

Midori Ohta
Curriculum Vitae

Okinawa Institute of Science and Technology
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[Centrosome Dynamics and Evolution Group](#)
[Google Scholar](#)

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PROFESSIONAL APPOINTMENT AND EMPLOYMENT:

- 2024-present Buribushi Fellow, Principal Investigator of the Centrosome Dynamics and Evolution Group
- 2023-present Cross-Appointment Assistant Professor, Graduate School of Life Sciences, Tohoku University
- 2022-2024 Science and Technology Associate, Okinawa Institute of Science and Technology, Okinawa, Japan
- 2016-2022 Postdoctoral fellow with Dr. Karen Oegema, Department of Mitotic Mechanisms, Ludwig Institute for Cancer Research, La Jolla, USA
- 2012-2016 Postdoctoral fellow with Dr. Daiju Kitagawa, Centrosome Biology Laboratory, National Institute of Genetics, Mishima, Japan

EDUCATION:

- 2012 Ph.D. Department of Biophysics and Biochemistry, Graduate School of Science, University of Tokyo, Japan
- 2008 M.S. Department of Biophysics and Biochemistry, Graduate School of Science, University of Tokyo, Japan
- 2006 B.S. Department of Biology, Ochanomizu University, Tokyo, Japan

RESEARCH EXPERIENCES:

- 2024-present Buribushi Fellow, Principal Investigator of the Centrosome Dynamics and Evolution Group
- 2022-2024 Science and Technology Associate, Okinawa Institute of Science and Technology, Okinawa, Japan
Project: *Structural understanding of the macromolecular γ -tubulin complex activation at centrosomes*
- 2016-2022 Postdoctoral fellow with Dr. Karen Oegema, Ludwig Institute for Cancer Research, La Jolla, USA
Project: *Mechanism of centrosome maturation and its role in spindle assembly*
- 2012-2016 Postdoctoral fellow with Dr. Daiju Kitagawa, National Institute of Genetics, Mishima, Japan
Project: *Molecular basis of centrosome duplication*
- 2006-2012 Graduate student with Dr. Masayuki Yamamoto, University of Tokyo, Japan

Project: *Molecular mechanisms of spindle pole body remodeling during meiotic differentiation in fission yeast*

2005-2006

Undergraduate student with Dr. Shinichi Nemoto, Ochanomizu University, Japan

Project: *Mechanisms of spindle formation in starfish oocytes*

PUBLICATION LIST: Total 15, Citations 770, H-index = 11, i10-index = 11 (Jan 5, 2025)

*Equal contribution; #Co-corresponding author

1. Bellaart A, Brambila A, Xu J, Mendez Diaz F, Deep A, Anzola J, Meitinger F, **Ohta M**, Corbett K, Desai A, Oegema K, TRIM37 employs peptide motif recognition and substrate-dependent oligomerization to prevent ectopic spindle pole assembly. *bioRxiv* [Preprint]. 2024 Oct 9;2024.10.09.617493. doi: 10.1101/2024.10.09.617493.
2. Houston J, **Ohta M***, Gómez-Cavazos JS*, Deep A, Corbett KD, Oegema K, Lara-Gonzalez P, Kim T, Desai A. BUB-1-bound PLK-1 directs CDC-20 kinetochore recruitment to ensure timely embryonic mitoses. **Current Biology**, **2023**. Apr 28;S0960-9822(23)00469-4, doi:10.1016/j.cub.2023.04.021
3. Meitinger F*, Kong D*, **Ohta M***, Desai A, Oegema K, Loncarek J. TRIM37 prevents formation of condensate-organized ectopic spindle poles to ensure mitotic fidelity. **Journal of Cell Biology** **2021** Jul 5;220(7):e202010180. doi: 10.1083/jcb.202010180. Epub 2021 May 13.
4. **Ohta M**#, Zhao Z, Wu D, Wang S, Harrison JL, Gómez-Cavazos JS, Desai A, Oegema KF#. Polo-like kinase 1 independently controls microtubule-nucleating capacity and size of the centrosome. **Journal of Cell Biology** **2021** Feb 1;220(2):e202009083. doi: 10.1083/jcb.202009083.
5. Meitinger F., **Ohta M.**, Lee K.Y., Watanabe S., Davis R.L., Anzola J.V., Kabeche R., Jenkins J., Shiau A.K., Desai A., Oegema K. TRIM37 controls cancer-specific vulnerability to PLK4 inhibition. **Nature** **2020** Sep 585:440-446. doi: 10.1038/s41586-020-2710-1. Epub 2020 Sep 9.
6. Yoshiba S, Tsuchiya Y, **Ohta M**, Gupta A, Shiratsuchi G, Nozaki Y, Ashikawa T, Fujiwara T, Natsume T, Kanemaki MT, Kitagawa D. *HsSAS-6-dependent cartwheel assembly ensures stabilization of centriole intermediates*, **Journal of Cell Science** **2019** Jun 20;132(12):jcs217521. doi: 10.1242/jcs.217521.
7. **Ohta M**, Watanabe K, Ashikawa T, Nozaki Y, Yoshiba S, Kimura A, Kitagawa D. *Bimodal Binding of STIL to Plk4 Controls Proper Centriole Copy Number*, **Cell Reports** **2018** Jun 12;23(11):3160-3169.e4. doi: 10.1016/j.celrep.2018.05.030.
8. Hattersley N, Lara-Gonzalez P, Cheerambathur D, Gomez-Cavazos JS, Kim T, Prevo B, Khaliullin R, Lee KY, **Ohta M**, Green R, Oegema K, Desai A., *Employing the one-cell C. elegans embryo to study cell division processes*, **Methods Cell Biology** **2018**;144:185-231.
9. Gupta A, Tsuchiya Y, **Ohta M**, Shiratsuchi G, Kitagawa D., *NEK7 is required for G1 progression and procentriole formation.*, **Molecular Biology of the Cell** **2017** Jul 15;28(15):2123-2134. doi: 10.1091/mbc.E16-09-0643. Epub 2017 May 24.
10. **Ohta M**, Desai A, Oegema K., *How centrioles acquire the ability to reproduce.*, **eLife** **2017** Mar 8;6:e25358. doi: 10.7554/eLife.25358.

11. Zitouni S, Francia ME, Leal F, Montenegro Gouveia S, Nabais C, Duarte P, Gilberto S, Brito D, Moyer T, Kandels-Lewis S, **Ohta M**, Kitagawa D, Holland AJ, Karsenti E, Lorca T, Lince-Faria M, Bettencourt-Dias M. *CDK1 Prevents Unscheduled PLK4-STIL Complex Assembly in Centriole Biogenesis.*, **Current Biology** **2016** May 9;26(9):1127-37. doi: 10.1016/j.cub.2016.03.055. Epub 2016 Apr 21.
12. Bouhlel IB*, **Ohta M***, Mayeux A, Bordes N, Dingli F, Boulanger J, Velve Casquillas G, Loew D, Tran PT, Sato M, Paoletti A, *Cell cycle control of spindle pole body duplication and splitting by Sfi1 and Cdc31 in fission yeast*, **Journal of Cell Science**, **2015** Apr 15; 128(8):1481-93. doi: 10.1242/jcs.159657. Epub 2015 Mar 3
13. **Ohta M**, Ashikawa T, Nozaki Y, Kozuka-Hata H, Goto H, Inagaki M, Oyama M, Kitagawa D, *Direct interaction of Plk4 with STIL ensures formation of a single procentriole per parental centriole.* **Nature Communications**, **2014** Oct 24;5:5267. doi: 10.1038/ncomms6267.
14. **Ohta M**, Sato M and Yamamoto M, *Spindle pole body components are reorganized during fission yeast meiosis.* **Molecular Biology of the Cell**, **2012** May;23(10):1799-1811. doi: 10.1091/mbc.E11-11-0951. Epub 2012 Mar 21.
15. Funaya C, Samarasinghe S, Pruggnaller S, **Ohta M**, Connolly Y, Müller J, Murakami H, Grallert A, Yamamoto M, Smith D, Antony C, Tanaka K. *Transient structure associated with the spindle pole body directs meiotic microtubule reorganization in S. pombe.* **Current Biology**, **2012** Apr 10;22(7):562-574. doi: 10.1016/j.cub.2012.02.042. Epub 2012 Mar 15

AWARDS AND HONORS:

2024	Buribushi Fellowship, OIST
2023	Best poster prize at EMBO Workshop Centrosome in Development, Disease and Evolution in Turkey
2023	Travel Grant for EMBO Workshop Centrosome in Development, Disease and Evolution in Turkey
2023	Travel Award for Joint Symposium with Osaka University, OIST
2017	Japan Society for the Promotion of Science, Postdoctoral Fellowship for Research Abroad
2015	Japan Society for Cell Biology, Young Scientist Award
2014	Japan Society for the Promotion of Science, Postdoctoral Fellowship
2012	National Institute of Genetics, Postdoctoral Fellowship
2009	Japan Society for the Promotion of Science, Research Fellowship for young scientist

GRANT SUPPORT:

External

2024-2026 KAKENHI, Grant-in-Aid for Scientific Research (C): 24K09461

OIST Internal

2024 SHINKA Grant, FY 2024 (Collaboration with Tohoku University)
 2023 SHINKA Grant, FY 2023 (Collaboration with Tohoku University)

INVITED TALKS:

External Talks

- 2024 Seminar at Graduate School of Life Sciences, Tohoku University, Japan
- 2023 Molecular Biology Society of Japanese annual meeting, Kobe, Japan
- 2023 GSB Seminar at Genome and Systems Biology Degree Program, National Taiwan University
- 2023 Seminar at the Institute of Molecular Biology, Academia Sinica in Taiwan
- 2023 Advances in Centrosome Biology Satellite meeting at Koc University in Turkey
- 2023 EMBO Workshop Centrosome in development, disease and evolution in Turkey (flash talk)
- 2023 Cell Division Workshop at the National Institute of Genetics in Japan, Mishima
- 2023 Cold Spring Harbor Asia, Cilia & Centrosome meeting, Awaji, Japan
- 2022 Molecular Biology Society of Japanese annual meeting, Chiba, Japan
- 2019 ASCB/EMBO meeting, Mini-symposium Regulation of Cell division, Washington, USA
- 2015 Japan Society for Cell Biology annual meeting, Tokyo, Japan
- 2014 Genetic to Cells Seminar, Cancer Research UK in London Research Institute, London, UK
- 2014 MEXT grant meeting, Okayama, Japan
- 2014 National Institute of Genetics annual retreat, Shizuoka, Japan
- 2011 MEXT grant meeting, Tottori, Japan

OIST Seminar/Workshop Talks

- 2023 OIST-RIKEN RNA translation, proteomics meeting (Nov 16-17)
- 2023 OIST-Osaka University Joint Workshop, A Recipe for Scientific Synergy Series 4 (May 29)
- 2023 OIST Internal Seminar (April 14)
- 2023 STG Forum (March 28)

PROFESSIONAL MEMBERSHIPS:

- 2022 – present Member of the Molecular Biology Society of Japan
- 2018 – present Member of the American Society for Cell Biology
- 2015 – 2016 Member of the Japan Society for Cell Biology
- 2008 – 2016 Member of the Molecular Biology Society of Japan

TEACHING EXPERIENCES:

- 2011-2012 Teaching Assistant for a practical course for undergraduate students, The University of Tokyo, Yeast genetics and live-cell imaging
- 2005 Summer Teaching Assistant for a practical course for undergraduate students, Ochanomizu University, Developmental biology

SUPERVISED PERSONNEL:

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| Orie Arakawa | Lab Manager in Meitinger unit (OIST) | (2022 – present) |
| Wanying Tian | PhD Student in Karen Oegema lab (UCSD) | (2021 – 2022) |
| Andrew Bellaart | Lab Manager in Oegema & Desai lab (UCSD) | (2021 – 2022) |
| | *Current position: PhD student, Biology Department at UCSD | |
| Jennifer Harrison | Undergraduate student (UCSD) | (2018 – 2021) |
| | *Current position: PhD student, MMPP PhD program at Yale University | |
| Akshari Gupta | PhD Student in Daiju Kitagawa lab (NIG) | (2012 – 2016) |
| Koki Watanabe | PhD Student in Daiju Kitagawa lab (NIG) | (2015 – 2016) |

OUTREACH AND SERVICES:

- 2023 Judge for flash talks at the Molecular Biology Society of Japanese annual meeting, Kobe, Japan
- 2023 Organizer for the symposium- Right time, right scale: cell division regulation- at the Molecular Biology Society of Japanese annual meeting, Kobe, Japan
- 2023 Member of the Peer Mentoring Circle in OIST-Women's Leadership-
- 2022 Panelist in the MBSJ-ASCB-EMBO joint workshop Part 2- Navigating your career across boundaries
- 2020 The Science Innovation Academy at Castle Park High School
- 2019 Judge for the GSA poster awards for the 22nd International C. elegans Conference
- 2011 Student committee of Global COE annual retreat at the University of Tokyo

SERVICE TO THE UNIVERSITY:

- 2024 Lecture for Keio student at International Research Summer Camp at OIST (July 30)
- 2024-present Organizer of the OIST Cell Biology Joint Journal Club (Every week with Kono, Kiyomitsu, Meitinger Units and STAs)
- 2023-present Organizer of the OIST Cellular and Molecular Biology Internal Seminars (Every month with Wolf, Kono, Terenzio, Kiyomitsu, Meitinger Units and STAs)
- 2023 Lecture for Keio student at International Research Summer Camp at OIST
- 2020 Postdoc member of the faculty search in the Molecular Biology section at UCSD