

## Publication List – Thomas Monecke

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\* shared first authorship; # corresponding authorship

21. Niedner-Boblentz, A.\*, **Monecke, T.\***, Hennig, J., Klostermann, M., Hofweber, M., Davydova, E., Gerber, A.P., Anosova, I., Mayer, W., Müller, M., Heym, R.G., Janowski, R., Paillart, J.C., Dormann, D., Zarnack, K., Sattler, M., Niessing, D. **(2024)** Intrinsically disordered RNA-binding motifs cooperate to catalyze RNA folding and drive phase separation. *Nucleic Acids Res*, gkae1107
20. Freisem, D., Rodriguez-Alfonso, AA, Lawrenz, J., Zhou, Z., **Monecke, T.**, Preising, N., Endres, S., Wiese, S., Ständker, L., Kuan, SL, Thal, DR, Weil, T., Niessing, D., Barth, H., Kirchhoff, F., Harms, M., Münch, J., Sparrer, KMJ. **(2024)** A naturally occurring 22-amino acid fragment of human hemoglobin A inhibits autophagy and HIV-1. *Cell Mol Life Sci.*, 81(1):409.
19. Proske, M., Janowski, R., Bacher, S., Kang, H.S., **Monecke, T.**, Köhler, T., Hutten, S., Tretter, J., Crois, A., Molitor, L., Varela-Rial, A., Fino, R., Donati, E., Fabritiis, G., Dormann, D., Sattler, M., Niessing, D. **(2024)** PURA Syndrome-causing mutations impair PUR-domain integrity and affect P-body association *eLife*, 13, RP93561.
18. Witzenberger, M., Burczyk, S., Settele, D., Mayer, W., Welp, L.M., Heiss, M., Wagner, M., **Monecke, T.**, Janowski, R., Carell, T., Urlaub, H., Hauck, S.M., Voigt, A., Niessing, D. **(2023)** Human TRMT2A methylates tRNA and contributes to translation fidelity. *Nucleic Acids Res*, 51(16), 8691-8710
17. Gorelik, T.E., Tehrani, K.H.M.E., Grüne, T.\*, **Monecke, T.\***, Niessing, D., Kaiser, U., Blankenfeldt, W., Müller, R. **(2022)** Crystal structure of natural product argyrin-D determined by 3D electron diffraction. *CrystEngComm*, 24, 5885-5889.
16. Zinggrebe, J., Moepps, B., **Monecke, T.**, Gierschik, P., Schlichtig, F., Barth, T.F.E., Strauß, G., Boldrin, E., Posovszky, C., Schulz, A., Beringer, O., Rieser, E., Jacobsen, E.M., Lorenz, M.R., Schwarz, K., Pannicke, U., Walczak, H., Niessing, D., Schuetz, C., Fischer-Posovszky, P., Debatin, K.M. **(2022)** Compound heterozygous variants in OTULIN are associated with fulminant atypical late-onset ORAS. *EMBO Mol Med*, 14(3), e14901.
15. Behrens, G., Edelmann, S.L., Raj, T., Kronbeck, N., **Monecke, T.**, Davydova, E., Wong, E.H., Kifinger, L., Giesert, F., Kirmaier, M.E., Hohn, C., de Jonge, L.S., Pisfil, M.G., Fu, M., Theurich, S., Feske, S., Kawakami, N., Wurst, W., Niessing, D., Heissmeyer, V. **(2021)** Disrupting Roquin-1 interaction with Regnase-1 induces autoimmunity and enhances antitumor responses. *Nat Immunol*, 22(12), 1563-1576.
14. Netz, E., Dijkstra, T.M.H., Sachsenberg, T., Zimmermann, L., Walzer, M., **Monecke, T.**, Ficner, R., Dybkov, O., Urlaub, H. and Kohlbacher, O. **(2020)** OpenPepXL: An open-source tool for sensitive identification of cross-linked peptides in XL-MS. *Mol Cell Proteomics*, 19(12), 2157-2168.
13. **Monecke, T.**, Dickmanns, A., Weiss, M.S., Port, S.A., Kehlenbach, R.H., Ficner, R. **(2015)** Combining dehydration, construct optimization and improved data collection to solve the crystal structure of a CRM1-RanGTP-SPN1-Nup214 quaternary nuclear export complex. *Acta Crystallogr F*, 71(12), 1481-1487.
12. Port, S.A.\*, **Monecke, T.\***, Dickmanns, A., Spillner, C., Hofele, R., Urlaub, H., Ficner, R., Kehlenbach, R. **(2015)** Structural and functional characterization of CRM1-Nup214 interactions reveals multiple FG-binding sites involved in nuclear export. *Cell Rep*, 13(4), 690-702.
11. Dickmanns, A., **Monecke, T.**, Ficner, R. **(2015)** Structural Basis of Targeting the Exportin CRM1 in Cancer. *Cells*, 4(3), 538-568.

10. **Monecke, T.**, Dickmanns, A., Ficner, R. (2014) Allosteric control of the exportin CRM1 unraveled by crystal structure analysis.  
*FEBS J*, 281(18), 4179-4194.
9. Liu, Y., Neumann, P., Kuhle, B., **Monecke, T.**, Schell, S., Chari, A., Ficner, R. (2014) Translation initiation factor eIF3b contains a nine-bladed  $\beta$ -propeller and interacts with the 40S ribosomal subunit.  
*Structure*, 22(6), 923-930.
8. **Monecke, T.**<sup>#</sup>, Buschmann, J., Neumann, P., Wahle, E., Ficner, R. (2014) Crystal Structures of the Novel Cytosolic 5'-Nucleotidase IIIB Explain Its Preference for m<sup>7</sup>GMP.  
*PLoS ONE*, 9(3), e90915.
7. Dölker, N., Blanchet, C.E., Voß, B., Haselbach, D., Kappel, C., **Monecke, T.**, Svergun, D., Stark, H., Ficner, R., Zachariae, U., Grubmüller, H., Dickmanns, A. (2013) Structural Determinants and Mechanism of Mammalian CRM1 Allostery.  
*Structure*, 21(8), 1350-1360.
6. **Monecke, T.**, Haselbach, D., Voß, B., Russek, A., Neumann, P., Thomson, E., Hurt, E., Zachariae, U., Stark, H., Grubmüller, H., Dickmanns, A., Ficner, R. (2013) Structural basis for cooperativity of CRM1 export complex formation.  
*Proc Natl Acad Sci USA*, 110(3), 960-965.
5. Güttler, T., Madl, T., Neumann, P., Deichsel, D., Corsini, L., **Monecke, T.**, Ficner, R., Sattler, M., Görlich, D. (2010) NES consensus redefined by structures of PKI-type and Rev-type nuclear export signals bound to CRM1.  
*Nat Struct & Mol Biol*, 17(11), 1367-1376.
4. **Monecke, T.**<sup>\*</sup>, Güttler, T.<sup>\*</sup>, Neumann, P., Dickmanns, A., Görlich, D., Ficner, R. (2009) Crystal structure of the nuclear export receptor CRM1 in complex with Snurportin1 and RanGTP.  
*Science*, 324(5930), 1087-1091.
3. **Monecke, T.**, Dickmanns, A., Ficner, R. (2009) Structural basis for m<sup>7</sup>G-cap hypermethylation of small nuclear, small nucleolar and telomerase RNA by the dimethyltransferase TGS1.  
*Nucleic Acids Res*, 37(12), 3865-3877.
2. **Monecke, T.**, Dickmanns, A., Strasser, A., Ficner, R. (2009) Structure analysis of the conserved methyltransferase domain of human trimethylguanosine synthase TGS1.  
*Acta Crystallogr D*, 65(4), 332-338.
1. **Monecke, T.**<sup>\*</sup>, Schell, S.<sup>\*</sup>, Dickmanns, A., Ficner, R. (2008) Crystal structure of the RRM domain of poly(A)-specific ribonuclease reveals a novel m<sup>7</sup>G-cap-binding mode.  
*J Mol Biol*, 382(4), 827-834.