

## Curriculum Vitae

### Personal Data

Title	Prof. Dr. med. Dr. phil.
First name	Melanie
Name	Börries
Current position	W3 Professor, Director
Current institution(s)/site(s), country	Institute of Medical Bioinformatics and Systems Medicine, Medical Center - University of Freiburg
Identifiers/ORCID	0000-0002-3670-0602

### Qualifications and Career

Stages	Periods and Details
Spokesperson	<b>Since 2024</b> Spokesperson of the DKTK partner site Freiburg
Co-Director	<b>Since 2021</b> Co-Director of the Comprehensive Cancer Center Freiburg (CCCF), Medical Center – University of Freiburg, Germany
Director	<b>Since 2019</b> Director, Institute of Medical Bioinformatics and Systems Medicine, Medical Center - University of Freiburg, Germany
Professor	<b>Since 2019</b> Professor (W3) of Medical Bioinformatics, Albert-Ludwigs-University Freiburg, Germany
Junior Group Leader	<b>2013 - 2019</b> Group leader at the DKTK/DKFZ Partner Site Freiburg, Institute of Molecular Medicine and Cell Research, University of Freiburg, Germany
Principle Investigator	<b>2009 - 2012</b> FRIAS, Principal Investigator together with Hauke Busch (CCC Group), Institute for Advanced Studies-LIFENET, University of Freiburg, Germany
Postdoctoral Fellow	<b>2005 - 2009</b> Institute for Pharmacology and Toxicology, University of Freiburg (2007-2009: parental leave), Germany
Physician in Training/Clinical Resident	<b>2001 - 2005</b> Physician in Training/Clinical Resident, Department of Cardiology, Inselspital, University of Bern, Switzerland (3 month/year, MD PhD program)
Doctorate	<b>2005</b> PhD thesis in Cell Biology, University of Basel, Switzerland
Doctorate	<b>2004</b> MD thesis in Cardiology, University of Lübeck, Germany
Degree programme	<b>1994 - 2001</b> Medicine, University of Lübeck, Germany, Staatsexamen (Medical Licence Examination)

### Supplementary Career Information

One child, parental leave (02/2007 – 01/2009)

## Activities in the Research System

### Institutional Responsibilities

- Since 2024 Deputy Chair of the TMF (Technology and Methods Platform for Networked Medical Research e.V.) Executive Board
- Since 2023 Spokesperson for the NCT (National Center for Tumor Diseases) -IT Working Group
- Since 2023 Spokesperson of the clinical Use Case “PM4Onco - Personalized Medicine for Oncology” within the Medical Informatics Initiative, Germany
- Since 2020 Spokesperson of the Forum Health Location Baden-Württemberg for the Ministry of Science, Research and Art of Baden-Württemberg, Germany
- Since 2019 Spokesperson of the Molecular Tumor Board of the Medical Center - University of Freiburg
- Since 2019 Spokesperson of the School of Oncology of the DKTK (German Cancer Consortium)
- Since 2015 Spokesperson of the Integrated Research Training Group of the CRC 850 and CRC 1479
- Since 2015 Board Member of the local DKTK Steering Committee
- 2015 – 2018 Member of the Molecular Tumor Board of the Medical Center, University Freiburg
- 2001 – 2005 Doctoral scholarship (MD PhD) of the Maurice E Müller Stiftung, Switzerland

### Reviewing Activities

Bioinformatics, Cancer Research, Epigenetics, Nature Communications, Nature Methods, Nature Protocols, Oncogene, Theranostics

### Editorial Board Memberships

2022-2023 Cancers

### Membership of Scientific Societies

2001 - DGK

### Teaching activities

Since 2013 Various lectures and courses within the Curricula of Human Medicine, Molecular Medicine and Biology at the Medical and Biology Faculty, Freiburg

## Supervision of Researchers in Early Career Phases

Since 2009 20 Postdocs/ 12 PhD Students/ 6 Master Students

## Scientific Results

### Category A (*ten selected publications*)

1. Maas-Bauer, K., Stell, A. V., Yan, K. L., de Vega, E., Vinnakota, J. M., Unger, S., Núñez, N., Norona, J., Talvard-Balland, N., Koßmann, S., Schwan, C., Miething, C., Martens, U. S., Shoumariyeh, K., Nestor, R. P., Duquesne, S., Hanke, K., ... Becher, B.\*, **Boerries, M.\***, Zeiser, R.\* (2024). ROCK1/2 signaling contributes to corticosteroid-refractory acute graft-versus-host disease. **Nature communications**, 15(1), 446.
2. Velasco Cárdenas, R. M., Brandl, S. M., Meléndez, A. V., Schlaak, A. E., Buschky, A., Peters, T., Beier, F., Serrels, B., Taromi, S., Raute, K., Hauri, S.,

- Gstaiger, M., Lassmann, S., Huppa, J. B., **Boerries, M.**, Andrieux, G., Bengsch, B., Schamel, W. W., & Minguet, S. (2023). Harnessing CD3 diversity to optimize CAR T cells. *Nature immunology*, 24(12), 2135–2149.
3. Metzger, P., Hess, M. E., Blaumeiser, A., Pauli, T., Schipperges, V., Mertes, R., Christoph, J., Unberath, P., Reimer, N., Scheible, R., Illert, A. L., Busch, H., Andrieux, G., **Boerries, M.** (2023). MIRACUM-Pipe: An Adaptable Pipeline for Next-Generation Sequencing Analysis, Reporting, and Visualization for Clinical Decision Making. *Cancers*, 15(13),3456.
  4. Andrieux, G., Das, T., Griffin, M., Straehle, J., Paine, S. M. L., Beck, J., **Boerries, M.**, Heiland, D. H., Smith, S. J., Rahman, R., Chakraborty, S. (2023). Spatially resolved transcriptomic profiles reveal unique defining molecular features of infiltrative 5ALA-metabolizing cells associated with glioblastoma recurrence. *Genome medicine*, 15(1), 48.
  5. Ravi, V. M., Neidert, N., Will, P., Joseph, K., Maier, J. P., Kückelhaus, J., Vollmer, L., Goeldner, J. M., Behringer, S. P., Scherer, F., **Boerries, M.**, Follo, M., Weiss, T., Delev, D., Kernbach, J., Franco, P., Schallner, N., Dierks, C., Carro, M. S., Hofmann, U. G., ... Heiland, D. H. (2022). T-cell dysfunction in the glioblastoma microenvironment is mediated by myeloid cells releasing interleukin-10. *Nature communications*, 13(1), 925.
  6. Grünwald BT, Devisme A, Andrieux G, Vyas F, Aliar K, McCloskey CW, Macklin A, Jang GH, Denroche R, Romero JM, Bavi P, Bronsert P, Notta F, O’Kane G, Wilson J, Knox J, Tamblyn L, Udaskin M, Radulovich N, Fischer SE, **Boerries M\***, Gallinger S\*, Kislinger T\*, Khokha R\*. (2021). Spatially confined subtumor microenvironments in pancreatic cancer. *Cell*. Oct 28;184(22):5577-5592.e18, 2021.
  7. Corrales, E., Levit-Zerdoun, E., Metzger, P., Mertes, R., Lehmann, A., Münch, J., Lemke, S., Kowar, S., **Boerries, M.** (2022). PI3K/AKT signaling allows for MAPK/ERK pathway independency mediating dedifferentiation-driven treatment resistance in melanoma. *Cell communication and signaling : CCS*, 20(1), 187.
  8. Chakraborty, S., Andrieux, G., Hasan, A. M. M., Ahmed, M., Hosen, M. I., Rahman, T., Hossain, M. A., **Boerries, M.** (2019). Harnessing the tissue and plasma lncRNA-peptidome to discover peptide-based cancer biomarkers. *Scientific reports*, 9(1), 12322.
  9. Hoefflin, R., Lazarou, A., Hess, M. E., Reiser, M., Wehrle, J., Metzger, P., Frey, A. V., Becker, H., Aumann, K., Berner, K., Boeker, M., Buettner, N., Dierks, C., Duque-Afonso, J., Eisenblaetter, M., Erbes, T., Fritsch, R., Ge, I. X., ... **Boerries, M.\***, Illert, A.L.\*, von Bubnoff, N.\* (2021). Transitioning the Molecular Tumor Board from Proof of Concept to Clinical Routine: A German Single-Center Analysis. *Cancers*, 13(5), 1151.
  10. Klett, H., Balavarca, Y., Toth, R., Gigic, B., Habermann, N., Scherer, D., Schrotz-King, P., Ulrich, A., Schirmacher, P., Herpel, E., Brenner, H., Ulrich, C. M., Michels, K. B., Busch, H.\*, **Boerries, M.\*** (2018). Robust prediction of gene regulation in colorectal cancer tissues from DNA methylation profiles. *Epigenetics*, 13(4), 386–397.

\*equal contribution

## Category B

### Patents

1. Method for characterization of modifications caused by the use of designer nucleases  
European Patent No. 3 856 928 - European Patent Application No. 19769176.9, 2022.
2. A truly unbiased in vitro assay to profile off-target activity of one or more target-specific programmable nucleases in cells” (Abnoba-Seq), # EP19204418.8; filed on October 21, 2019.

### Academic Distinctions

2001-2005 MDPHD scholarship (Swiss National Science Foundation)  
2006 Award for innovative teaching projects