



## Pardes Habib

Instructor, Neurosurgery

### Bio

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#### BIO

Pardes Habib, MD/PhD, is an Instructor in the Department of Neurosurgery at Stanford University School of Medicine. His research focuses on how human neural stem cells (hNSCs) drive brain repair after chronic stroke. By integrating state-of-the-art imaging (MRI/PET) with spatially resolved multi omics, he maps structural and molecular remodeling after stroke and aims to identify diagnostic and prognostic biomarkers that drive the development and refinement of precision, cell-based therapies.

Dr. Habib completed dual doctorates in Neurology/Neuroscience (MD/PhD) and Biochemistry (PhD) at RWTH Aachen University in Germany, where he later earned a Habilitation (Venia Legendi) in Experimental Neurology—an academic qualification comparable to an associate professorship.

As head of Aachen's Translational Stroke Research Group, he investigated neuroprotective and neuroinflammatory pathways and illuminated the roles of inflammasome activation and the unfolded protein response in acute ischemic stroke.

Since joining Dr. Gary Steinberg's laboratory at Stanford in 2022, Dr. Habib has focused on decoding the molecular crosstalk among hNSCs, immune cells, and host neural circuits. His long-term goal is to transform these insights into targeted interventions that restore function and quality of life for patients living with the aftermath of stroke.

#### ACADEMIC APPOINTMENTS

- Instructor, Neurosurgery

#### ADMINISTRATIVE APPOINTMENTS

- Instructor, Stanford University School of Medicine, (2025- present)
- Habilitation/Assoc. Prof., Dept. of Neurology, RWTH Aachen University, Germany, (2022- present)

#### HONORS AND AWARDS

- MRI Pilot Grant, Wu Tsai Neurosciences Institutes, Preclinical Imaging Lab, Stanford University (05/2024-05/2025)
- 10X Genomics Poster Award, Society for Neuroscience (SFN) 2023, Washington DC, USA (11/2023)
- Postdoctoral Fellowship, German Research Foundation (DFG) (05/2022-04/2025)
- Fellow of the Academy of Science, Academy of Science and Arts, Nord Rhine Westphalia, Germany (01/2022-01/2026)
- Clinician scientist Fellowship, RWTH Aachen University, NRW, Germany (1/2019-01/2021)
- Max Planck/Gertrud Reemtsma Fellowship, Max Planck Institute (01/2016-01/2018)
- Young Investigator Research Grant (START), RWTH Aachen University, NRW, Germany (07/2017-07/2019)
- King Friedrich Wilhelm IV Prize for outstanding doctoral theses, RWTH Aachen University, NRW, Germany (10/2016)
- Borchers-Gold-Medal for exceptional academic performance, RWTH Aachen University, NRW, Germany (09/2016)

- Grünenthal Company Award for Young Investigators, Grünenthal, Germany (06/2016)
- The Else-Kröner-Fresenius Fellowship, E-Fellows-scholarship, Else-Kröner-Fresenius, Germany (11/2013-01/2016)
- 64th Lindau Nobel Laureate Meeting Fellowship, Nobel Laureate Meeting , Lindau, Germany (06/2014)
- Stipend, German Academic Scholarship Foundation (01/2010-12/2012)
- The Hertie-Foundation START-Scholarship, The Hertie-Foundation (08/2006-06/2008)

## PROFESSIONAL EDUCATION

- Instructor, Stanford University School of Medicine , Neurosurgery (2025)
- PostDoc, Stanford University, School of Medicine, Neurosurgery , Neuroscience (2022)
- Venia legendi/Habilitation, RWTH Aachen University, Aachen, Germany , Experimental Neurology (2022)
- PhD, RWTH Aachen University, Institute for Biology II, Department for Neurobiological Research and Institute of Biochemistry and Molecular Immunology, Aachen Germany , Biology/Biochemistry (2020)
- Residency, Department of Neurology, RWTH Aachen University, Aachen, Germany , Neurology (2016)
- MD/PhD, RWTH Aachen University, Institute of Neuroanatomy, Aachen, Germany , Neurosciences (2016)
- MD, RWTH Aachen University, Department of Neurology, Aachen, Germany , Neurology/ Neuroscience (2016)

## LINKS

- Google Scholar: <https://scholar.google.com/citations?user=dBHprocAAAAJ&hl=en>
- LinkedIn: <https://www.linkedin.com/in/dr-pardes-habib/>
- Researchgate: [https://www.researchgate.net/profile/Pardes-Habib?ev=hdr\\_xprf](https://www.researchgate.net/profile/Pardes-Habib?ev=hdr_xprf)
- MyBibliography: <https://www.ncbi.nlm.nih.gov/myncbi/pardes.habib.1/bibliography/public/>

## Publications

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### PUBLICATIONS

- **BRAF/MEK inhibition induces cell state transitions boosting immune checkpoint sensitivity in BRAFV600E-mutant glioma.** *Cell reports. Medicine*  
Xing, Y. L., Panovska, D., Park, J. W., Grossauer, S., Koeck, K., Bui, B., Nasajpour, E., Nirschl, J. J., Feng, Z. P., Cheung, P., Habib, P., Wei, R., Wang, et al  
2025: 102183
- **Point-of-care ultrasound of the common carotid arteries for detection of large vessel occlusion stroke: Results of the POCUS-LVO study.** *European stroke journal*  
Pinho, J., Tyurina, A., Hartmann, C., Audeh, O. A., Habib, P., Abdelnaby, R., Matz, O., Felzen, M., Brokmann, J. C., Wiesmann, M., Schulz, J. B., Nikoubashman, O., Reich, et al  
2025: 23969873251315337
- **Clinical state and future directions of stem cell therapy in stroke rehabilitation.** *Experimental neurology*  
Habib, P., Steinberg, G. K.  
2024: 115132
- **Unfavorable neurological long-term outcome despite eTICI 3 - What are the predictors?** *Clinical neurology and neurosurgery*  
Taufik, H., Hager, C., Blum, F., Jazi, E. Y., Habib, P., Ridwan, H., Ferreira de Pinho, J. D., Wiesmann, M., Reich, A., Nikoubashman, O., Hasan, D.  
2024; 245: 108501
- **In Vivo Polymer Mechanochemistry with Polynucleotides.** *Advanced materials (Deerfield Beach, Fla.)*  
Ishaqat, A., Hahmann, J., Lin, C., Zhang, X., He, C., Rath, W. H., Habib, P., Sahnoun, S. E., Rahimi, K., Vinokur, R., Mottaghy, F. M., Göstl, R., Bartneck, et al  
2024: e2403752
- **The prostate-specific membrane antigen holds potential as a vascular target for endogenous radiotherapy with [177Lu]Lu-PSMA-I&T for triple-negative breast cancer.** *Breast cancer research : BCR*

Heesch, A., Florea, A., Maurer, J., Habib, P., Werth, L. S., Hansen, T., Stickeler, E., Sahnoun, S. E., Mottaghy, F. M., Morgenroth, A.  
2024; 26 (1): 30

- **Validation of Dual-Action Chemo-Radio-Labeled Nanocarriers with High Efficacy against Triple-Negative Breast Cancer** *ACS APPLIED MATERIALS & INTERFACES*  
Ilyas, S., E. M. Sahnoun, S., Szymura, A., Pes, J., Habib, S., Florea, A., Schaefer, L., Buhl, E., Morgenroth, A., Habib, P., Mottaghy, F. M., Mathur, S.  
2023; 15 (42): 48963-48977
- **Point-of-Care Ultrasound to Detect Acute Large Vessel Occlusions in Stroke Patients: A Proof-of-Concept Study.** *The Canadian journal of neurological sciences. Le journal canadien des sciences neurologiques*  
Habib, P., Dimitrov, I., Pinho, J., Schürmann, K., Bach, J. P., Wiesmann, M., Schulz, J. B., Reich, A., Nikoubashman, O.  
2023; 50 (5): 656-661
- **Erythropoietin Abrogates Post-Ischemic Activation of the NLRP3, NLRC4, and AIM2 Inflammasomes in Microglia/ Macrophages in a TAK1-Dependent Manner (vol 32, pg 462, 2022)** *TRANSLATIONAL STROKE RESEARCH*  
Heinisch, O., Zeyen, T., Goldmann, T., Prinz, M., Huber, M., Jung, J., Arik, E., Habib, S., Slowik, A., Reich, A., Schulz, J. B., Habib, P.  
2023: 689-690
- **Small-molecule modulators of TRMT2A decrease PolyQ aggregation and PolyQ-induced cell death.** *Computational and structural biotechnology journal*  
Margreiter, M. A., Witznberger, M., Wasser, Y., Davydova, E., Janowski, R., Metz, J., Habib, P., Sahnoun, S. E., Sobisch, C., Poma, B., Palomino-Hernandez, O., Wagner, M., Carell, et al  
2022; 20: 443-458
- **Epicardial adipose tissue thickness assessed by CT is a marker of atrial fibrillation in stroke patients** *ANNALS OF CLINICAL AND TRANSLATIONAL NEUROLOGY*  
Edsen, F., Habib, P., Matz, O., Nikoubashman, O., Wiesmann, M., Frick, M., Marx, N., Schulz, J. B., Reich, A., Pinho, J.  
2022; 9 (10): 1668-1672
- **Standardized hypoxia-reoxygenation protocol to assess posthypoxic neurobehavioral impairments and molecular mechanisms in Drosophila melanogaster.** *STAR protocols*  
Jung, J., Fehr, A. T., Voigt, A., Habib, P.  
2022; 3 (3): 101634
- **Erythropoietin Enhances Post-ischemic Migration and Phagocytosis and Alleviates the Activation of Inflammasomes in Human Microglial Cells.** *Frontiers in cellular neuroscience*  
Arik, E., Heinisch, O., Bienert, M., Gubelj, L., Slowik, A., Reich, A., Schulz, J. B., Wilhelm, T., Huber, M., Habib, P.  
2022; 16: 915348
- **Erythropoietin Abrogates Post-Ischemic Activation of the NLRP3, NLRC4, and AIM2 Inflammasomes in Microglia/Macrophages in a TAK1-Dependent Manner.** *Translational stroke research*  
Heinisch, O., Zeyen, T., Goldmann, T., Prinz, M., Huber, M., Jung, J., Arik, E., Habib, S., Slowik, A., Reich, A., Schulz, J. B., Habib, P.  
2022; 13 (3): 462-482
- **Imaging patterns of cerebral ischemia in hypereosinophilic syndrome: case report and systematic review** *NEUROLOGICAL SCIENCES*  
Miethe, K., Iordanishvili, E., Habib, P., Panse, J., Kraemer, S., Wiesmann, M., Schulz, J. B., Nikoubashman, O., Reich, A., Pinho, J.  
2022; 43 (8): 5091-5094
- **Classification of patients with embolic stroke of undetermined source into cardioembolic and non-cardioembolic profile subgroups** *EUROPEAN JOURNAL OF NEUROLOGY*  
Martin, M., Sichtermann, T., Schuermann, K., Habib, P., Wiesmann, M., Schulz, J. B., Nikoubashman, O., Pinho, J., Reich, A.  
2022; 29 (8): 2275-2282
- **Alpha-Synuclein-Specific Naturally Occurring Antibodies Inhibit Aggregation In Vitro and In Vivo** *BIOMOLECULES*  
Braczynski, A. K., Sevenich, M., Gering, I., Kupreichyk, T., Agerschou, E. D., Kronimus, Y., Habib, P., Stoldt, M., Willbold, D., Schulz, J. B., Bach, J., Falkenburger, B. H., Hoyer, et al  
2022; 12 (3)
- **Transient Focal Cerebral Ischemia Leads to miRNA Alterations in Different Brain Regions, Blood Serum, Liver, and Spleen** *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*  
Voelz, C., Ebrahimy, N., Zhao, W., Habib, P., Zendedel, A., Pufe, T., Beyer, C., Slowik, A.

2022; 23 (1)

- **Erythropoietin Abrogates Post-ischemic Activation of the NLRP3, NLRC4, and AIM2 Inflammasomes in Microglia/Macrophages in a TAK1-Dependent Manner (Sept, 10.1007/s12975-021-00948-8, 2021) TRANSLATIONAL STROKE RESEARCH**  
Heinisch, O., Zeyen, T., Goldmann, T., Prinz, M., Huber, M., Jung, J., Arik, E., Habib, S., Slowik, A., Reich, A., Schulz, J. B., Habib, P.  
2022; 13 (5): 860
- **Increased Post-Hypoxic Oxidative Stress and Activation of the PERK Branch of the UPR in Trap1-Deficient Drosophila melanogaster Is Abrogated by Metformin. International journal of molecular sciences**  
Kokott-Vuong, A., Jung, J., Fehr, A. T., Kirschfink, N., Noristani, R., Voigt, A., Reich, A., Schulz, J. B., Huber, M., Habib, P.  
2021; 22 (21)
- **CK1BP Reduces  $\alpha$ -Synuclein Oligomerization and Aggregation Independent of Serine 129 Phosphorylation. Cells**  
Elsholz, L., Wasser, Y., Ziegler, P., Habib, P., Voigt, A.  
2021; 10 (11)
- **Dehydroepiandrosterone (DHEA) Serum Levels Indicate Cerebrospinal Fluid Levels of DHEA and Estradiol (E2) in Women at Term Pregnancy. Reproductive sciences (Thousand Oaks, Calif.)**  
Habib, P., Neulen, J., Habib, S., Rösing, B.  
2021; 28 (10): 2823-2829
- **Aggregated Tau-PHF6 (VQIVYK) Potentiates NLRP3 Inflammasome Expression and Autophagy in Human Microglial Cells CELLS**  
Panda, C., Voelz, C., Habib, P., Mevissen, C., Pufe, T., Beyer, C., Gupta, S., Slowik, A.  
2021; 10 (7)
- **Intrauterine hCG application increases expression of endothelial cell-cell adhesion molecules in human ARCHIVES OF GYNECOLOGY AND OBSTETRICS**  
Bienert, M., Habib, P., Buck, V., Classen-Linke, I., Skoblo, R., Roesing, B.  
2021; 304 (6): 1587-1597
- **Alteration of miRNA Biogenesis Regulating Proteins in the Human Microglial Cell Line HMC-3 After Ischemic Stress. Molecular neurobiology**  
Voelz, C., Habib, P., Köberlein, S., Beyer, C., Slowik, A.  
2021; 58 (4): 1535-1549
- **Gaze Deviation and Paresis Score (GPS) Sufficiently Predicts Emergent Large Vessel Occluding Strokes. Journal of stroke and cerebrovascular diseases : the official journal of National Stroke Association**  
Johannes, B., Habib, P., Schürmann, K., Nikoubashman, O., Wiesmann, M., Schulz, J. B., Reich, A.  
2021; 30 (3): 105518
- **Posthypoxic behavioral impairment and mortality of Drosophila melanogaster are associated with high temperatures, enhanced predeath activity and oxidative stress. Experimental & molecular medicine**  
Habib, P., Jung, J., Wilms, G. M., Kokott-Vuong, A., Habib, S., Schulz, J. B., Voigt, A.  
2021; 53 (2): 264-280
- **Gonadal Hormones E2 and P Mitigate Cerebral Ischemia-Induced Upregulation of the AIM2 and NLRC4 Inflammasomes in Rats. International journal of molecular sciences**  
Habib, P., Harms, J., Zendedel, A., Beyer, C., Slowik, A.  
2020; 21 (13)
- **Microglial-specific depletion of TAK1 is neuroprotective in the acute phase after ischemic stroke. Journal of molecular medicine (Berlin, Germany)**  
Zeyen, T., Noristani, R., Habib, S., Heinisch, O., Slowik, A., Huber, M., Schulz, J. B., Reich, A., Habib, P.  
2020; 98 (6): 833-847
- **Differential use of BTK and PLC in Fc $\epsilon$ RI- and KIT-mediated mast cell activation: A marginal role of BTK upon KIT activation. Biochimica et biophysica acta. Molecular cell research**  
Simonowski, A., Wilhelm, T., Habib, P., Zorn, C. N., Huber, M.  
2020; 1867 (4): 118622
- **NLRP3 Depletion Fails to Mitigate Inflammation but Restores Diminished Phagocytosis in BV-2 Cells After In Vitro Hypoxia MOLECULAR NEUROBIOLOGY**  
Schoelwer, I., Habib, P., Voelz, C., Rolfes, L., Beyer, C., Slowik, A.

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- **EPO and TMBIM3/GRINA Promote the Activation of the Adaptive Arm and Counteract the Terminal Arm of the Unfolded Protein Response after Murine Transient Cerebral Ischemia.** *International journal of molecular sciences*  
Habib, P., Stamm, A. S., Schulz, J. B., Reich, A., Slowik, A., Capellmann, S., Huber, M., Wilhelm, T.  
2019; 20 (21)
- **EPO regulates neuroprotective Transmembrane BAX Inhibitor-1 Motif-containing (TMBIM) family members GRINA and FAIM2 after cerebral ischemia-reperfusion injury.** *Experimental neurology*  
Habib, P., Stamm, A. S., Zeyen, T., Noristani, R., Slowik, A., Beyer, C., Wilhelm, T., Huber, M., Komnig, D., Schulz, J. B., Reich, A.  
2019; 320: 112978
- **Fingolimod (FTY720) is not protective in the subacute MPTP mouse model of Parkinson's disease and does not lead to a sustainable increase of brain-derived neurotrophic factor** *JOURNAL OF NEUROCHEMISTRY*  
Komnig, D., Dagli, T., Habib, P., Zeyen, T., Schulz, J. B., Falkenburger, B. H.  
2018; 147 (5): 678-691
- **Impact of steroid hormones E2 and P on the NLRP3/ASC/Casp1 axis in primary mouse astroglia and BV-2 cells after in vitro hypoxia** *JOURNAL OF STEROID BIOCHEMISTRY AND MOLECULAR BIOLOGY*  
Slowik, A., Lammerding, L., Zendedel, A., Habib, P., Beyer, C.  
2018; 183: 18-26
- **Modern Interdisciplinary and Interhospital Acute Stroke Therapy-What Patients Think About It and What They Really Understand** *JOURNAL OF STROKE & CEREBROVASCULAR DISEASES*  
Pressler, H., Reich, A., Schulz, J., Nikoubashman, O., Willmes, K., Habib, P., Bach, J.  
2018; 27 (10): 2669-2676
- **$\alpha$ 1-antitrypsin mitigates NLRP3-inflammasome activation in amyloid  $\beta$ 1-42-stimulated murine astrocytes.** *Journal of neuroinflammation*  
Ebrahimi, T., Rust, M., Kaiser, S. N., Slowik, A., Beyer, C., Koczulla, A. R., Schulz, J. B., Habib, P., Bach, J. P.  
2018; 15 (1): 282
- **Faim2 contributes to neuroprotection by erythropoietin in transient brain ischemia** *JOURNAL OF NEUROCHEMISTRY*  
Komnig, D., Gertz, K., Habib, P., Nolte, K. W., Meyer, T., Brockmann, M. A., Endres, M., Rathkolb, B., de Angelis, M., Schulz, J. B., Falkenburger, B. H., Reich, A., German Mouse Clinic Consortium  
2018; 145 (3): 258-270
- **Estrogen serum concentration affects blood immune cell composition and polarization in human females under controlled ovarian stimulation.** *The Journal of steroid biochemistry and molecular biology*  
Habib, P., Dreymueller, D., Rösing, B., Botung, H., Slowik, A., Zendedel, A., Habib, S., Hoffmann, S., Beyer, C.  
2018; 178: 340-347
- **Estrogen Attenuates Local Inflammasome Expression and Activation after Spinal Cord Injury** *MOLECULAR NEUROBIOLOGY*  
Zendedel, A., Moennink, F., Hassanzadeh, G., Zaminy, A., Ansar, M., Habib, P., Slowik, A., Kipp, M., Beyer, C.  
2018; 55 (2): 1364-1375
- **Reduction of glutamate-induced excitotoxicity in murine primary neurons involving calpain inhibition** *JOURNAL OF THE NEUROLOGICAL SCIENCES*  
Gold, M., Koczulla, A., Mengel, D., Koepke, J., Dodel, R., Dontcheva, G., Habib, P., Bach, J.  
2015; 359 (1-2): 356-362
- **Regulation of brain microglia by female gonadal steroids.** *The Journal of steroid biochemistry and molecular biology*  
Habib, P., Beyer, C.  
2015; 146: 3-14
- **Omega-3 polyunsaturated fatty acids ameliorate neuroinflammation and mitigate ischemic stroke damage through interactions with astrocytes and microglia.** *Journal of neuroimmunology*  
Zendedel, A., Habib, P., Dang, J., Lammerding, L., Hoffmann, S., Beyer, C., Slowik, A.  
2015; 278: 200-11
- **Hypoxia-induced gene expression of aquaporin-4, cyclooxygenase-2 and hypoxia-inducible factor 1 $\alpha$  in rat cortical astroglia is inhibited by 17 $\beta$ -estradiol and progesterone.** *Neuroendocrinology*  
Habib, P., Dang, J., Slowik, A., Victor, M., Beyer, C.

2014; 99 (3-4): 156-67

- **Regulation of hypoxia-induced inflammatory responses and M1-M2 phenotype switch of primary rat microglia by sex steroids.** *Journal of molecular neuroscience : MN*  
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2014; 52 (2): 277-85
- **Sex steroid hormone-mediated functional regulation of microglia-like BV-2 cells during hypoxia.** *The Journal of steroid biochemistry and molecular biology*  
Habib, P., Dreymueller, D., Ludwig, A., Beyer, C., Dang, J.  
2013; 138: 195-205
- **Comparison of infarct volume and behavioral deficit in Wistar Kyoto and spontaneously hypertensive rat after transient occlusion of the middle cerebral artery** *SPRINGERPLUS*  
Garcia, J., Dang, J., Habib, P., Beyer, C., Kipp, M.  
2013; 2: 414
- **Long-term cerebral cortex protection and behavioral stabilization by gonadal steroid hormones after transient focal hypoxia** *JOURNAL OF STEROID BIOCHEMISTRY AND MOLECULAR BIOLOGY*  
Ulbrich, C., Zendedel, A., Habib, P., Kipp, M., Beyer, C., Dang, J.  
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