Curriculum Vitae

Personal information

Claudia Buerger

Work experience

present |SCIENTIFIC ASSESSOR

Section Quality Assessment Coagulation Products and Gene Therapy, Paul-Ehrlich-Institute, Federal Institute for Vaccines and Biomedicines, Langen, Germany

| 2010 - 2024 | GROUP LEADER, PRINCIPAL INVESTIGATOR,

Immunology laboratory, Department of Dermatology, University Hospital Frankfurt, Germany

- Molecular pathomechanisms of inflammatory skin diseases
- Identification of molecular targets, preclinical testing of substances
- Development of 2D and 3D in vitro skin models and organoid systems, including genetic manipulation

| 2021 - 2024 | SCIENTIFIC LAB HEAD

Andrology Laboratory, Department of Dermatology, University Hospital Frankfurt, Germany

- Management of a laboratory for diagnostics and cryopreservation of semen material
- Responsible according to §20c AMG: production and release of tissue preparations
- Monitoring of legal regulations, management of official audits

| 2008 - 2010 | POSTDOCTORAL REASEARCH FELLOW

Immunology laboratory, Department of Dermatology, University Hospital Frankfurt, Germany

- Investigation of signaling pathways of epidermal homeostasis
- Development and establishment of biochemical, immunological and cell biological readout assays

| 2003 - 2008 || POSTDOCTORAL RESEARCH Fellow

Ontario Cancer Institute, Toronto, Canada/ Johannes Gutenberg University Mainz

- Genetic manipulation of the cellular localization of the ras-like GTPase Rheb

| 1998 - 2002 | Ph.D. STUDENT

Institute for Biomedical Research, Georg-Speyer-Haus, Frankfurt, Germany

- Development of a screening system for interacting peptides
- Preclinical validation and characterization of inhibitory properties
- Large scale expression and purification of recombinant proteins
- Establishment of various protein transduction techniques

Education and training

| 2018 | HABILITATION, PD Dr. med. habil.

Johann Wolfgang Goethe University, Frankfurt, Germany

- Molecular pathomechanisms of psoriasis and their suitability as therapeutic targets

| 1998 - 2002 | | Ph.D., Dr. phil. Nat Grade: very good

Georg-Speyer-Haus/ Johann-Wolfgang-Goethe-University, Frankfurt, Germany

- Inhibition of signal transduction of the EGF receptor by peptide aptamers - a new approach for cancer therapy

| 1995- 1998 | MASTER BIOLOGY, Diploma

Albert-Ludwig-University, Freiburg, Germany

| 1993- 1995 | BACHELOR BIOLOGY

Eberhard-Karl- University, Tübingen, Germany

Additional information

Publications

1. The Volume-Regulated Anion Channel LRRC8 is Involved in the Initiation of Epidermal Differentiation and is Deregulated in Psoriasis
Jahn M, Lang V, Rauh O, Fauth T, Buerger C
JID innovations 2025, *doi: 10.1016/j.xjidi.2025.100357*

2. RNAi-based ALOX15B silencing augments keratinocyte inflammation in vitro via EGFR/STAT1/JAK1 signalling.
Palmer MA, Kirchhoff R, Buerger C, Benatzy Y, Schebb NH, Brüne B.
Cell Death Dis. 2025 Jan 22;16(1):39. doi: 10.1038/s41419-025-07357-x.

3. A Novel Epidermis Model Using Primary Hidradenitis Suppurativa Keratinocytes
Haferland I, Pinter A, Rossmanith T, Diehl S, Buerger C, Ickelsheimer T, Kaufmann R, Koenig A
Journal of Tissue Engineering and Regenerative Medicine 2024(6):1-10

4. Different immortalized keratinocyte cell lines display distinct capabilities to differentiate and reconstitute an epidermis in vitro.
Jahn M, Lang V, Diehl S, Back R, Kaufmann R, Fauth T, Buerger C
Exp Dermatol. 2024 Jan;33(1):e14985.

5. The Ca2+ channel TRPV4 is dispensable for Ca2+ influx and cell volume regulation during hypotonic stress response in human keratinocyte cell lines.
Ritzmann D, Jahn M, Heck S, Jung C, Cesetti T, Couturier N, Rudolf R, Reuscher N, Buerger C, Rauh O, Fauth T.
Cell Calcium. 2023 May;111:102715.

6. mTORC1 Activity in Psoriatic Lesions Is Mediated by Aberrant Regulation through the Tuberous Sclerosis Complex
Ferreri A, Lang V, Kaufmann R, Buerger C
Cells 2022 Vol. 11 Issue 18, 2847

7. Mechanism of anti-inflammatory effects of rifampicin in an ex vivo culture system of hidradenitis suppurativa.
Haferland I, Wallenwein CM, Ickelsheimer T, Diehl S, Wacker MG, Schiffmann S, Buerger C, Kaufmann R, Koenig A, Pinter A.
Experimental Dermatology 2022 Vol. 31 Issue 7 Pages 1005-1013

8. mTORC1 – a potential player in the pathogenesis of Hidradenitis suppurativa?
Dmitriev A, König A, Lang V, Diehl S, Kaufmann R, Pinter A, Buerger C
Journal of the European Academy of Dermatology and Venerology 2021 Vol. 35 Issue 7 Pages e444-e447

9. IL-17E (IL-25) and IL-17A Differentially Affect the Functions of Human Keratinocytes.
Borowczyk J, Buerger C, Tadjrischi N, Drukala J, Wolnicki M, Wnuk D, Modarressi A, Boehncke WH, Brembilla NC.
Journal of Investigative Dermatology 2020 Jul;140(7):1379-1389.e2

10. Hypotonic stress response of human keratinocytes involves LRRC8A as component of volume-regulated anion channels
Trothe J, Ritzmann D, Lang V, Scholz P, Pul U, Kaufmann R, Buerger C, Ertongur-Fauth T
Experimental Dermatology, 2018. (12):1352-1360

11. Inflammation Dependent mTORC1 Signaling interferes with the Switch from Keratinocyte Proliferation to Differentiation
Buerger C, Shirsath N, Lang V, Berard A, Diehl S, Kaufmann R, Boehncke WH, Wolf P
PLoS One, 2017. 12(7): p. e0180853

12. Blocking mTOR signaling with rapamycin ameliorates imiquimod-induced psoriasis in mice
Buerger C, Shirsath N, Lang V, Diehl S, Kaufmann R, Weigert A, Han YY, Ringel C, Wolf P.
Acta Dermato-Venerologica 2017. 97(9): p. 1087-1094;

13. Insulin Resistance May Contribute to Upregulation of Adhesion Molecules on Endothelial Cells in Psoriatic Plaques
Schlüter K, Diehl S, Lang V, Kaufmann R, Boehncke WH, Buerger C
Acta Dermato-Venerologica 2016 Feb, 96(2):162-8

14. Epidermal Insulin Resistance as a Therapeutic Target in Acanthosis nigricans?
Malisiewicz B, Boehncke S, Lang V, Boehncke WH, Buerger C
Acta Dermato-Venerologica 2014; Sep:94(5):607-8

15. Endothelial cells are highly heterogeneous at the level of cytokine-induced insulin resistance.
Woth K, Prein C, Steinhorst K, Diehl S, Boehncke WH, Buerger C
Experimental Dermatology 2013 Nov;22(11):714-8;

16. Mammalian target of rapamycin and its downstream signalling components are activated in psoriatic skin
Buerger C, Malisiewicz B, Eiser A, Hardt K, Boehncke WH
British Journal of Dermatology 2013 Jul;169(1):156-9

17. Interleukin-1β interferes with epidermal homeostasis through induction of insulin resistance – implications for psoriasis
Buerger C, Richter B, Woth K, Salgo R, Malisiewicz B, Diehl S, Hardt K, Boehncke S, Boehncke WH
Journal of Investigative Dermatology 2012 Sep;132(9):2206-14

18. PAX2 regulates ADAM10 expression and mediates anchorage-independent cell growth of melanoma cells
Lee SB, Doberstein K, Baumgarten P, Wieland A, Ungerer C, Bürger C, Hardt K, Boehncke WH, Pfeilschifter J, Mihic-Probst D, Mittelbronn M, Gutwein P.
PLoS One. 2011;6(8):e22312

19. ADAM15 expression is downregulated in melanoma metastasis compared to primary melanoma.
Ungerer C, Doberstein K, Bürger C, Hardt K, Boehncke WH, Böhm B, Pfeilschifter J, Dummer R, Mihic-Probst D, Gutwein P.
Biochemical and Biophysical Research Communication. 2010 Oct 22;401(3):363-9

20. Characterization of the intrinsic and TSC2-GAP-regulated GTPase activity of Rheb by real-time NMR.
Marshall CB, Ho J, Buerger C, Plevin MJ, Li GY, Li Z, Ikura M, Stambolic V
Science Signaling 2009 Jan 27;2(55):ra3

21. Peptide aptamers with binding specificity for the intracellular domain of the ErbB2 receptor interfere with AKT signaling and sensitize breast cancer cells to Taxol.
Kunz C, Borghouts C, Buerger C, Groner B
Molecular Cancer Research 2006 Vol. 4(12):983-98

22. Localization of Rheb to the endomembrane is critical for its signaling function.
Buerger C, DeVries B and Stambolic V
Biochemical and Biophysical Research Communication 2006 Jun 9; 344(3):869-80

23. The interaction of specific peptide aptamers with the DNA binding domain and the dimerization domain of the transcription factor Stat3 inhibits transactivation and induces apoptosis in tumor cells.
Nagel-Wolfrum K, Buerger C, Wittig I, Butz K, Hoppe-Seyler F and Groner B
Molecular Cancer Research, 2004 Mar; 2(3):170-82

24. Sequence specific peptide aptamers, interacting with the intracellular domain of the EGF receptor, interfere with Stat3 activation and inhibit the growth of tumor cells
Buerger C, Nagel-Wolfrum K, Kunz C, Wittig I, Butz K, Hoppe-Seyler F and Groner B

Projects

Memberships

Other Relevant Information