

Personal Data

Title	Prof. Dr. rer. nat. Dr. habil. med.
First name	Dirk
Name	Mielenz
Current position	PI, tenured
Current institution(s)/site(s), country	Division of Molecular Immunology, Universitätsklinik Erlangen (UKER), Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Germany
Identifiers/ORCID	0000-0002-1135-0642

Qualifications and Career

Stages	Periods and Details
1989 – 1995	Study of Biology, Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Germany
1996	Research fellow, Dept. of Cell Biology and Anatomy, University of Chapel Hill, North Carolina
Doctorate 1995-2000	01/02/2000. Prof. Dr. Klaus von der Mark (direct supervisor) (Cell Biology) & Prof. Dr. Georg Fey. (Genetics). “The role of the integrin $\alpha 7$ during cell migration on Laminin”, Institute for Experimental Medicine, FAU
2000 – 2004	Postdoc at the Division of Molecular Immunology, Universitätsklinik Erlangen (UKER), FAU
2004 –	Group leader at the Division of Molecular Immunology, Universitätsklinik Erlangen (UKER), FAU
2012	Habilitation (lecturer qualification) at the Faculty of Medicine, FAU
2018	Adjunct Professor, FAU

Engagement in the Research System

Teaching for Biology, Medicine, Life Science Engineering, Molecular Medicine students:

- Preclinical seminar for Medical students (2h/week, shared with other lecturers)
- Clinical seminar for Medical students (2h/week, shared with other lecturers)
- Bachelor lecture series “Concepts of Immunology” (2h/week, shared with other lecturers)
- Practical training course for Bachelor students in Immunology (4w/semester, shared with other lecturers)
- Practical training course for Master students in Immunology (4w/semester, shared with other lecturers)

- Method Seminar, Immunology degree programme “iImmune” (2h/week, shared with other lecturers)
- Seminar for Molecular Medicine students (2w/semester, shared with other lecturers)
- Seminars within the graduate schools GK1660 and GK2599
- Supervision of Bachelor, Master, Diploma, MD and PhD students
- Development of online exams

Meeting organisation

- 2025 Organisation of the 23rd B-Cell Forum of the German Society for Immunology, Bamberg
- 2023 Co-Organisation “International Symposium on Regulators of Humoral Immunity”, Erlangen, by the GK2599 IRTG
- 2017 Co-Organisation of the German Society for Immunology meeting
- 2015 Co-Organisation of the “International Symposium on B cell immunology”, Erlangen
- 2012 Co-Organisation of the “International Symposium on Regulators of Humoral Immunity”, Erlangen, by the GK1660 IRTG
- 2012 Organisation of the 10th B-Cell Forum of the German Society for Immunology, Kloster Banz
- 2006 Organisation of the 4th B-Cell Forum of the German Society for Immunology, Kloster Banz

Infrastructure

Radiation safety manager (2005 -)

Biological safety manager (safety level 1, 1997 – 2012)

Biological safety manager (safety level 2, 2012 –)

Institutional safety manager (2012 -)

Editorial work

- 2021 Guest Editor for “Vaccines”
- 2015-2017 Managing editor, “Journal of Negative Results in Biomedicine”

Reviewing

- External Bachelor, Master, Diploma, MD and PhD thesis’ and examinations
- Numerous Journals, including Nature Communications, Nature Metabolism, Cell Reports, EMBO reports, Cell death and differentiation
- German Science Foundation (DFG), Austrian Science Foundation, Czech Science Foundation, BONFOR, Klaus Tschira Boost Funds (Berlin), Agence Nationale de Recherche (ANR), Netherland Rheumatism
- EURIdoc - Eucor Upper Rhine Immunology doctoral programme

Supervision of Researchers in Early Career Phases (*past 5 years*)

- 2015-2020 Member of the GK1660 IRTG steering committee
- 2024- Member of the GK2599 IRTG speakers team
- Dr. Tobit Daniel Steinmetz, Post-Doc (DFG stipend), Groningen, Netherlands
- Dr. Sophia Urbanczyk, Post-Doc, Nürnberg Clinic North
- Dr. Dorothea Reimer, Industry
- Dr. Ariful Haque Abir, Post-Doc, Berlin

Selected Scientific Results

- Abir, A. H.; Weckwerth, L.; Wilhelm, A.; Thomas, J.; Reichardt, C. M.; Munoz, L.; Völkl, S.; Appelt, U.; Mroz, M.; Niesner, R.; Hauser, A.; Sophie Fischer, R.; Pracht, K.; Jäck, H.-M.; Schett, G.; Krönke, G.; **Mielenz, D.** (2024). Metabolic Profiling of Single Cells by Exploiting NADH and FAD Fluorescence via Flow Cytometry. *Molecular Metabolism* 2024, 101981. <https://doi.org/10.1016/j.molmet.2024.101981>
- Urbanczyk, S., Baris, O. R., Hofmann, J., Taudte, R. V., Guegen, N., Golombek, F., Castiglione, K., Meng, X., Bozec, A., Thomas, J., Weckwerth, L., Mougiakakos, D., Schulz, S. R., Schuh, W., Schlötzer-Schrehardt, U., Steinmetz, T. D., Brodesser, S., Wiesner, R. J., & **Mielenz, D.** (2022). Mitochondrial respiration in B lymphocytes is essential for humoral immunity by controlling the flux of the TCA cycle. *Cell Reports*, 39(10). <https://doi.org/10.1016/j.celrep.2022.110912>
- Reimer, D., Meyer-Hermann, M., Rakhymzhan, A., Steinmetz, T., Tripal, P., Thomas, J., Boettcher, M., Mougiakakos, D., Schulz, S. R., Urbanczyk, S., Hauser, A. E., Niesner, R. A., & **Mielenz, D.** (2020). B Cell Speed and B-FDC Contacts in Germinal Centers Determine Plasma Cell Output via Swiprosin-1/EFhd2. *Cell Rep*, 32(6), 108030. <https://doi.org/10.1016/j.celrep.2020.108030>
- Steinmetz, T. D., Schlötzer-Schrehardt, U., Hearne, A., Schuh, W., Wittner, J., Schulz, S. R., Winkler, T. H., Jack, H. M., & **Mielenz, D.** (2020). TFG is required for autophagy flux and to prevent endoplasmic reticulum stress in CH12 B lymphoma cells. *Autophagy*, 1–19. <https://doi.org/10.1080/15548627.2020.1821546>
- Mielenz, D.**, Reichel, M., Jia, T., Quinlan, E. B., Stöckl, T., Mettang, M., Zilske, D., Kirmizi-Alsan, E., Schönberger, P., Praetner, M., Huber, S. E., Amato, D., Schwarz, M., Purohit, P., Brachs, S., Spranger, J., Hess, A., Büttner, C., Ekici, A. B., ... Müller, C. P. (2018). EFhd2/Swiprosin-1 is a common genetic determinant for sensation-seeking/low anxiety and alcohol addiction. *Molecular Psychiatry*, 23(5), 1303–1319. <https://doi.org/10.1038/mp.2017.63>
- Stein, M., Dutting, S., Mougiakakos, D., Bosl, M., Fritsch, K., Reimer, D., Urbanczyk, S., Steinmetz, T., Schuh, W., Bozec, A., Winkler, T. H., Jack, H. M., & **Mielenz, D.** (2017). A defined metabolic state in pre B cells governs B-cell development and is counterbalanced by Swiprosin-2/EFhd1. *Cell Death Differ*, 24(7), 1239–1252. <https://doi.org/10.1038/cdd.2017.52>
- Lang, S. C., Harre, U., Purohit, P., Dietel, K., Kienhofer, D., Hahn, J., Baum, W., Herrmann, M., Schett, G., & **Mielenz, D.** (2017). Neurodegeneration Enhances the Development of Arthritis. *J Immunol*, 198(6), 2394–2402. <https://doi.org/10.4049/jimmunol.1601472>
- Grötsch, B., Brachs, S., Lang, C., Luther, J., Derer, A., Schlötzer-Schrehardt, U., Bozec, A., Fillatreau, S., Berberich, I., Hobeika, E., Reth, M., Wagner, E. F., Schett, G., **Mielenz, D.***, & David, J.-P.* (2014). The AP-1 transcription factor Fra1 inhibits follicular B cell differentiation into plasma cells. *The Journal of Experimental Medicine*, 211(11), 2199–2212. <https://doi.org/10.1084/jem.20130795> *equal contribution
- Avramidou, A., Kroczeck, C., Lang, C., Schuh, W., Jack, H. M., & **Mielenz, D.** (2007). The novel adaptor protein Swiprosin-1 enhances BCR signals and contributes to BCR-induced apoptosis. *Cell Death Differ*, 14(11), 1936–1947. <https://doi.org/10.1038/sj.cdd.4402206>
- Mielenz, D.**, Vettermann, C., Hampel, M., Lang, C., Avramidou, A., Karas, M., & Jack, H. M. (2005). Lipid rafts associate with intracellular B cell receptors and exhibit a B cell stage-specific protein composition. *J Immunol*, 174(6), 3508–3517. <https://doi.org/10.4049/jimmunol.174.6.3508>

Patent:

PCT/EP2022/061971, „A Surrogate Cell-Based Corona Virus Spike Protein Blocking Assay”

Academic Distinctions

- 1996 Travel stipend (Boehringer Ingelheim Funds)
- 1996-1998 DFG Dissertation Stipend (GK263)