler, Kinetics and Efficiency of a MethylCarboxylated 5-Fluorouracil- Bovine Serum Albumin Adduct for Targeted Delivery. *Macromol Biosci* **14**, 428-439 (2014). <https://doi.org/10.1002/mabi.201300363>
- Meiners, T.**, **B. Stechmann**, **R. Frank**, EU-OPENSREEN-chemical tools for the study of plant biology and resistance mechanisms. *J Biol Chem* **7**, 113-118 (2014). Other article, <https://doi.org/10.1007/s12154-014-0118-9>
- Mühlberg, M.**, **K. D. Siebertz**, **B. Schlegel**, **P. Schmieder**, **C. P. R. Hackenberger**, Controlled thioamide vs. amide formation in the thioacid-azide reaction under acidic aqueous conditions. *Chem Commun* **50**, 4603-4606 (2014). <https://doi.org/10.1039/C4cc00774c>
- Nischan, N.**, **C. P. R. Hackenberger**, Site-specific PEGylation of Proteins: Recent Developments. *J Org Chem* **79**, 10727-10733 (2014). <https://doi.org/10.1021/jo502136n>
- Pichlo, M., S. Bungert-Plümke, I. Weyand, R. Seifert, W. Bonigk, T. Strunker, N. D. Kashikar, N. Goodwin, A. Müller, P. Pelzer, Q. Van, J. Enderlein, C. Klemm, **E. Krause**, C. Trotschel, A. Poetsch, E. Kremmer, U. B. Kaupp, High density and ligand affinity confer ultrasensitive signal detection by a guanylyl cyclase chemoreceptor. *J Cell Biol* **206**, 541-557 (2014). <https://doi.org/10.1083/jcb.201402027>
- Preidl, J. J.**, V. S. Gnanapragassam, **M. Lisurek**, J. Saupe, R. Horstkorte, **J. Rademann**, Fluorescent Mimetics of CMP-Neu5Ac Are Highly Potent, Cell-Permeable Polarization Probes of Eukaryotic and Bacterial Sialyltransferases and Inhibit Cellular Sialylation. *Angew Chem Int Ed* **53**, 5700-5705 (2014). <https://doi.org/10.1002/anie.201400394>
- Rodriguez Plaza, J. G., R. Morales-Nava, C. Diener, G. Schreiber, Z. D. Gonzalez, M. T. L. Ortiz, I. O. Blake, O. Pantoja, **R. Volkmer**, E. Klipp, A. Herrmann, G. Del Rio, Cell Penetrating Peptides and Cationic Antibacterial Peptides TWO SIDES OF THE SAME COIN. *J Biol Chem* **289**, 14448-14457 (2014). <https://doi.org/10.1074/jbc.M113.515023>
- Schulze, M., **C. Junkes**, P. Mueller, S. Speck, K. Ruediger, **M. Dathe**, K. Mueller, Effects of Cationic Antimicrobial Peptides on Liquid-Preserved Boar Spermatozoa. *PLoS One* **9**, e100490 (2014). <https://doi.org/10.1371/journal.pone.0100490>
- Schumacher, D.**, **C. P. R. Hackenberger**, More than add-on: chemoselective reactions for the synthesis of functional peptides and proteins. *Curr Opin Chem Biol* **22**, 62-69 (2014). Review, <https://doi.org/10.1016/j.cbpa.2014.09.018>
- Speck, S., A. Courtiol, **C. Junkes**, **M. Dathe**, K. Müller, M. Schulze, Cationic Synthetic Peptides: Assessment of Their Antimicrobial Potency in Liquid Preserved Boar Semen. *PLoS One* **9**, e105949 (2014). <https://doi.org/10.1371/journal.pone.0105949>

- Sydow, K., V. P. Torchilin, M. Dathe**, Lipopeptide-modified PEG-PE-based pharmaceutical nanocarriers for enhanced uptake in blood-brain barrier cells and improved cytotoxicity against glioma cells. *Eur J Lipid Sci Tech* **116**, 1174-1183 (2014). <https://doi.org/10.1002/ejlt.201300373>
- Troskie, A. M., M. Rautenbach, N. Delattin, J. A. Vosloo, **M. Dathe**, B. P. A. Cammue\*, K. Thevissen, Synergistic Activity of the Tyrocidines, Antimicrobial Cyclodecapeptides from *Bacillus aneurinolyticus*, with Amphotericin B and Caspofungin against *Candida albicans* Biofilms. *Antimicrob Agents Ch* **58**, 3697-3707 (2014). <https://doi.org/10.1128/Aac.02381-14>
- Vargas, C., G. Radziwill, G. Krause, A. Diehl, S. Keller, N. Kamdem, C. Czekelius, A. Kreuchwig, P. Schmieder, D. Doyle, K. Moelling, V. Hagen, M. Schade, H. Oschkinat**, Small-Molecule Inhibitors of AF6 PDZ-Mediated Protein-Protein Interactions. *ChemMedChem* **9**, 1458-1462 (2014). <https://doi.org/10.1002/cmdc.201300553>
- Veit, M., A. K. Matczuk, B. C. Sinhadri, **E. Krause**, B. Thaa, Membrane proteins of arterivirus particles: Structure, topology, processing and function. *Virus Res* **194**, 16-36 (2014). <https://doi.org/10.1016/j.virusres.2014.09.010>
- Voss, F. K., F. Ullrich, J. Münch, K. Lazarow, D. Lutter, N. Mah, M. A. Andrade-Navarro, J. P. von Kries, T. Stauber\*, T. J. Jentsch\***, Identification of LRRC8 Heteromers as an Essential Component of the Volume-Regulated Anion Channel VRAC. *Science* **344**, 634-638 (2014). <https://doi.org/10.1126/science.1252826>
- Weisshoff, H., S. Hentschel, I. Zaspel, R. Jarling, **E. Krause**, T. L. H. Pham, PPZPMs - a Novel Group of Cyclic Lipodepsipeptides Produced by the *Phytophthora alni* Associated Strain *Pseudomonas* sp JX090307-the Missing Link between the Viscosin and Amphisin Group. *Nat Prod Commun* **9**, 989-996 (2014). <https://doi.org/10.1177/1934578X1400900727>
- Wilde, F., **E. Specker, M. Neuenschwander, M. Nazaré**, A. Bodtke, A. Link, Tractable synthesis of multipurpose screening compounds with under-represented molecular features for an open access screening platform. *Mol Divers* **18**, 483-495 (2014). <https://doi.org/10.1007/s11030-014-9518-6>
- Zhang, S. C., L. Gremer, H. Heise, P. Janning, A. Shymanets, I. C. Cirstea, **E. Krause**, B. Nürnberg, M. R. Ahmadian, Liposome Reconstitution and Modulation of Recombinant Prenylated Human Rac1 by GEFs, GDI1 and Pak1. *PLoS One* **9**, e102425 (2014). <https://doi.org/10.1371/journal.pone.0102425>