

Dr. Roman Mehling

Personal Data

Status/Function: Post-Doctoral Research Fellow
Scientific focus: Immunology and Inflammation
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Education and qualifications

10/2015 – 07/2023 **Dr. rer. Nat. / PhD Immunology**
Eberhard Karls University Tübingen, Germany
10/2012 – 10/2015 **Master of Science in Microbiology**
Eberhard Karls University Tübingen, Germany
10/2009 – 09/2012 **Bachelor of Science**
Eberhard Karls University Tübingen, Germany

Work Experience

Since 10/2022 **Post-Doctoral Research Fellow**
Research Focus: Immunology and Inflammation
Department for Preclinical Imaging and Radiopharmacy, University of Tübingen, Germany
10/2015 – 10/2022 **PhD Student**
Research Focus: Immunology and Inflammation
Department for Preclinical Imaging and Radiopharmacy, University of Tübingen, Germany
Group: Immunology
10/2014 – 10/2015 **Master thesis**
Identification of staphylococcal enterotoxins as modulators of MDSC generation.
Department of Pediatrics I Infectiology & Immunology
Eberhard Karls University Tübingen, Germany
4/2014 – 7/2015 **Student employee**
ZF/TRW Automotive, Alfdorf, Germany
10/2013 – 3/2014 **Internship**
Interfaculty Institute of Microbiology and Infection Medicine Tuebingen (IMIT)
Eberhard Karls University Tübingen, Germany
4/2012 – 10/2012 **Bachelor thesis**
Die räumliche Organisation humaner und boviner
Chondrozyten in der superfiziellen Zone diarthrodialer Gelenke.
Center for Regenerative Medicine, University of Tübingen, Germany

Teaching Experience

Since 2019 Supervision of internships, Bachelor, Master and Medical students
2016 - 2019 11 - 14th Small Animal Imaging Workshop of the Werner Siemens Imaging Center

2017	Practical course in advanced Optical imaging for Medical Engineering students
2016	Practical course in SPEC CT for Molecular Medicine students

Supervision of master student in biochemistry for laboratory rotation

Additional Qualifications and Skills

<u>Language skills:</u>	German, English, Russian, Spanish
<u>IT qualification:</u>	MS Office, GraphPad Prism, Image J, NCBI, FlowJo, FCS Express, Living Images, Inveon Research Workplace
Animal handling:	Basic Course on Laboratory Animal Science, Eberhard Karls University of Tübingen, Germany (Qualification equivalent to FELASA B)

Publications

1. S. Golombek, T. Hoffmann, L. Hann, M. Mandler, S. Schmidhuber, J. Weber, Y. Chang, **R. Mehling**, A. Ladinig, C. Knecht, J. Leyens, C. Schlensak, H.P. Wendel, A. Schneeberger, M. Avci-Adali. "Improved tropoelastin synthesis in the skin by codon optimization and nucleotide modification of tropoelastin encoding synthetic mRNA." *Molecular Therapy - Nucleic Acids*, 2023, ISSN 2162-2531.
2. Zizmare L, **R. Mehling**, I. Gonzalez-Menendez, Lonati C, L. Quintanilla-Martinez, BJ. Pichler, M. Kneilling, C. Trautwein (2022). "Acute and chronic inflammation alter immunometabolism in a cutaneous delayed-type hypersensitivity reaction (DTHR) mouse model. " *Commun Biol.* 15;5(1):1250.
3. **Mehling, R.**, J. Schwenck, C. Lemberg, C. Trautwein, L. Zizmare, D. Kramer, A. Muller, B. Fehrenbacher, I. Gonzalez-Menendez, L. Quintanilla-Martinez, K. Schroder, R. P. Brandes, M. Schaller, W. Ruf, M. Eichner, K. Ghoreschi, M. Rocken, B. J. Pichler and M. Kneilling (2021). "Immunomodulatory role of reactive oxygen species and nitrogen species during T cell-driven neutrophil-enriched acute and chronic cutaneous delayed-type hypersensitivity reactions." *Theranostics* 11(2): 470-490.
4. Schwenck, J., **R. Mehling**, W. M. Thaiss, D. Kramer, I. G. Menendez, H. H. Oz, D. Hartl, K. Schulze-Osthoff, S. Hailfinger, K. Ghoreschi, L. Quintanilla-Martinez, H. Carlsen, M. Rocken, B. J. Pichler and M. Kneilling (2020). "Temporal Dynamics of Reactive Oxygen and Nitrogen Species and NF-kappaB Activation During Acute and Chronic T Cell-Driven Inflammation." *Mol Imaging Biol* 22(3): 504-514.
5. Weber, M., A. Fech, L. Jager, H. Steinle, L. Buhler, R. M. Perl, P. Martirosian, **R. Mehling**, D. Sonanini, W. K. Aicher, K. Nikolaou, C. Schlensak, M. D. Enderle, H. P. Wendel, W. Linzenbold and M. Avci-Adali (2020). "Hydrojet-based delivery of footprint-free iPSC-derived cardiomyocytes into porcine myocardium." *Sci Rep* 10(1): 16787.
6. Schwenck, J., A. Maurer, B. Fehrenbacher, **R. Mehling**, P. Knopf, N. Mucha, D. Haupt, K. Fuchs, C. M. Griessinger, D. Bukala, J. Holstein, M. Schaller, I. G. Menendez, K. Ghoreschi, L. Quintanilla-Martinez, M. Gutschow, S. Laufer, T.

Reinheckel, M. Rocken, H. Kalbacher, B. J. Pichler and M. Kneilling (2019). "Cysteine-type cathepsins promote the effector phase of acute cutaneous delayed-type hypersensitivity reactions." *Theranostics* 9(13): 3903-3917.

7. Stoll, H., M. Ost, A. Singh, **R. Mehling**, D. Neri, I. Schafer, A. Velic, B. Macek, D. Kretschmer, C. Weidenmaier, A. Hector, R. Handgretinger, F. Gotz, A. Peschel, D. Hartl and N. Rieber (2018). "Staphylococcal Enterotoxins Dose-Dependently Modulate the Generation of Myeloid-Derived Suppressor Cells." *Front Cell Infect Microbiol* 8: 321.
8. Ost, M., A. Singh, A. Peschel, **R. Mehling**, N. Rieber and D. Hartl (2016). "Myeloid-Derived Suppressor Cells in Bacterial Infections." *Front Cell Infect Microbiol* 6: 37.

Conferences and Courses

Conferences:

Novel concepts in innate immunity – AMSYS 2023, Tübingen, Germany:

Poster: Impact of canonical and non-canonical NF- κ B signaling pathway on acute and chronic cutaneous delayed-type hypersensitivity reaction (DTHR)

International Societies for Investigative Dermatology Meeting – ISID 2023, Tokyo, Japan:

Poster: Noncanonical NF- κ B signaling is essential for development of chronic contact hypersensitivity (CHS)

49ste Tagung Arbeitsgemeinschaft Dermatologische Forschung, – ADF 2023, Innsbruck, Austria:

Oral presentation: Noncanonical NF- κ B signaling is inevitable for development of chronic contact hypersensitivity reaction (CHS)

48ste Tagung Arbeitsgemeinschaft Dermatologische Forschung Tagung, – ADF 2022, Virtual Meeting:

Poster: Differential role of reactive oxygen and nitrogen species in contact hypersensitivity reaction

World Molecular Imaging Congress – WMIC 2019, Montreal, Canada:

Poster: Immunomodulatory role of reactive oxygen and nitrogen species during T-cell driven cutaneous delayed-type hypersensitivity reaction

14th European Molecular Imaging Meeting – EMIM 2019, Glasgow, Scotland:

Oral presentation: Noncanonical NF- κ B activation is essential for the development of chronic cutaneous delayed-type hypersensitivity reaction

13th European Molecular Imaging Meeting – EMIM 2018, San Sebastian, Spain:

Poster: Uncovering the essential reactive oxygen and nitrogen species (ROS/RNS) source with a ROS-sensitive chemiluminescence optical imaging (OI) probe in mice with differently impaired ROS/RNS production

5th European Congress of Immunology – ECI 2018, Amsterdam, Netherlands:

Poster: Minor immunomodulatory role of reactive oxygen species and nitrogen species (ROS/RNS) during T-cell driven neutrophil-enriched acute and chronic cutaneous delayed-type hypersensitivity reaction (DTHR)

OPTICAL IMAGING – from Molecules to Humans (TOPIM TECH), 2017, Crete, Greece:

Oral presentation: Essential repressor functions of canonical NF- κ B activation during acute and chronic T-cell driven delayed-type hypersensitivity reaction.

12th European Molecular Imaging Meeting – EMIM 2017, Cologne, Germany:

Poster: Canonical NF- κ B activation modulates leucocyte recruitment and oxidative stress during acute and chronic contact hypersensitivity reactions

Frontiers in Redox Biology and Medicine (FirBaM), 2016, Rostock, Germany:

Oral presentation: In vivo dynamics of reactive oxygen species (ROS) and NF- κ B activation during acute and chronic T cell driven inflammation.

World Molecular Imaging Congress – WMIC 2016, New York, USA:

Poster: Canonical NF- κ B activation modulates leucocyte recruitment and oxidative stress during acute and chronic contact hypersensitivity reaction.

46th Annual Meeting of the German Society for Immunology (DGfI) 2016, Hamburg, Germany:

Poster: Canonical NF- κ B activation exhibit essential repressor functions during acute and chronic contact hypersensitivity reaction.

Professional Memberships

2016 - 2022

ESMI – European Society of Molecular Imaging