

Curriculum Vitae

Olmer Ruth PD, Dr. rer nat.
d.o.b. December 07th, 1979, in Salzkotten, Germany

University Education

2023 Habilitation Regenerative Bioscience, MHH
2010 Doctorate, MHH
1999–2005 Studies “Molecular Biotechnology University Bielefeld, Germany

Scientific Career

2023 Venia Legendi: Regenerative Biosciences, Hannover Medical School (MHH)
2014 Head of Research Group „Stem Cell based therapies for lung diseases“,
Biomedical Research in Endstage and Obstructive Lung Disease (BREATH),
German Centre for Lung Research (DZL)
Since 11/2012 Principle Investigator in Biomedical Research in Endstage and Obstructive
Lung Disease (BREATH), German Centre for Lung Research (DZL)
2010 – 2014 Postdoctoral position, LEBAO, MHH
2005 – 2010 Doctoral Thesis, Leibniz Research Laboratories for Biotechnology and
Artificial Organs (LEBAO), MHH “Characterization of human pluripotent
stem cells from cord blood and expansion in scalable suspension culture”
Dr. rer. nat.

Reviewer for Scientific Journals: Stem Cells and Development, Cell Reports, Stem Cell
Research & Therapy, European Respiratory Journal,
Journal of Cystic Fibrosis

Memberships of scientific

Societies: since 2017 Member of German Society for Stem Cell
Research (GSCN)

Citation Record

Total citations: 2069; h-index: 18

Top-10 selected Publications

1. Kempf, H.*, **Olmer, R.***, Kropp, C., Ruckert, M., Jara-Avaca, M., Robles-Diaz, D., Franke, A., Elliott, D. A., Wojciechowski, D., Fischer, M., Roa Lara, A., Kensah, G., Gruh, I., Haverich, A., Martin, U., and Zweigerdt, R. 2014. Controlling expansion and cardiomyogenic differentiation of human pluripotent stem cells in scalable suspension culture. *Stem Cell Reports* 3, no. 6:1132. DOI: 10.1016/j.stemcr.2014.09.017. *contributed equally
2. Kempf, H., Kropp, C., **Olmer, R.**, Martin, U., and Zweigerdt, R. 2015. Cardiac differentiation of human pluripotent stem cells in scalable suspension culture. *Nat Protoc* 10, no. 9:1345. DOI: 10.1038/nprot.2015.089.
3. Kropp, C., Kempf, H., Halloin, C., Robles-Diaz, D., Franke, A., Scheper, T., Kinast, K., Knorpp, T., Joos, T. O., Haverich, A., Martin, U., Zweigerdt, R., and **Olmer, R.** 2016. Impact of Feeding

Strategies on the Scalable Expansion of Human Pluripotent Stem Cells in Single-Use Stirred Tank Bioreactors. *Stem Cells Transl Med*. DOI: 10.5966/sctm.2015-0253.

4. **Olmer, R.**, Engels, L., Usman, A., Menke, S., Malik, M. N. H., Pessler, F., Gohring, G., Bornhorst, D., Bolten, S., Abdelilah-Seyfried, S., Scheper, T., Kempf, H., Zweigerdt, R., and Martin, U. 2018. Differentiation of Human Pluripotent Stem Cells into Functional Endothelial Cells in Scalable Suspension Culture. *Stem Cell Reports*. DOI: 10.1016/j.stemcr.2018.03.017.

5. Merkert, S.*, Schubert, M.*, **Olmer, R.***, Engels, L., Radetzki, S., Veltman, M., Scholte, B. J., Zollner, J., Pedemonte, N., Galiotta, L. J. V., von Kries, J. P., and Martin, U. 2019. High-Throughput Screening for Modulators of CFTR Activity Based on Genetically Engineered Cystic Fibrosis Disease-Specific iPSCs. *Stem Cell Reports* 12, no. 6:1389. DOI: 10.1016/j.stemcr.2019.04.014. *contributed equally

6. Pflaum, M., Dahlmann, J., Engels, L., Naghilouy-Hidaji, H., Adam, D., Zollner, J., Otto, A., Schmeckebier, S., Martin, U., Haverich, A., **Olmer, R.**, and Wiegmann, B. 2021. Towards Biohybrid Lung: Induced Pluripotent Stem Cell Derived Endothelial Cells as Clinically Relevant Cell Source for Biologization. *Micromachines (Basel)* 12, no. 8. DOI: 10.3390/mi12080981.

7. Sahabian, A., Dahlmann, J., Martin, U., and **Olmer, R.** 2021. Production and cryopreservation of definitive endoderm from human pluripotent stem cells under defined and scalable culture conditions. *Nat Protoc* 16, no. 3:1581. DOI: 10.1038/s41596-020-00470-5.

8. Lindner, M., Laporte, A., Elomaa, L., Lee-Thedieck, C., **Olmer, R.**, and Weinhart, M. 2022. Flow-induced glycocalyx formation and cell alignment of HUVECs compared to iPSC-derived ECs for tissue engineering applications. *Front Cell Dev Biol* 10:953062. DOI: 10.3389/fcell.2022.953062.

9. Bojkova, D., Reus, P., Panosch, L., Bechtel, M., Rothenburger, T., Kandler, J. D., Pfeiffer, A., Wagner, J. U. G., Shumliakivska, M., Dimmeler, S., **Olmer, R.**, Martin, U., Vondran, F. W. R., Toptan, T., Rothweiler, F., Zehner, R., Rabenau, H. F., Osman, K. L., Pullan, S. T., Carroll, M. W., Stack, R., Ciesek, S., Wass, M. N., Michaelis, M., and Cinatl, J., Jr. 2023. Identification of novel antiviral drug candidates using an optimized SARS-CoV-2 phenotypic screening platform. *iScience* 26, no. 2:105944. DOI: 10.1016/j.isci.2023.105944.

10. von Schledorn, L., Puertollano Martin, D., Cleve, N., Zollner, J., Roth, D., Staar, B. O., Hegermann, J., Ringshausen, F. C., Nawroth, J., Martin, U., and **Olmer, R.** 2023. Primary Ciliary Dyskinesia Patient-Specific hiPSC-Derived Airway Epithelium in Air-Liquid Interface Culture Recapitulates Disease Specific Phenotypes In Vitro. *Cells* 12, no. 11. DOI: 10.3390/cells12111467.