

Research profile

Kneilling, Manfred, PD Dr. med., *22.08.1969, male

Senior physician, senior research fellow and group leader

- a) Department of Dermatology
Eberhard Karls University Tübingen
Liebermeisterstr. 25
72076 Tübingen
Phone: +49 7071/2986870
- b) Department of Preclinical Imaging and
Radiopharmacy, Werner Siemens Imaging
Center
Röntgenweg 13
72076 Tübingen
Phone: +49 7071/2986870



E-mail: manfred.kneilling@med.uni-tuebingen.de

Education

10/1993 – 07/2001 Medical School, Ludwig Maximilians University, Munich

Degrees

01/2022 Habilitation in Dermatology, „molekulare Modulation von Entzündungsprozessen“, mentor: Prof. Dr. med. Martin Röcken, Eberhard Karls University Tübingen

07/2004 Doctoral thesis in Medicine, “Zur Rolle des TNF-LT-Komplexes bei verzögerten Immunreaktionen am Beispiel der kontaktallergischen Reaktion”, Department of Dermatology, Eberhard Karls University Tübingen, Prof. Dr. med. Martin Röcken (summa cum laude)

Academic career

01/2022 Call for a W3 professorship for translational dermatology, Heidelberg, Germany – 01/2023 call refused

10/2021 – present Senior physician in Dermatology, head of the allergology section, Department of Dermatology, Eberhard Karls University of Tübingen, Germany

08/2007 – 09/2021 Specialist in Dermatology, Department of Dermatology, Eberhard Karls University of Tübingen, Germany

02/2003 – 07/2007 Resident in Dermatology, Department of Dermatology, Eberhard Karls University of Tübingen, Germany

11/2002 – 01/2003 Internship, Department of Dermatology, Eberhard Karls University of Tübingen, Germany

08/2001 – 10/2002 Internship, Department of Dermatology, Ludwig Maximilians University Munich, Germany

Awards and activities

2021 European Society of Dermatological Research, Poster-Award (senior author)

2021 European Society of Molecular Imaging Congress, Poster Award (senior author)

2019 World Molecular Imaging Congress, Category Chair: Inflammation/Immunology,

2014 – 2017	European Society of Molecular Imaging, Category Chair: Inflammation/Immunology
2012 – 2015	World Molecular Imaging Congress, Category Chair: Inflammation/Immunology
2012	World Molecular Imaging Congress, Poster-Award (senior author)
2011	German Society of Dermatological Research, Poster Award (senior author)
2010	European Society of Molecular Imaging Congress, Poster Award (senior author)
2006	German Society for Dermatological Research, Poster Award
2006	Fortüne-Kolloquium; Medical Faculty of the Eberhard Karls University of Tübingen, Poster Award
2005	Karl Liebermeister Award of the Medical Faculty of the Eberhard Karls University Tübingen

Research grants

12/2022– 06/2023	TRANSVAC2 Infrastructure Access Call 2211-15: NIPPET; “Noninvasive Imaging of Inflammatory Processes by Macrophage-directed PET tracers during SARS-COV-2 Infection”; M. Kneilling, D. Sonanini, U. Rothbauer (0,2 Mio €)
07/2022 – 06/2024	Helix Biopharma, Ontario, Canada; “Assessment of the therapeutic response of L-DOS47 in several CEACAM6 expressing cancer models with advanced preclinical metabolic imaging”; M. Kneilling & A. Martins (0,9 Mio €).
07/2019 – 06/2023	CRC 156 „ <i>The skin as sensor and effector organ, orchestrating local and systemic immunity</i> “; TP C03: “ <i>Impact of noncanonical NF-κB signaling during hapten-induced skin inflammation</i> “; M. Kneilling & B. Pichler (465.200€)
07/2020 –06/2022	Exzellenzcluster 2180 "Individualisierung von Tumorthérapien durch molekulare Bildgebung und funktionelle Identifizierung therapeutischer Zielstrukturen (iFIT), flexible Projektförderung, Projekt: 10077-1: “Oncolytic Viruses promote Immune Checkpoint Inhibitors and TAA-Th1 Cell based Immune therapies”; M. Kneilling & U. Lauer (144.420€)
09/2019 – 08/2024	Innovative Medicines Initiative (IMI2) - H2020-JTI-IMI2-2018-14 “ <i>Immune-Image: Specific Imaging of Immune Cell Dynamics Using Novel Tracer Strategies</i> ” Work Package IV Leadership; M. Kneilling & B. Pichler (1.103.496€)
2020 – 2021	Exzellenzstrategie „Research - Relevance - Responsibility, Unterstützung für den Aufbau von strategischen Forschungsk Kooperationen im Bereich Immune-Imaging (Stanford-Tübingen Collaboration on Imaging Immunotherapy) "Identifying and applying new imaging biomarkers for immune cells based on RNAseq"; M. Kneilling & A. Maurer (Tübingen: 30.000€) & K. Ferrara (Stanford: 30.000€).
02/2018 - 02/2020	DAAD-Stipend (PhD Student: Philipp Knopf), "Characterization and Image Guided Modulation of the Tumor microenvironment (TME)" (21.686€).
07/2015 – 06/2019	SFB Transregio 156, TP C03: " <i>Impact of reactive oxygen species and NF-κB signaling during hapten-induced skin inflammation</i> "; M. Kneilling & B. Pichler (415.200€)
07/2013 – 06/2017	SFB 685 „ <i>Immuntherapie: Von den molekularen Grundlagen zur klinischen Anwendung</i> “; TP B06 “ <i>Non-invasive in vivo imaging of the mode and sites of action of tumor-associated antigen-specific T cells</i> “; M. Kneilling & B. Pichler (402.000€)
07/2009 – 06/2013	SFB 685; TP B06 “ <i>Non-invasive imaging of T cell trafficking into solid tumors</i> “; M. Kneilling & B. Pichler (355 T€)

- 2005 – 2007 National Institute of Health – National Institute of Allergy and Infectious Diseases, USA; R03-Antrag “*Non-invasive Imaging of T-Cell Trafficking*”; M. Kneilling & B. Pichler (110.000US\$)
- 2005 – 2006 *fortüne* Normal-Antrag, Medizinische Fakultät des Universitätsklinikums Tübingen; “*Nicht invasive in vivo Untersuchung der Hypoxie-induzierten Angiogenese im Verlauf T-Zell-vermittelter Immunantworten*”; M. Kneilling (53.000€)

Patents

Novel single domain antigen binding molecules and their uses (EP21182579, June 20, 2021)

Clinical studies (IIT)

EudraCT: 2021-004328-13: „Early detection of side effects in patients with metastatic melanoma receiving immune checkpoint inhibitor therapy by investigation of the CD8+ immune infiltrate using [89Zr]Zr-Df-IAB22M2C-PET“

Publications (selection)

- Schwenck J, Sonanini D, Seyfried D, Ehrlichmann W, Kienzle G, Reischl G, Krezer P, Wilson Ian, Korn R, Gonzalez-Menendez I, Quintanilla-Martinez L, Seith F, Forschner A, Eigentler T, Zender L, Röcken M, Pichler B, Flatz L, **Kneilling M**^{*}, la Fougere C^{*}. In vivo imaging of CD8⁺ T cells in metastatic cancer patients: first clinical experience with simultaneous [⁸⁹Zr]Zr-Df-IAB22M2C PET/MRI. *Theranostics* 2023; 13(8):2408-2423; ***contributed equally**
- Sonanini D, Griessinger CM, Schörg B, Knopf P, Röcken M, Pichler BJ, **Kneilling M**. Low dose total body irradiation facilitates antitumoral Th1 immune responses. *Theranostics*. 2021; 11(16):7700-7714.
- Thaiss WM, Gatidis S, Sartorius T, Machann J, Peter A, Eigentler TK, Nikolaou K, Pichler BJ, **Kneilling M**. Noninvasive, longitudinal imaging-based analysis of body adipose tissue and water composition in a melanoma mouse model and in immune checkpoint inhibitor-treated metastatic melanoma patients. *Cancer Immunol Immunother*. 2021 vol. 70: 1263.
- Brenner E, Schörg BF, Ahmetlić F, Wieder T, Hilke FJ, Simon N, Schroeder C, Demidov G, Riedel T, Fehrenbacher B, Schaller M, Forschner A, Eigentler T, Niessner H, Sinnberg T, Böhm KS, Hömberg N, Braumüller H, Dauch D, Zwirner S, Zender L, Sonanini D, Geishauser A, Bauer J, Eichner M, Jarick KJ, Beilhack A, Biskup S, Döcker D, Schadendorf D, Quintanilla-Martinez L, Pichler BJ, **Kneilling M**, Mocikat R, Röcken M. Cancer immune control needs senescence induction by interferon-dependent cell cycle regulator pathways in tumours. *Nat Commun*. 2020. 11(1):1335. (IF: 14.919).
- Schwenck J, Schörg B, Fiz F, Sonanini D, Forschner A, Eigentler T, Weide B, Martella M, Gonzalez-Menendez I, Campi C, Sambuceti G, Seith F, Quintanilla-Martinez L, Garbe C, Pfannenbergl C, Röcken M, la Fougere C, Pichler BJ, **Kneilling M**. Cancer immunotherapy is accompanied by distinct metabolic patterns in primary and secondary lymphoid organs observed by non-invasive in vivo 18F-FDG-PET. *Theranostics*. 2020. 10(2):925-937. (IF: 11.556).
- Fuchs K, Kuehn A, Mahling M, Guenthoer P, Hector A, Schwenck J, Hartl D, Laufer S, Kohlhofer U, Quintanilla-Martinez L, Reischl G, Röcken M, Pichler BJ, **Kneilling M**. In Vivo Hypoxia PET Imaging Quantifies the Severity of Arthritic Joint Inflammation in Line with Overexpression of Hypoxia-Inducible Factor and Enhanced Reactive Oxygen Species Generation. *J Nucl Med*. 2017. 58(5):853-860. (IF: 7.439).
- Griessinger CM, Maurer A, Kesenheimer C, Kehlbach R, Reischl G, Ehrlichmann W, Bukala D, Harant M, Cay F, Brück J, Nordin R, Kohlhofer U, Rammensee HG, Quintanilla-Martinez L, Schaller M, Röcken M, Pichler BJ, **Kneilling M**. 64Cu antibody-targeting of the T-cell receptor and subsequent internalization enables in vivo tracking of lymphocytes by PET. *Proc Natl Acad Sci U S A*. 2015; 112:1161-6. (IF: 9.423).

8. Griessinger CM, Kehlbach R, Bukala D, Wiehr S, Bantleon R, Cay F, Schmid A, Braumüller H, Fehrenbacher B, Schaller M, Eichner M, Sutcliffe JL, Ehrlichmann W, Eibl O, Reischl G, Cherry SR, Röcken M, Pichler BJ, **Kneilling M**. In vivo tracking of Th1 cells by PET reveals quantitative and temporal distribution and specific homing in lymphatic tissue. *J Nucl Med*. 2014. 55(2):301-7. (IF: 6.16).
9. Braumüller H, Wieder T, Brenner E, Aßmann S, Hahn M, Alkhaled M, Schilbach K, Essmann F, **Kneilling M**, Griessinger C, Ranta F, Ullrich S, Mocikat R, Braungart K, Mehra T, Fehrenbacher B, Berdel J, Niessner H, Meier F, van den Broek M, Häring HU, Handgretinger R, Quintanilla-Martinez L, Fend F, Pesic M, Bauer J, Zender L, Schaller M, Schulze-Osthoff K, Röcken M. T-helper-1-cell cytokines drive cancer into senescence. *Nature*. 2013. 494(7437):361-5. (IF: 42.351).
10. Müller-Hermelink N, Braumüller H, Pichler B, Wieder T, Mailhammer R, Schaak K, Ghoreschi K, Yazdi A, Haubner R, Sander CA, Mocikat R, Schwaiger M, Förster I, Huss R, Weber WA, **Kneilling M**, Röcken M. TNFR1 signaling and IFN-gamma signaling determine whether T cells induce tumor dormancy or promote multistage carcinogenesis. *Cancer Cell*. 2008. 13(6):507-18. (IF: 24.962).
11. **Kneilling M**, Mailhammer R, Hültner L, Schönberger T, Fuchs K, Schaller M, Bukala D, Massberg S, Sander CA, Braumüller H, Eichner M, Maier KL, Hallmann R, Pichler BJ, Haubner R, Gawaz M, Pfeffer K, Biedermann T, Röcken M. Direct crosstalk between mast cell-TNF and TNFR1-expressing endothelia mediates local tissue inflammation. *Blood*. 2009;114(8):1696-706. (IF: 10.555).

All Publications:

<https://pubmed.ncbi.nlm.nih.gov/?term=Kneilling+or+Kneiling&sort=date>