## Curriculum Vitae

### Personal Data

| | |
|---|---|
| Title | Prof. Dr. |
| First name | Thomas |
| Name | Müller-Reichert |
| Current position | Research Group Leader, Director “Core Facility Cellular Imaging” (CFCI) |
| Current institution(s)/site(s), country | Technische Universität Dresden, Faculty of Medicine Carl Gustav Carus, Germany |
| Identifiers/ORCID | 0000-0003-0203-1436 |

### Qualifications and Career

| **Degree programme** | **Subject, period, place, country** |
|---|---|
| Habilitation | Cell Biology, 2006, Technische Universität Dresden, Dresden,Germany |
| Doctorate | Cell Biology, 1991-1995, Swiss Federal Institute of Technology, Zurich, Switzerland |
| Diploma<br><br>M.S. | Zoology, 1983-1986, 1988-1990, J.W. Goethe University, Frankfurt/Main, Germany<br>Zoology, 1987, Eastern Illinois University (EIU), Charleston (IL), USA |
| Stages of academic/professional career | Research Group Leader, Director Core Facility Cellular Imaging (CFCI), 2010 - present, Faculty of Medicine CGC, Technische Universität Dresden, Dresden, Germany<br><br>Leader EM Facility, Leader Electron Tomography Group, 2001 - 2009, Max Planck Institute of Molecular Cell Biology and Genetics (MPI-CBG), Dresden, Germany<br><br>Visiting Scientist, Staff Scientist, 1999 - 2001, University of California, Max Planck Institute of Molecular Cell Biology and Genetics (MPI-CBG), Berkeley, USA and Dresden, Germany<br><br>Post-doctoral Fellow, 1995 - 1998, European Molecular Biology Laboratory (EMBL), Heidelberg, Germany |

### Activities in the Research System

Organization of Conferences

2024 (Co-)Organizer of the EMBO conference on “Microtubules”

2024 (Co-)Organizer of the EMBO practical course on “Correlative Light and Electron Microscopy” (previous courses were held in 2012, 2016 and 2018)

Activities in the German Society for Electron Microscopy (DGE)

| | |
|---|---|
| 2023 - present | Member of the Ernst Ruska Prize-Committee |
| 2018 - 2019 | President of the DGE |
| 2016 - 2017 | Vice-President of the DGE |
| 2008 - present | (Co-)Speaker and (Co-)Organiser of the annual AG “PANOS” meetings |

Peer Reviewing Activities

Reviewer for *Current Biology*, *iScience*, *Nature*, *Science* and other scientific journals

Reviewing Activities for Research Organisations and Funding Agencies

Alexander von Humboldt Foundation (AvH), French National Research Agency (ANR), German Research Foundation (DFG), Swiss National Science Foundation (SNF)

Editorial Activities

(Co-)Editor of seven volumes within the series *Methods in Cell Biology*

Müller-Reichert, T., and Verkade, P. (2024). CLEM V. *Vol. 187* (in preparation).
Müller-Reichert, T., and Verkade, P. (2021). CLEM IV. *Vol. 162*.
Müller-Reichert, T., and Pigino, G. (2019). 3D Electron Microscopy. *Vol. 152*.
Müller-Reichert, T., and Verkade, P. (2017). CLEM III. *Vol. 140*.
Müller-Reichert, T., and Verkade, P. (2014). CLEM II. *Vol. 124*.
Müller-Reichert, T., and Verkade, P. (2012). CLEM I. Vol. *111*.
Müller-Reichert, T. (2010). Electron Microscopy of Model Systems. Vol. *96*.

Teaching

“Electron Microscopy of Model Systems” (Practical course and seminar for students in Biology)
“Developmental Biology of *C. elegans*” (Lecture for students in Biology)
“Biology for Medical Students” (Lectures in Virology and Parasitology)

Outreach

“Digital Classroom - Teaching Microscopy to Kids” (in cooperation with Gymnasium Bürgerwiese, Dresden)
“Long Night of Science” (“Lange Nacht der Wissenschaften”, annual event for the general public)

**Supervision of Researchers in Early Career Phases**

In the past, I have trained 5 Bachelor, 8 Master and 5 PhD students. Currently, I am supervising 2 Master students and 2 PhD students. One post-doc is working in the lab.

**Selected Publications**

1. Kiewisz, R., Fabig, G., Conway, W., Baum, D., Needleman, D.J., and Müller-Reichert, T. (2022). Three-dimensional structure of kinetochore-fibers in human mitotic spindles. **Elife,** *11*, e75459.

2. Conway, W., Kiewisz, R., Fabig, G., Kelleher, C.P., Wu, H.Y., Anjur-Dietrich, M., Müller-Reichert, T., and Needleman, D.J. (2022) Self-organization of kinetochore-fibers in human mitotic spindles. **Elife,** *11*, e75458.

3. Fabig, G., Kiewisz, R., Lindow, N., Powers, J.A., Cota, V., Quintanilla, L.J., Brugués, J., Prohaska, S., Chu, D.S.*, and Müller-Reichert, T.* (*joint last authors). (2020). Male meiotic spindle features that efficiently segregate paired and lagging chromosomes. **Elife,** *9,* e50988.

4. Farhadifar, R., Yu, C.-H., Fabig, G., Wu, H.-Y., Stein, D.B., Rockman, M., Müller-Reichert, T.,

Shelley, M.J., and Needleman, D.J. (2020). Stoichiometric interactions explain spindle dynamics and scaling across 100 million years of nematode evolution. **Elife,** *9*, e55877.

5. Yu, C.-H., Redemann, S., Wu, H.-Y., Kiewisz, R., Yoo, T.Y., Conway, W., Farhadifar, R., Müller-Reichert, T.*, and Needleman, D.* (*joint last authors). (2019). Central spindle microtubules are strongly coupled to chromosomes during both anaphase A and anaphase B. **Mol. Biol. Cell,** *30*, 2503-2514.

6. Redemann, S., Lantzsch, I., Lindow, N., Prohaska, S., Srayko, M., and Müller-Reichert, T. (2018). A switch in microtubule orientation during *C. elegans* meiosis. **Curr. Biol.** *28*, 2991-2997.

7. Redemann, S., Baumgart, J., Lindow, N., Shelley, M., Nazockdast, E., Kratz, A., Prohaska, S., Brugues, J., Fürthauer, S., and Müller-Reichert, T. (2017). *C. elegans* chromosomes connect to centrosomes by anchoring into the spindle network. **Nat. Commun.** *8,* 15288.

8. Guizetti, J., Schermelleh, L., Mäntler, J., Maar, S., Poser, I., Leonhardt, H., Müller-Reichert,T.*, and Gerlich, D.W.* (*joint last authors). (2011). Cortical constriction during abscission involves helices of ESCRT-III-dependent filaments. **Science,** *331*, 1616-1620.

9. Pelletier, L., O'Toole, E., Schwager, A., Hyman, A.A., and Müller-Reichert, T. (2006). Centriole assembly in *Caenorhabditis elegans*. **Nature,** *444*, 619-623.

10. Müller-Reichert, T., Chrétien, D., Severin, F., and Hyman, A.A. (1998). Structural changes at microtubule ends accompanying GTP hydrolysis: information from a slowly hydrolyzable analogue of GTP, guanylyl (a,b) methylene-diphosphonate. **Proc. Natl. Acad. Sci. USA,** *95*, 3661-3666.

**Academic Distinctions**

| | |
|---|---|
| 2007, 2009, 2011 | Summer Research Fellowships from the Marine Biological Laboratory (MBL), Woods Hole, USA |
| 1999 | DFG Research Fellowship |
| 1998 | MPG Research Fellowship |
| 1995 – 1997 | EMBO Long-Term Fellowship |
| 1983 – 1986 | Wöhler Fellowship |

**Other Information**

Member (PI) of the Marie Skłodowska-Curie Innovative Training Network (DivIDE; https://cordis.europa.eu/project/id/675737).