Prof. Dr.rer.nat. Sandra Iden, Dipl. Biochem.

Professor for Cell and Developmental Biology
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Center for Gender-specific Biology & Medicine (CGBM)
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Education

2007	Dr.rer.nat., WWU Münster, Germany (*summa cum laude*) Supervisor: Prof. Dr. Klaus Ebnet
2003	Diploma in Biochemistry, Leibniz University Hannover, Germany Diploma thesis: MPI for exp. Endocrinology, supervisors: Prof. Dr. Karl Bauer, Dr. Heike Heuer
2002	Institute of Cellular Chemistry, Hannover Medical School, Germany (Prof. R. Gerardy-Schahn)
2002	Center for Neurobiology and Behavior, Columbia University New York, USA (Prof. C. A. Mason)
2001	Institute of Biophysical Chemistry, Hannover Medical School, Germany (Prof. J. Alves)
1998 - 2003	Studies in Biochemistry, Leibniz University Hannover, Germany

Professional Appointments

since 2020	Full Professor (W2) and Chair for Cell & Developmental Biology, Saarland U.
2011 - 2019	Independent Research Group Leader, CECAD, University of Cologne (UoC)
2007 - 2010	Research Associate at The Netherlands Cancer Institute, Division of Cell Biology, Amsterdam, The Netherlands, Mentor: Dr. John G. Collard
2007	Postdoc at Institute of Medical Biochemistry, University Hospital Muenster, Germany, Mentor: Prof. Dr. Klaus Ebnet

Commissions of Trust, Institutional Tasks, Honors

2024-2028	DFG-Fachkollegium, elected panel member Cell Biology
2023	Health Award of the Medical Association of Saarland (shared w. F. Kirchhoff)
10/2023 -	Study Dean and Deputy Director, ZHMB, Saarland U.
2022 -	Vice president German Society for Cell Biology (DGZ), Executive Board
2022 -	Mentor in Excellence Program for junior research group leaders, Saarland U.
2021 -	PI in CRC 1027, Saarland U.
2020 - 2022	DGZ Executive Board, CEO
2020 -	Member Center Council, ZHMB, Saarland U.
2020 -	Examination board B.Sc. Biology, M.Sc. Human & Mol. Biol., ZHMB, Saarland U.
2020 -	Research Committee (Forschungskommission), Medical Faculty, Saarland U.
2019	Chair of EMBO Workshop ‚Cell Polarity & Membrane Dynamics', Spain
2015 -	PI in SPP1782 (both funding periods)
2015 - 2020	Executive Board Member, CRC 829, UoC
2013 - 2021	PI in CRC 829, UoC (second & third funding periods)
2013 - 2020	Coordinator CRC 829 IRTG, w. T. Krieg, UoC
2013 - 2019	Executive Board Member, CECAD Excellence Cluster, UoC
2013 - 2019	Representative Junior Research Group Leaders at CECAD, UoC
2013 - 2021	Faculty Member, Cologne Graduate School of Ageing, UoC
2012 - 2021	Associated Faculty, Graduate School for Biological Sciences, UoC

Memberships

German Society for Cell Biology (DGZ)
European Society for Dermatological Research (ESDR)
European Association for Cancer Research (EACR)
Society for Biochemistry and Molecular Biology (GBM)

Research interests

Our core scientific interest is to uncover mechanisms of cell-cell communication and cell polarity in tissue homeostasis, and consequences of disturbed cell-cell adhesion and polarity signalling in disease. We aim to understanding how different cell types communicate, synergize or compete with each other at tissue scale, which adhesion molecules mediate such heterotypic cell-cell interactions, how polarity networks impinge on these dynamic interactions, and how these processes fail in the disease context.

10 selected publications

1. Baess SC, Graband A, Sere K. Zenke M, Niemann C, Iden S (2022). Lrig1 and Wnt dependent niches dictate segregation of resident immune cells and melanocytes in murine tail epidermis. ***Development*** 149 (14): dev200154. doi: 10.1242/dev.200154. Open access.
2. Dias Gomes M, Iden S (2021). Orchestration of tissue-scale mechanics and fate decisions by polarity signalling. ***EMBO J***, e106787. doi: 10.15252/embj.2020106787. Open access.
3. Dias Gomes M, Letzian S, Saynisch M, Iden S (2019). Polarity signaling ensures epidermal homeostasis by coupling cellular mechanics and genomic integrity. ***Nat Commun*** 10, 3362. doi: 10.1038/s41467-019-11325-3. Open access.
4. Vorhagen S*, Kleefisch D*, Schwickert A, Leitges M, Niessen CM#, Iden S# (2018). Shared and distinct functions of atypical PKCλ and Par3 polarity proteins in skin tumorigenesis. ***Oncogene***, 37(37):5136-5146 (shared *first / #senior authors). doi: 10.1038/s41388-018-0313-1. Open access.
5. Mescher M, Jeong P, Knapp S, Rübsam M, Saynisch M, Kranen M, Landsberg J, Schlaak M, Mauch C, Tüting T, Niessen CM, Iden S (2017). The epidermal polarity protein Par3 is a non-cell autonomous suppressor of malignant melanoma. ***J Exp Med*** 214(2):339-358. doi: 10.1084/jem.20160596. Open access.
6. Ali NJA, Dias Gomes M, Bauer R, Brodesser S, Niemann C, Iden S (2016). Essential role of polarity protein Par3 for epidermal homeostasis through regulation of barrier function, keratinocyte differentiation and stem cell maintenance. ***J Invest Dermat*** 136(12):2406-2416. doi: 10.1016/j.jid.2016.07.011. Open access.
7. Iden S*, van Riel WE, Schäfer R, Song J-Y, Hirose T, Ohno S, Collard JG (2012). Tumor Type-Dependent Function of the Par3 Polarity Protein in Skin Tumorigenesis. ***Cancer Cell*** 22(3):389-403. doi: 10.1016/j.ccr.2012.08.004, *: corresponding author. Open access.
8. Iden S*, Misselwitz S*, Peddibhotla SD, Tuncay H, Rehder D, Gerke V, Robenek H, Suzuki A, Ebnet K (2012). aPKC phosphorylates JAM-A at Ser285 to promote cell contact maturation and tight junction formation. ***J Cell Biol*** 196(5):623-39. doi: 10.1083/jcb.201104143, *: equal contribution. Open access.
9. Iden S, Rehder D, August B, Suzuki A, Noda K, Nagafuchi A, Wolburg-Buchholz K, Wolburg H, Ohno S, Behrens J, Vestweber D, Ebnet K (2006). A distinct PAR polarity protein complex physically associated with VE-cadherin in vertebrate endothelial cells. ***EMBO Rep*** 7(12):1239-46. doi: 10.1038/sj.embor.7400819. Open access.
10. Iden S*, Collard JG* (2008). Crosstalk between small GTPases and polarity proteins in cell polarization. ***Nat Rev Mol Cell Biol*** 9(11):846-59. doi: 10.1038/nrm2521, *: shared correspondence