

Curriculum Vitae

Alexander Perniss Dr. rer. nat.
d.o.b. April 27th, 1988, in Suhl, Germany

University Education

2022 Dr. rer. nat. Biology Justus Liebig University Giessen
2015-2022 PhD Student Justus Liebig University Giessen
2013-2015 M.Sc. Biology Justus Liebig University Giessen
2010-2013 B.Sc. Biology Justus Liebig University Giessen

Scientific Career

Since 2026 Principal Investigator German Center for Lung Research
Since 2026 Junior Research Group Leader University zu Luebeck, Institute for Anatomy,
Luebeck, Germany
Since 2023 Postdoctoral Fellow, Division of Allergy and Clinical Immunology, Brigham &
Women's Hospital and Department of Medicine, Harvard Medical School,
Boston, MA, USA
2022-2023 Postdoctoral Fellow, JLU Giessen, Institute for Anatomy and
Cell Biology, Germany
2015-2022 PhD Student, JLU Giessen, Institute for Anatomy and Cell
Biology, PI Wolfgang Kummer, Germany
2015 Erasmus Internship University of Newcastle, UK, PI Michael
Gray

Awards and Honors

2023 Promotionspreis der Deutschen Stiftung für Lungenforschung (PhD award of
the German Lung Foundation)
2022 Promotionspreis der Deutschen Anatomischen Gesellschaft (PhD award of the
German Anatomical Society)
2018 Early Career Researcher Poster Competition Winner, The Physiological
Society, Europhysiology, London
2018 Poster Award, German Anatomical Society Meeting
2018 Poster Award, German Center for Lung Research (DZL)
2017 Young Investigator Award, German Anatomical Society
2015 Erasmus-Plus Stipend, University of Newcastle, UK
2025 American Academy of Allergy, Asthma & Immunology (AAAAI) Travel
Scholarship, San Diego, USA
2024 European Chemoreception Society Travel Fellowship, Reykjavik, Iceland
2024 Harvard Catalyst Grant, Startup grant to perform light sheet microscopy of the
murine olfactory mucosa

Citation Record

Total citations: 529; h-index:13; h-index since 2021: 11 (Google Scholar June 1, 2026)

Top-10 selected Publications

* Shared first authorship

1. **Perniss A**, Liu S, Boonen B, Keshavarz M, Ruppert AL, Timm T, Pfeil U, Soultanova A, Kusumakshi S, Delventhal L, Aydin Ö, Pyrski M, Deckmann K, Hain T, Schmidt N, Ewers C, Günther A, Lochnit G, Chubarov V, Gudermann T, Oberwinkler J, Klein J, Mikoshiba K, Leinders-Zufall T, Offermanns S, Schütz B, Boehm U, Zufall F, Bufe B, Kummer W. Chemosensory Cell-Derived Acetylcholine Drives Tracheal Mucociliary Clearance in Response to Virulence-Associated Formyl Peptides. **Immunity**. 2020 Apr 14;52(4):683-699.e11.
2. Ualiyeva S*, Lemire E*, Wong C*, **Perniss A***, Boyd A, Avilés EC, Minichetti DG, Maxfield A, Roditi R, Matsumoto I, Wang X, Deng W, Barrett NA, Buchheit KM, Laidlaw TM, Boyce JA, Bankova, Haber AL. A nasal cell atlas reveals heterogeneity of tuft cells and their role in directing olfactory stem cell proliferation. **Science Immunology**. 2024 9,eabq4341.
3. **Perniss A***, Boonen B*, Tonack S, Thiel M, Poharkar K, Alnouri MW, Keshavarz M, Papadakis T, Wiegand S, Pfeil U, Richter K, Althaus M, Oberwinkler J, Schütz B, Boehm U, Offermanns S, Leinders-Zufall T, Zufall F, Kummer W. A succinate/SUCNR1-brush cell defense program in the tracheal epithelium. **Science Advances**. 2023 Aug 2;9(31):eadg8842.
4. Mahmoud W*, **Perniss A***, Poharkar K, Soultanova A, Pfeil U, Hoek A, Bhushan S, Hain T, Gärtner U, Kummer W. CXCL13 is expressed in a subpopulation of neuroendocrine cells in the murine trachea and lung. **Cell and Tissue Research**. 2021 Nov 11.
5. **Perniss A***, Schmidt P*, Soultanova A, Papadakis T, Dahlke K, Voigt A, Schütz B, Kummer W, Deckmann K. Development of epithelial cholinergic chemosensory cells of the urethra and trachea of mice. **Cell and Tissue Research**. 2021 Jul;385(1):21-35.
6. **Perniss A**, Latz A, Boseva I, Papadakis T, Dames C, Meisel C, Meisel A, Scholze P, Kummer W, Krasteva-Christ G. Acute nicotine administration stimulates ciliary activity via $\alpha 3\beta 4$ nAChR in the mouse trachea. **International Immunopharmacology**. 2020 Jul;84:106496.
7. Derakhshan T, Hollers E, **Perniss A**, Ryan T, McGill A, Hacker J, Bergmark RW, Bhattacharyya N, Lee SE, Maxfield AZ, Roditi RE, Bankova L, Buchheit KM, Laidlaw TM, Boyce JA, Dwyer DF. Human intraepithelial mast cell differentiation and effector function are directed by TGF- β signaling. **Journal of Clinical Investigation**. 2025 Jan 2;135(1):e174981
8. Mahmoud W*, **Perniss A***, Poharkar K, Keshavarz M, Gärtner U, Oberwinkler J, Schütz B, Worzfeld T, Offermanns S, Kummer W. Differential expression of villin and advillin by neuroendocrine and tuft cells in the murine lower airways. **Cell and Tissue Research**. 2025 Oct;402(1):1-20.
9. **Perniss A**, Schmidt N, Gurtner C, Dietert K, Schwengers O, Weigel M, Hempe J, Ewers C, Pfeil U, Gärtner U, Gruber AD, Hain T, Kummer W. Bordetella pseudohinzii targets cilia and impairs tracheal cilia-driven transport in naturally acquired infection in mice. **Scientific Reports**. 2018 Apr 9;8(1):5681.
10. **Perniss A**, Preiss K, Nier M, Althaus M. Hydrogen sulfide stimulates CFTR in Xenopus oocytes by activation of the cAMP/PKA signalling axis. **Scientific Reports**. 2017 Jun 14;7(1):3517.