

Aktuelle Publikationen

(Peer reviewed, Originalarbeiten)

Hinweis: Der Dozent publiziert unter seinem Geburtsnamen (Meyer, H.)

Buhr, A., Schiemann, R. and Meyer, H. **2023**. Neprilysin 4: An essential peptidase with multifaceted physiological relevance. *Biol Chem*. DOI: 10.1515/hsz-2022-0286.

Schiemann, R., Buhr, A., Cordes, E., Walter, S., Heinisch, J.J., Ferrero, P., Milting, H., Paululat, A., and Meyer, H. **2022**. Neprilysins regulate muscle contraction and heart function via cleavage of SERCA-inhibitory micropeptides. *Nat Commun*, 13(1):4420.

Meyer, C., Breitsprecher, L., Bataille, L., Vincent, A., Drechsler, M., Meyer, H. and Paululat, A. **2022**. Formation and function of a highly specialized type of organelle in cardiac valve cells. *Development*. 149(19):dev200701. doi: 10.1242/dev.200701.

Klinke, N., Meyer, H., Ratnavadivel, S., Reinhardt, M., Heinisch, J.J., Malmendal, A., Milting, H., and Paululat, A. **2022**. A *Drosophila melanogaster* model for TMEM43 related Arrhythmogenic right ventricular cardiomyopathy type 5. *Cell Mol Life Sci*, 79(8):444.

Santalla, M., Garcia, A., Mattiazzi, A., Valverde, C.A., Schiemann, R., Paululat, A., Hernandez, G., Meyer, H.*, and Ferrero, P. **2022**. Interplay between SERCA, 4E-BP and eIF4-E in the *Drosophila* heart. *PLOS ONE*, 17(5):e0267156. (*co-corresponding author)

Meyer, H.*, Buhr, A., Callaerts, P., Schiemann, R., Wolfner, M.F., and Marygold, S.J. **2021**. Identification and bioinformatic analysis of neprilysin and neprilysin-like metalloendopeptidases in *Drosophila melanogaster*. *MicroPubl Biol*, doi:10.17912/micropub.biology.000410. (*co-corresponding author)

Dehnen, L.*, Janz, M.*, Kumar Verma, J., Psathaki, O.E., Langemeyer, L., Fröhlich, F., Heinisch, J.J., Meyer, H., Ungermann, C. and Paululat, A. **2020**. A trimeric metazoan Rab7 GEF complex is crucial for endocytosis and scavenger function. *Journal of Cell Science* 133 (13): jcs.247080, doi: 10.1242/jcs.247080.

Beyenbach, K.W., Schöne, F., Breitsprecher, L.H., Tirbucy, F., Furuse, M., Izumi, Y., Meyer, H., Jonusaite, S., Rodan, A.R. and Paululat, A. **2020**. The septate junction protein Tetraspanin 2A is critical to the structure and function of Malpighian tubules in *Drosophila melanogaster*. *American Journal of Physiology - Cell Physiology* 318 (6): C1107-C1122, doi: 10.1152/ajpcell.00061.2020.

Jonusaite, S., Beyenbach, K.W., Meyer, H., Paululat, A., Izumi, Y., Furuse, M. and Rodan, A.R. **2020**. The septate junction protein Mesh is required for epithelial morphogenesis, ion transport and paracellular permeability in the *Drosophila* Malpighian tubule. *American Journal of Physiology - Cell Physiology* 318 (3): C675-C694. doi: 10.1152/ajpcell.00492.2019.

Schiemann, R., Lammers, K., Janz, M., Lohmann, J., Paululat, A., and Meyer, H. **2019**. Identification and in vivo characterisation of cardioactive peptides in *Drosophila melanogaster*. *Int J Mol Sci*, 20, doi:10.3390/ijms20010002.

Wilmes, A.C., Klinke, N., Rotstein, B., Meyer, H., and Paululat, A. **2018**. Biosynthesis and assembly of the Collagen IV-like protein Pericardin in *Drosophila melanogaster*. *Biol Open*, 7, doi:10.1242/bio.030361.

- Rotstein, B., Post, Y., Reinhardt, M., Lammers, K., Buhr, A., Heinisch, J.J., Meyer, H., and Paululat, A. **2018**. Distinct domains in the matricellular protein Lonely heart are crucial for cardiac extracellular matrix formation and heart function in *Drosophila*. *J Biol Chem*, 293:7864-7879.
- Drechsler, M., Meyer, H., Wilmes, A.C., and Paululat, A. **2018**. APC/C(Fzr) regulates cardiac and myoblast cell numbers, and plays a crucial role during myoblast fusion. *J Cell Sci*, 131(14):jcs209155.
- Balcazar, D., Regge, V., Santalla, M., Meyer, H., Paululat, A., Mattiazzi, A., and Ferrero, P. **2018**. SERCA is critical to control the Bowditch effect in the heart. *Sci Rep*, 8:12447.
- Lammers, K., Abeln, B., Hüsken, M., Lehmacher, C., Psathaki, O.E., Alcorta, E., Meyer, H., and Paululat, A. **2017**. Formation and function of intracardiac valve cells in the *Drosophila* heart. *J Exp Biol*, doi: 10.1242/jeb.156265.
- Hallier, B., Schiemann, R., Cordes, E., Vitos-Faleato, J., Walter, S., Heinisch, J.J., Malmendal, A., Paululat, A., and Meyer, H. **2016**. *Drosophila* neprilysins control insulin signaling and food intake via cleavage of regulatory peptides. *eLife*, doi: 10.7554/eLife.19430.
- Thiel, D., Hugenschütt, M., Meyer, H., Paululat, A., Quijada-Rodriguez, A.R., Purschke, G., and Weihrauch, D. **2016**. Ammonia excretion in the marine polychaete *Eurythoe complanata* (Annelida). *J Exp Biol*, pii:jeb.145615.
- Hallier, B., Hoffmann, J., Roeder, T., Tögel, M., Meyer, H., and Paululat, A. **2015**. The bHLH transcription factor Hand regulates the expression of genes critical to heart and muscle function in *Drosophila melanogaster*. *PLOS ONE*, 10(8):e0134204.
- Husken, M., K. Hufnagel, K. Mende, E. Appel, H. Meyer, H. Peisker, M. Togel, S. Wang, J. Wolff, S.N. Gorb, and A. Paululat. **2015**. Adhesive pad differentiation in *Drosophila melanogaster* depends on the Polycomb group gene Su(z)2. *J Exp Biol* 218:1159-1165.
- Moschner, K., Sundermann, F., Meyer, H., da Graca, A.P., Appel, N., Paululat, A., Bakota, L., and Brandt, R. **2014**. RNA protein granules modulate tau isoform expression and induce neuronal sprouting. *J Biol Chem* 289:16814-16825.
- Drechsler, M., Schmidt, A.C., Meyer, H., and Paululat, A. **2013**. The conserved ADAMTS-like protein lonely heart mediates matrix formation and cardiac tissue integrity. *PLOS Genetics* 9:e1003616.
- Togel, M., Meyer, H., Lehmacher, C., Heinisch, J.J., Pass, G., and Paululat, A. **2013**. The bHLH transcription factor hand is required for proper wing heart formation in *Drosophila*. *Dev Biol* 381:446-459.
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- Wang, S., Meyer, H., Ochoa-Espinosa, A., Buchwald, U., Onel, S., Altenhein, B., Heinisch, J.J., Affolter, M., and Paululat, A. **2012**. GBF1 (Gartenzwerg)-dependent secretion is required for *Drosophila* tubulogenesis. *J Cell Sci* 125:461-472.
- Panz, M., Vitos-Faleato, J., Jendretzki, A., Heinisch, J.J., Paululat, A., and Meyer, H. **2012**. A novel role for the non-catalytic intracellular domain of Neprilysins in muscle physiology. *Biol Cell* 104:553-568.

Weitere Publikationen

Schiemann, R. and Meyer, H. **2023**. Chapter in „Rawlings - Vol. 1 - Handbook of Proteolytic Enzymes: Metallopeptidases, 4th Edition“, ISBN: 9780128235874

Meyer, H. **2017**. Neprilysin: Der Schatz unter den Proteinen?
<http://www.ndr.de/info/Neprilysin-Der-Schatz-unter-Proteinen,audio308040.html>

Meyer, H. **2016**. Diabetesforschung: Neuer Mechanismus zur Regulation des Insulin-Stoffwechsels gefunden.
[http://www.innovations-report.de/html/berichte/ biowissenschaften-chemie/diabetesforschung-neuer-mechanismus-zur-regulation-des-insulin-stoffwechsels-gefunden.html](http://www.innovations-report.de/html/berichte/biowissenschaften-chemie/diabetesforschung-neuer-mechanismus-zur-regulation-des-insulin-stoffwechsels-gefunden.html)