

Curriculum Vitae

Personal Data

Title	Dr. rer. nat.
First name	Hsin-Fang
Name	Chang
Current position	Research Group Leader (tenure)
Current institution(s)/site(s), country	Department of Cellular Neurophysiology, CIPMM, Saarland University (UdS), Homburg, Germany
Identifiers/ORCID	0000-0002-7691-4090

Qualifications and Career

Stages	Periods and Details
Bachelor of Science	09/2006 - 07/2010 Fragrance and Cosmetic Science, Kaohsiung Medical University, Taiwan
Master of Science	09/2010 - 07/2011 Fragrance and Cosmetic Science, Kaohsiung Medical University, Taiwan
Dr. rer. nat. (summa cum laude)	05/2012 - 06/2017 DFG scholarship. 'GK1326-Calcium-Signaling and Cellular Nanodomains'. Physiology, Saarland University, Germany
Stages of academic/professional career	Since 05/2021 Research Group Leader (tenure), Department of Cellular Neurophysiology, CIPMM, Faculty of Medicine, Saarland University 05/2019-04/2021 Postdoctoral Fellow, tenure position. Department of Cellular Neurophysiology, CIPMM, Faculty of Medicine, Saarland University 02/2017-04/2019 Postdoctoral Fellow, Institute for neuroimmunology and multiple sclerosis research, University medical center Göttingen

Activities in the Research System

Fundings

2024-2025	DAAD-NSTC program for 2 years (German-Taiwan seeding fund).
2022	SFB894 Teilprojekt A10 (co-PI).
2021-2024	HOMFORexcellent grant for 3 year project.
2021-2024	BioNanoMed, Young Investigator Grant for 3 year project.
2020	HOMFOR grant for 1 year project.

Teaching activities

Since 2024 Member of the examination committee for the oral examination (Physikum, der erste Abschnitt der Ärztlichen Prüfung) in Physiology for the medical examination at UdS.

Since 2022 Physiology course 'Central Nervous System Block' for medical students at UdS.

Organization of Scientific Meetings and Mentor program

11/2023	Mentor program, TU Dortmund, Germany
10/2023	2nd European Taiwanese Conference for Science and Technology (ETCST), ETH, Zürich, Switzerland
09/2022	1st European Taiwanese Conference for Science and Technology (ETCST), Berlin, Germany

Conferences & Symposia

12/2023	Invited speaker, Cancer Research Center of Toulouse (CRCT), Toulouse, France
10/2023	Speaker, ERC synergy consortium 'ATTACK Cancer' symposium, Freinsheim, Germany
10/2023	Speaker, Cell Physics conference (organized by DGZ and SFB1027), Saarbrücken, Germany
10/2023	Invited speaker, 2nd European Taiwanese Conference for Science and Technology (ETCST), ETH, Zürich, Switzerland
10/2023	Speaker, Symposium-Translationale Forschung in der Onkologie, Universitäres Tumorzentrum des Saarlandes, Germany
09/2022	Conference program chair, 1st European Taiwanese Conference for Science and Technology (ETCST), Berlin, Germany
10/2022	Speaker, ERC synergy consortium 'ATTACK Cancer' symposium, Oxford, UK
09/2021	Invited Speaker, Conference of Taiwan Elite in DACH-region on Advanced Engineering and Biomedical Technologies, Bad Homburg, Germany
09/2020	Invited Speaker, Conference of Taiwan Elite in DACH-region on Advanced Engineering and Biomedical Technologies, Berlin, Germany
05/2019	Speaker, Rare Immune Disease 'HLH' symposium, Paris, France.
09/2017	Invited Speaker, 38th IUPS Congress, Rio de Janeiro, Brazil

Membership

Since 09/2023	Center for Gender-specific Biology and Medicine (CGBM), PI.
Since 06/2023	Review Editorial Board Journal Frontiers in Immunology. Member.
Since 06/2022	European Taiwanese Science and Technology Association (ETSTA), Co-Founder and Executive Board Member.

Supervision of Researchers in Early Career Phases

Szu-Min Tu	PhD student; ongoing (since 2020)
Ching-Hsin Lin	PhD student; ongoing (since 2020)
Marie-Louise Wirkner	PhD student; ongoing (since 2020)
Marie-Louise Wirkner	Master student; degree 2019
Pascal Blatt	Master student; degree 2017

Scientific Results

Category A

Ten most important publications

1. Lin CH, Scheller A, Liu Y, Krause E, **Chang HF** (2023). Study of Effector CD8+ T Cell Interactions with Cortical Neurons in Response to Inflammation in Mouse Brain Slices and Neuronal Cultures. *Int J Mol Sci.* 24(4):3166. DOI: 10.3390/ijms24043166
2. **Chang HF**, Schirra C, Pattu V, Krause E, Becherer U (2023). Lytic granule exocytosis at immune synapses: lessons from neuronal synapses. *Front Immunol.*14:1177670. DOI: 10.3389/fimmu.2023.1177670
2. Schirra C, Alawar N, Becherer U, **Chang HF** (2023). Separation of Single Core and Multicore Lytic Granules by Subcellular Fractionation and Immunoisolation. *Methods Mol Biol.* 2654:159-167. DOI: 10.1007/978-1-0716-3135-5_11
3. **Chang HF***, Schirra C, Ninov M, Hahn U, Ravichandran K, Krause E, Becherer U, Bálint Š, Harkiolaki M, Urlaub H, Valitutti S, Baldari CT, Dustin ML, Jahn R, and Rettig J* (2022). Identification of distinct cytotoxic granules as the origin of supramolecular attack particles in T lymphocytes. *Nat. Commun.* 13(1):1029. *corresponding author. DOI: 10.1038/s41467-022-28596-y
4. Fang LP, Zhao N, Caudal LC, **Chang HF**, Zhao R, Lin CH, Hainz N, Meier C, Bettler B, Huang W, Scheller A, Kirchhoff F, Bai X (2022). Impaired bidirectional communication between interneurons and oligodendrocyte precursor cells affects social cognitive behavior. *Nat. Commun.* 13(1):1394. DOI: 10.1038/s41467-022-29020-1
5. Chitirala P*, **Chang HF***, Martzloff P, Harenberg C, Ravichandran K, Abdulreda MH, Berggren PO, Krause E, Schirra C, Leinders-Zufall T, Benseler F, Brose N, Rettig J (2020). Studying the biology of cytotoxic T lymphocytes in vivo with a fluorescent granzyme B-mTFP knock-in mouse. *eLife.* 9: e58065. *equal contribution. DOI: 10.7554/eLife.58065
6. **Chang HF***, Wirkner ML, Krause E, Rettig J* (2020). Investigation of Cytotoxic T Lymphocyte Function during Allotransplantation in the Anterior Chamber of the Eye. *Int. J. Mol. Sci.* 21. 4660. *corresponding author. DOI: 10.3390/ijms21134660
7. Lodygin D, Hermann M, Schweingruber N, Flügel-Koch C, Watanabe T, Schlosser C, Merlini A, Körner H, **Chang HF**, Fischer HJ, Reichardt HM, Zagrebelsky M, Mollenhauer B, Frahm J, Stadelmann C, Kügler S, Fitzner D, Haberl M, Odoardi F, Flügel A (2019). β -Synuclein reactive T cells induce autoimmune CNS grey matter degeneration. *Nature* 566, 503-508. doi: 10.1038/s41586-019-0964-2.
8. **Chang HF**, Mannebach S, Beck A, Ravichandran K, Krause E, Frohnweiler K, Fecher-Trost C, Schirra C, Pattu V, Flockerzi V, Rettig J (2018). Cytotoxic granule exocytosis depends on the Flower protein. *J. Cell Biol.* 217, 667-683. Highlighted in biosights (JCB Journal Club) <https://jcb-journalclub.rupress.org/2018/02/index.html>. DOI: 10.1083/jcb.201706053
9. **Chang HF**, Bzeih H, Schirra C, Chitirala P, Halimani M, Cordat E, Krause E, Rettig J, Pattu V (2016). Endocytosis of cytotoxic granules is essential for multiple killing of target cells by T lymphocytes. *J. Immunol.* 197, 2473-2484. DOI: 10.4049/jimmunol.1600828
10. Matti U, Pattu V, Halimani M, Schirra C, Krause E, Liu Y, Weins L, **Chang HF**, Guzman R, Olausson J, Freichel M, Schmitz F, Pasche M, Becherer U, Bruns D, Rettig J (2013). Synaptobrevin2 is the v-SNARE required for cytotoxic T lymphocyte lytic granule fusion. *Nat. Commun.* 4, 1439. DOI: 10.1038/ncomms2467

Category B

Patent

- 2013 US patent. Chen, H.T., Chang, H.F., Wang, Y.H., Kao, C.L. Anionic cell penetrating peptide and its use for intracellular delivery. Patent No. US 8614194 B1.

Academic Distinctions

2017 Calogero Pagliarello-Studienspreis for excellent Ph.D. thesis. Saarland University.