

Leibniz Research Laboratories for Biotechnology and Artificial Organs (LEBAO)
Hannover Medical School (MHH)
Tel: +49-511-5328930
Email: merkert.sylvia@mh-hannover.de

EDUCATION

2014 Dr. rer. nat. in Stem Cell Biology
PhD Program "Regenerative Science", REBIRTH Cluster of Excellence (MHH)
Final grade: summa cum laude
2008 Master of Science in Biomedicine (MHH)
Final grade: very good

PROFESSIONAL EXPERIENCE

Since 09/2022 Principal Investigator German Centre for Lung Research (DZL)
Since 02/2019 Senior Research Fellow for Genome Editing at LEBAO, MHH
02/2014-01 2019 Postdoctoral Research Position LEBAO, Hannover Medical School, Germany
10/2008-01/2014 PhD under supervision of Prof. U. Martin, PhD Program "Regenerative Science",
MHH

STIPENDS AND GRANTS

Mukoviszidose e.V. EFFECT/1807, 200.000€ (co-writing grant application)
Hochschulinterne Leistungsförderung (HiLF), MHH, 24.000€ (applicant)
REBIRTH stipend (2008-2010) PhD Program "Regenerative Science"

PEER REVIEW ACTIVITIES

Stem Cell Research and Therapy
Stem Cells and Development
Molecular Therapy- Methods & Clinical Development

MEMBERSHIP IN SCIENTIFIC SOCIETIES

German Stem Cell Network (GSCN)

CITATION RECORD

Total citations: 1,294; h-index: 18 (*Scopus preview April 2026*)

PUBLICATIONS (TOP 10)

Klassen MC, A Balazs, J Zollner, N Cleve, L Czichon, L von Schledorn, J Hegermann, JC Nawroth, D Roth, M Mielenz, S Hedtfeld, F Stanke, T Rubil, F Ius, D Jonigk, JW Hanrahan, A Ruhparwar, R Olmer, MA Mall[#], **S Merkert[#]** and U Martin[#]. (2025). Human induced pluripotent stem cells for in vitro modeling of impaired mucociliary clearance in cystic fibrosis lung disease. *Stem Cell Res Ther* 16:573. #Authors contributed equally

M.C. Jaboreck, J.L. Lühmann, M. Mielenz, F. Stanke, Gohring, G., U. Martin, R. Olmer[#] and **S. Merkert[#]** (2022). Generation of two TMEM16A knockout iPSC clones each from a healthy human iPSC line, from a Cystic Fibrosis patient specific line with p.Phe508del mutation and from the gene corrected iPSC line. *Stem cell research* 64, 102918. #Authors contributed equally.

S. Wunderlich, A. Haase, **S. Merkert**, K. Jahn, M. Deest, H. Frieling, S. Glage, W. Korte, A. Martens, A. Kirschning, A. Zeug, E. Ponimaskin, G. Gohring, M. Ackermann, N. Lachmann, T. Moritz, R. Zweigerdt, U. Martin (2022). Targeted biallelic integration of an inducible Caspase 9 suicide gene in iPSCs for safer therapies, *Mol Ther Methods Clin Dev*, 26 84-94.

Merkert, S., Jaboreck, M.C., Engels, L., Malik, M.N.H., Gohring, G., Pessler, F., Martin, U., and Olmer, R. (2020). Generation of two human ISG15 knockout iPSC clones using CRISPR/Cas9 editing. *Stem Cell Research* 50, 102135.

Merkert, S., Schubert, M., Haase, A., Janssens, H.M., Scholte, B., Lachmann, N., Gohring, G., and Martin, U. (2020). Generation of an induced pluripotent stem cell line (MHHi018-A) from a patient with Cystic Fibrosis carrying p.Asn1303Lys (N1303K) mutation. *Stem cell research* 44, 101744.

Engels, L., Olmer, R., de la Roche, J., Gohring, G., Ulrich, S., Haller, R., Martin[#], U., and **Merkert[#], S.** (2019). Generation of a CFTR knock-in reporter cell line (MHHi006-A-1) from a human induced pluripotent stem cell line. *Stem cell research* 40, 101542. #Authors contributed equally

Merkert, S., Schubert, M., Olmer, R., Engels, L., Radetzki, S., Veltman, M., Scholte, B.J., Zollner, J., Pedemonte, N., Galiotta, L.J.V., *et al.* (2019). High-Throughput Screening for Modulators of CFTR Activity Based on Genetically Engineered Cystic Fibrosis Disease-Specific iPSCs. *Stem cell reports* 12, 1389-1403.

Malysheva, S., Wunderlich, S., Haase, A., Göhring, G., Martin[#], U., **Merkert[#], S.** (2018). Generation of a human CDX2 knock-in reporter iPSC line (MHHi007-A-1) to model human trophoblast differentiation. *Stem Cell Res* 30:117. #Authors contributed equally

Merkert, S., Wunderlich, S., Bednarski, C., Beier, J., Haase, A., Dreyer, A.-K., Schwanke, K., Meyer, J., Göhring, G., Cathomen, T., and Martin, U. (2014). Efficient designer nuclease-based homologous recombination enables direct PCR screening for footprint less targeted human pluripotent stem cell clones. *Stem Cell Reports* 2, 107-118.

Haase, A., Olmer, R., Schwanke, K., Wunderlich, S., **Merkert, S.**, Hess, C., Zweigerdt, R., Gruh, I., Meyer, J., Wagner, S., Maier, L.S., Han, D.W., Glage, S., Miller, K., Fischer, P., Scholer, H.R., and Martin, U. (2009). Generation of induced pluripotent stem cells from human cord blood. *Cell stem cell* 5, 434-441.