Wachten, Dagmar (geb. Harzheim)
Professor Dr. rer. nat. *10.05.1979, female

Biophysical Imaging
Institute of Innate Immunity, Department of Biophysical Imaging
BMZ-II, University Hospital, University of Bonn
Venusberg-Campus 1, 53127 Bonn, Germany
phone +49 228 2875-1978
Email dwachten@uni-bonn.de

Studies/Positions

Since 02/2020	Full-Professor (W3) for Biophysical Imaging and Director, Institute of Innate Immunity, Medical Faculty, University of Bonn
2020-2021	Managing Director Institute of Innate Immunity
01/2017 – 02/2020	Professor (W2) for Biophysical Imaging, Institute of Innate Immunity, Medical Faculty, University of Bonn
01/2014 – 12/2016	Max Planck Research Group Leader, Minerva Max Planck Research Group "Molecular Physiology", caesar, Bonn
06/2014	Habilitation in Molecular Biomedicine, University of Bonn
10/2009-12/2013	Project Group Leader, caesar, Bonn
01/2007-09/2009	Postdoctoral research fellow, Laboratory of Molecular Signaling, Babraham Institute, Cambridge, UK
06/2006-12/2006	PostDoc (after PhD), Research Center Jülich
06/2003-05/2006	PhD thesis, Institute for Biological Information Processing, Prof. U.B. Kaupp, Research Center Jülich Promotion Biology (Biochemistry), University of Cologne (*summa cum laude*)
10/1998-06/2003	Diploma in Biology (grade: 1.0), University of Cologne
2013 - 2017	*Ombudsperson* caesar

Awards/Fellowships/Memberships

Since 2022	Member of the Ciliopathy Alliance
2020	Teaching price, Natural Science Faculty, University of Bonn
2020	Life & Health Research Prize, University of Bonn
since 2020	Member TRA1 and TRA3, Excellence University, Bonn
2019 - 2025	Core Member Excellence cluster "ImmunoSensation^2", Bonn
since 2019	Member Reviewer panel "la Caixa" Foundation
since 2019	Member Editorial Board PLOS Biology
2012 - 2018	Member Excellence Cluster "ImmunoSensation", Bonn
since 2013	Metra-Program, University of Bonn
10/2008 – 12/2009	Junior Research Fellowship, Wolfson College, Cambridge, UK
09/2007	*Blue Riband Prize* of the Physiological Society, UK
06/2003 – 05/2006	PhD Fellowship of the Boehringer Ingelheim Fonds
06/2006	PhD thesis *summa cum laude*

Patents

Jikeli JF., Wachten D. (2016) "Strahlführungseinheit" (102016116620.0)
Wachten, D., Jansen, V., Mukherjee, S., Seifert, R., Kaupp, U.B. (2015/16) „Verfahren zum Nachweis von Liganden vermittels Biosensoren" (PCT/EP2016/070937, 102015115640.7)

Coordinating Functions

Since 2021	Board member University Foundation, University of Bonn
since 2021	Chairwoman Dekanatskommission Core Facilities and Bonn Technology Campus

2020-2022	Speaker Bonner Forum Biomedicine
2018-2022	Site coordinator TRR83/SFB
since 2018	Steering Committee “Nanobody Facility”, University Hospital Bonn
since 2018	Member “Engerer Fakultätsrat” Medical Faculty
since 2017	Prüfungskommission Bachelor program “Life & Medical Sciences”
since 2017	Bonfor-Committee, SciMed- and BoNI-Program
since 2017	HET- Committee (experimental animals)
since 2017	Steering Committee “Imaging Facility”, University Hospital Bonn
since 2016	Board Member Bonner Forum for Biomedicine

Manuscript reviewer for 30 journals and Editorial Board Member Plos Biology; *Ad hoc* reviewer for the German Research Foundation (DFG), European Research Council (ERC), Human Frontiers Science Program (HFSP), Boehringer Ingelheim Fonds, ANR (France), NWO (The Netherlands), la Caixa Fellowship program, Helmholtz Foundation

Promotion of young scientists

- Metra-Program, Mentoring for female scientists, University of Bonn
- Mentoring Program for International Female Scholars, University of Cologne

Grants

2022 – 2025	Schlüsselprojekt, **Else-Kröner-Fresenius Stiftung (**2021.EKFSE.53)
2022 – 2025	**SFB/TRR333 BAT energy**, project leader P10
2021 – 2024	**SFB1454 Metaflammation**, Analyzing the role of primary cilia in metaflammation
2019 – 2025	**Excellence Cluster ImmunoSensation^2**
2018 – 2019	**BonFOR** – SciMed Program
2018 – 2021	**FOR2743 “Mechanical Stress Protection”,** Analyzing Cytohesin function in mechanical stress protection
2018 – 2022	**TRR83 “Molecular architecture and cellular functions of lipid/protein assemblies”,** Lipid-protein interactions in the primary cilium
2017 – 2020	**SPP1726 “Microswimmer – from single particle motion to collective behavior” WA3382/2-1, “**Analyzing the role of cAMP in controlling the flagellar beat using optogenetics”
2017 – 2018	**Exploration Grant, Boehringer Ingelheim Foundation**
2016 - 2019	**SPP1926 “Next generation optogenetics” WA3382/3-1, “**Analyzing the physiological function of cAMP in primary cilia using optogenetics”
2014-2018	**Minerva Max Planck Research Group**
2015-2018	**DFG project grant WA3382/1-1** „Analysis of Creld1 function in the heart“
2015-2018	**Fritz Thyssen Stiftung Az.10.15.1.026MN** „Investigating the role of GBA2 in locomotor dysfunction”
2013-2016	**Sonderforschungsbereich 645 (SFB645) INST 217/555-2** “Regulation and manipulation of information flow within dynamic protein and lipid environments”. **Project leader B9:** “Der Einfluss von GBA2 und Glukosylceramid auf zelluläre Dynamiken unter physiologischen und pathologischen Bedingungen“
2014	**Maria-von-Linden Program,** University of Bonn
2014	**Heraeus-Foundation** Lab retreat „Hütten-Seminar“
2014	**Infrafrontier EU Mouse Production**

Organization of Conferences

2020	Co-Organizer Cilia2020, Cologne
2018	Organizer TRR83 Annual Meeting, Bonn
2018	Co-Organizer SPP1926 3rd Annual Meeting & Summer School, caesar, Bonn

2014 Co-Organizer 4th International caesar Conference *„Sensory Systems – from Molecules to Function",* caesar, Bonn
2011 Co-Organizer 1st International caesar Conference *„Sperm signaling and motility"*, caesar, Bonn

Invited talks (selected)

- ACSB meeting, USA (2021)
- DGZ Meeting, Münster, Germany (2021)
- FASEB catalyst conference, PKD (2021)
- FASEB conference Cilia Biology, Snowmass, Colorado, USA (2019)
- FEBS Sphingolipid conference, Lisbon, Portugal (2019)
- EMBO Workshop on Cilia, Copenhagen, Denmark (2018)
- Society for Study of Reproduction, Annual Meeting, New Orleans, USA (2018)
- Gordon Research Conference, Glycolipid and Sphingolipid Biology, Galveston, USA (2018)
- Invited Lecture German Society for Genetics, Annual Meeting (2017)
- Chemical Biology Lecture Series, University of Leiden, The Netherlands (2017)
- Batsheva Seminar: Challenges and frontiers in reproduction, Weizman Institute, Israel (2016)
- ETW2016: European Testis Workshop, Saint-Malo, France (2016)
- Lorentz Workshop: Optogenetics: from molecules to application, Leiden, The Netherlands (2016)
- 6. DVR-Kongress (Dachverband Reproduktionsbiologie und -medizin), Hamburg, (2015)
- Gordon Research Conference, Fertilization and Initiation of Development, Holderness, USA (2015)
- Channelrhodopsin and Optogenetics, Würzburg (2014)

Further Education

2011-2015 Leadership seminar Kempkes/Gebhard
2010 Project leader course
2007 FELASA course (UK)

Listed for Professorships

2019 W3 "Zellphysiologie", University of Hohenheim, listed on 1, declined
2017 W2 "Biophysical Imaging", University of Bonn, listed on 1, accepted
2017 W3 "Zellphysiologie", University of Bochum, listed on 3
2016 W3 "Anatomie/Enwicklungsbiologie", University of Mannheim/Heidelberg, listed on 2
2016 W3 "Biochemie/Molekularbiologie", UKE, Hamburg, listed on 3

Publications (10 selected)

1. Hansen, J.N., Kaiser, F., Leyendecker, P., Stüven, B., Krause, J.H., Derakhshandeh G., S.F., Jaazba, I., Sroka, T.J., Preval, K.M., Desai, P.B., Kraut, M., Theis, H., Drews, A.D., De-Domenica, E., Händler, K., Pazour, G.J., **Mick, D.U., Wachten, D.** A cAMP signalosome in primary cilia drives gene expression and kidney cyst formation. *EMBO Rep.* (**2022**), 43(5):366-378. doi: 10.1016/j.it.2022.03.001.

2. **Wachten, D.,** Mick, D.U. Signal transduction in primary cilia – analyzing GPCR and second messenger signaling. **(2021)** *Pharmacol. Ther.* 224:107836. doi:10.1016/j.pharmthera.2021.10783

3. Hansen, J.N., Kaiser, F., Klausen, C., Stüven, B., Chong, R., Bönigk, W., Möglich, A., Mick, D.U., Jurisch-Yaksi, N., Schmidt, F.I., **Wachten, D.** Nanobody-directed targeting of optogenetic tools reveals differential regulation of cilia length. **(2020)** *eLife*, 9:e57907, doi: 10.7554/eLife.57907.

4. Mukherjee, S., Jansen, V., Jikeli, J. F., Hamzeh, H., Alvarez, L., Dombrowski, M., Balbach, M., Strünker, T., Seifert, R., Kaupp, U. B., and **Wachten, D.** (**2016**) A novel biosensor to study cAMP dynamics in cilia and flagella. *eLife* 5 doi: 10.7554/eLife.14052

5. Raju, D., Schonauer, S., Hamzeh, H., Flynn, K. C., Bradke, F., Vom Dorp, K., Dörmann, P., Yildiz, Y., Trötschel, C., Poetsch, A., Breiden, B., Sandhoff, K., Körschen, H. G., and **Wachten, D.** (**2015**) Accumulation of glucosylceramide in the absence of the beta-glucosidase GBA2 alters cytoskeletal dynamics. *PLoS Genet.* 11, e1005063

6. Jansen, V., Alvarez, L., Balbach, M., Strünker, T., Hegemann, P., Kaupp, U. B., and **Wachten, D.** (**2015**) Controlling fertilization and cAMP signaling in sperm by optogenetics. *eLife* **4** doi: 10.7554/eLife.05161

7. *Mass, E., ***Wachten, D**., Aschenbrenner, A. C., Voelzmann, A., and Hoch, M. (**2014**) Murine Creld1 Controls Cardiac Development through Activation of Calcineurin/NFATc1 Signaling. *Dev. Cell* 28, 711-726

8. *Drawnel, F. M., ***Wachten, D.,** Molkentin, J. D., Maillet, M., Aronsen, J. M., Swift, F., Sjaastad, I., Liu, N., Catalucci, D., Mikoshiba, K., Hisatsune, C., Okkenhaug, H., Andrews, S. R., Bootman, M. D., and Roderick, H. L. (**2012**) Mutual antagonism between IP3RII and miRNA-133a regulates calcium signals and cardiac hypertrophy. *J. Cell Biol.* 199, 783-98

9. **Harzheim, D.,** Movassagh, M., Foo, R. S. Y., Ritter, O., Tashfeen, A., Conway, S. J., Bootman, M. D., and Roderick, H. L. (**2009**) Increased InsP(3)Rs in the junctional sarcoplasmic reticulum augment Ca2+ transients and arrhythmias associated with cardiac hypertrophy. *PNAS* 106, 11406-11411

10. **Harzheim, D.,** Pfeiffer, K. H., Fabritz, L., Kremmer, E., Buch, T., Waisman, A., Kirchhof, P., Kaupp, U. B., and Seifert, R. (**2008**) Cardiac pacemaker function of HCN4 channels in mice is confined to embryonic development and requires cyclic AMP. *EMBO J.* 27, 692-703