

Koya YOSHIZAWA, PhD

Personal Information

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Research Experience

2025–Present Postdoctoral fellow, Faculty of Advanced Life Science, Hokkaido University.
Mentor: [Ryota Uehara](#)
Jul–Nov, 2024 Visiting scholar at Mechanobiology Institute, National University of Singapore, Singapore.
Mentor: [Jin Zhu](#)
2021–2024 Research assistant at Global Facility Center, Hokkaido University, Japan.
Duty: assistant manager of flow cytometer and cell sorter.
Sep, 2020 Intern student at Summer Course in Sugashima Marine Biological Laboratory, Nagoya University, Japan.
Mentor: [Gohta Goshima](#)

Education

2022–2025 PhD in Life Science, Graduate School of Life Science at Hokkaido University, Japan.
Supervisor: Ryota Uehara
2020–2022 MS in Life Science, Graduate School of Life Science at Hokkaido University, Japan.
Supervisor: Ryota Uehara
2016–2020 BS in Biology, Department of Science at Hokkaido University, Japan.
Supervisor: Ryota Uehara

Fellowships and Research Funds

2022–2025 Hokkaido University-Hitachi Joint Cooperative Support Program for Education and Research (JPY 15,600,000).
2021–2022 The Sasakawa Scientific Research Grant (JPY 640,000).

Awards

2025 The Half refund exemption of student loan for exceptional research performance (JPY 1,440,000), Japan Student Services Organization.
2023 IGP 2023 Publication Award, Graduate School of Life Science, Hokkaido University.
2023 Hamamatsu Photonics Award (Best Discussor Award), The 9th Annual Meeting of Young Researchers in the Japan Society for Cell Biology.
2023 Best Presentation Award, Research Meeting of Cell Biology at Hokkaido University in 2023, Hokkaido University.
2022 The Full refund exemption of student loan for exceptional research performance (JPY 1,200,000), Japan Student Services Organization.
2020 IGP Award (Best Presentation Award in English), master thesis defence in Graduate School of Life Science, Hokkaido University.

Publications

Link to [Google Scholar](#) and [PubMed](#)

* Equal contribution

Research Articles

1. Yoshizawa, K., Singh, H. R., Paramasivam, K., Zhu, J., Uehara, R. (2026). Cep192 insufficiency underlies haploid instability in human cells. *bioRxiv*, 2026.03.18.712690.
2. Ishida-Ishihara, S.*, Yaguchi, K.*, Miura, S.*, Nomura, R., Wang, Q., Yoshizawa, K., Sato, K., Yang, G., Veszelyi, K., Banhegyi, G., Margittai, E., & Uehara, R. (2024). Fragility of ER homeostatic regulation underlies haploid instability in human somatic cells. *Journal of Biological Chemistry*, 300(11), 107909. PMID: 39433129
3. Sahu, S., Yoshizawa, K., Yamamoto, T., Uehara, R., & Tamaoki, N. (2024). Photoswitchable Auxin-Inducible Degron System for Conditional Protein Degradation with Spatiotemporal Resolution. *Journal of the American Chemical Society*, 146(31), 21203–21207. PMID: 39047232
4. Yoshizawa, K., Matura, A., Shimada, M., Ishida-Ishihara, S., Sato, F., Yamamoto, T., Yaguchi, K., Kawamoto, E., Kuroda, T., Matsuo, K., Tamaoki, N., Sakai, R., Shimada, Y., Mishra, M., & Uehara, R. (2023). Tetraploidy-linked sensitization to CENP-E inhibition in human cells. *Molecular Oncology*, 17(6), 1148–1166. PMID: 36688680
 - Selected as 2023 *Highlights* in Molecular Oncology.
 - Ranked within the top 10% of most-viewed papers published in Molecular Oncology in 2023.
5. Yaguchi, K., Sato, K., Yoshizawa, K., Mikami, D., Yuyama, K., Igarashi, Y., Banhegyi, G., Margittai, E., & Uehara, R. (2021). Mevalonate Pathway-mediated ER Homeostasis Is Required for Haploid Stability in Human Somatic Cells. *Cell Structure and Function*, 46(1), 1–9. PMID: 33361684
6. Yoshizawa, K., Yaguchi, K., & Uehara, R. (2020). Uncoupling of DNA Replication and Centrosome Duplication Cycles Is a Primary Cause of Haploid Instability in Mammalian Somatic Cells. *Frontiers in Cell and Developmental Biology*, 8, 721. PMID: 32850837

Method Articles

1. Yoshizawa, K. & Uehara, R. (2025). Comparative Pharmacological Analysis of Mitotic Inhibitors Using Isogenic Ploidy Series of HAP1 Cells. *Methods in Molecular Biology*, 2872:207–219. PMID: 39616578

Review Articles

1. Yoshizawa, K. and Uehara, R. (2025). Alterations in mitotic regulations upon whole genome duplication. *Experimental Medicine*, Vol. 43 No. 16.

Presentations

Oral Presentations

1. Yoshizawa, K., Singh, H. R., Paramasivam, K., Zhu, J., Uehara, R. (July 2026).
Cep192 insufficiency underlies haploid instability in human cells.
The 78th Annual Meeting of the Japan Society for Cell Biology. Sapporo, Japan.
2. Yoshizawa, K., Zhu, J., & Uehara, R. (July 2025).
Towards understanding the causes of haploidy-linked failure in bipolar spindle assembly.
The 4th Research Meeting of Cell Division. Mishima, Japan.
3. Yoshizawa, K., Shimada, M., Ishida-Ishihara, S., Yamamoto, T., & Uehara, R. (March 2023).
Tetraploidy-linked sensitization to CENP-E inhibition in human cells.
Research Meeting of Cell Biology at Hokkaido University 2023. Sapporo, Japan.
4. Yoshizawa, K., Shimada, M., Yamamoto, T., & Uehara, R. (June 2022).
Selective growth suppression of tetraploid cells by inhibition of mitotic kinesin CENP-E.
The 74th Annual Meeting of the Japan Society for Cell Biology. Tokyo, Japan.
5. Yoshizawa, K. & Uehara, R. (December 2021).
Haploid human somatic cells are vulnerable to perturbations of spindle bipolarity.
The 44th Annual Meeting of the Molecular Biology Society of Japan. Yokohama, Japan.
6. Yoshizawa, K., Shimada, M., & Uehara, R. (March 2021).
Abnormal spindle formation with changes in drug sensitivity caused by chromosome gain/loss.
Research Meeting of Cell Biology at Hokkaido University 2021. Online, Japan.
7. Yoshizawa, K., Yaguchi, K., & Uehara, R. (June 2020).
Stabilization of the haploid state in human somatic cells through artificial recoupling of centriole duplication cycle with DNA replication cycle.
The 72nd Annual Meeting of the Japan Society for Cell Biology. Online, Japan.
8. Yoshizawa, K., Shimada, M., & Uehara, R. (August 2019).
Selective growth suppression in polyploid cells by paclitaxel at clinically relevant concentration.
The 1st Hungary-Japan Joint Meeting on Cellular/Molecular Dynamics. Sapporo, Japan.

Poster Presentations

1. Yoshizawa, K., Singh, H. R., Paramasivam, K., Zhu, J., and Uehara, R. (June 2026).
Cep192 insufficiency underlies haploid instability in human cells.
CHROMOSOME DYNAMICS 2026, International Symposium on Chromosome Dynamics: from Structure to Cellular Function. Awaji, Japan.
 - Selected as a flash talk.
2. Yoshizawa, K., Zhu, J., & Uehara, R. (July 2025).
Towards understanding the causes of haploidy-linked failure in bipolar spindle assembly.
The 4th Research Meeting of Cell Division. Mishima, Japan.
3. Yoshizawa, K. & Uehara, R. (November 2023).
Haploidy-linked insufficiency of pericentriolar material (PCM) protein causes a genome instability in human somatic cells.
The 61st Annual Meeting of the Biophysical Society of Japan. Nagoya, Japan.
4. Yoshizawa, K. (August 2023).
Heterogeneity of drug response in a series of isogenic human tetraploid cancer cell lines.
The 1st Hokkaido Bio "Mix-up". Sapporo, Japan.
5. Yoshizawa, K., Matura, A., Shimada, M., Ishida-Ishihara, S., Yamamoto, T., & Uehara, R. (July 2023).
Ploidy-linked changes in dependency on mitotic motor proteins in human cell.
The 49th Naito Conference on "Frontiers of Microtubule and Its-Related Motors: Atomic Structures, Cellular Functions, Development and Diseases". Sapporo, Japan.
6. Yoshizawa, K. & Uehara, R. (June 2023).
Establishing haploidy-stable human somatic cells by artificial reinforcement of acentrosomal pathway.
The 75th Annual Meeting of the Japan Society for Cell Biology. Nara, Japan.
7. Yoshizawa, K. & Uehara, R. (December 2021).
Haploid human somatic cells are vulnerable to perturbations of spindle bipolarity.
The 44th Annual Meeting of the Molecular Biology Society of Japan. Yokohama, Japan.

8. Yoshizawa, K., Yaguchi, K., & Uehara, R. (June 2020).
Stabilization of the haploid state in human somatic cells through artificial recoupling of centriole duplication cycle with DNA replication cycle.
The 72nd Annual Meeting of the Japan Society for Cell Biology. Online, Japan.
9. Yoshizawa, K., Yaguchi, K., & Uehara, R. (March 2020).
Stabilization of the haploid state in human somatic cells.
Interdisciplinary meetup. Sapporo, Japan.

Patent

1. Tamaoki, N., Sahu, S., Uehara, R., & Yoshizawa, K.
Compound, agent, method and kit of protein degradation control
Submitted, 2024-073342

Memberships in Scientific Societies

2021–Present Young Meeting in the Biophysical Society of Japan
2021–Present Japan Society for Cell Biology
2021–Present The Molecular Biology Society of Japan