

Unit Name

Membranology Unit

Mentorship / Supervision

May 2024 - Present	Third Committee Member, Muhammad Hamzah, OIST Student
Jan 2024 - Present	Mentor, Oscar Eduardo Juez, OIST Student
Jan 2022 - Present	Thesis Supervisor, Kamila Krystyna Kozik, OIST Student
Sep 2021 - Apr 2025	Thesis Supervisor, Yuta Yamazaki, OIST Student
May 2021 - Dec 2024	Mentor, Gulfiya Kadyrzhanova, OIST Student
Jan 2021 - Present	Mentor, Pradeep Palanichamy, OIST Student
Jan 2021 - Dec 2024	Co-Supervisor, Masato Hirota, OIST Student
Sep 2020 - Present	Thesis Supervisor, Jan Grasic, OIST Student
May 2020 - Present	Mentor, Munissa Sadykova, OIST Student Thesis Supervisor, Yatzu Chiu, OIST Student
May 2020 - Apr 2024	Thesis Supervisor, Kojiro Suda, OIST Student
Jan 2020 - Apr 2024	Co-Supervisor, Sara Emad Mohamed Elagamy Abdelaal, OIST Student
Sep 2019 - Present	Mentor, Maria Fransiska Emily, OIST Student Thesis Supervisor, Aisulu Maipas, OIST Student
May 2019 - Apr 2024	Third Committee Member, Hung-Ju Chiang, OIST Student
May 2019 - Dec 2024	Third Committee Member, Charles Whitaker, OIST Student
Sep 2018 - Aug 2024	Mentor, Dongpeng Hu, OIST Student

Scholarly Contributions and Creative Productions

Journal Article

Completed/Published

Maipas, A.; Sato, A.; Moriyama, Y.; Yamamoto, T.; Kono, K. Knockdown of CNOT3, a Subunit of the CCR4-NOT Deadenylase Complex, Sensitizes A549 Human Non-Small Cell Lung

Cancer Cells to Senescence-Inducing Stimuli. *Biochemical and biophysical research communications* **2025**, 748, 151294.

Seike, T.; Takekata, H.; Kono, K.; Sakata, N.; Kotani, H.; Furusawa, C.; Matsuda, F. Discovery and Identification of a Novel Yeast Species, *Sp. Nov.*, from in Okinawa, Japan. *International journal of systematic and evolutionary microbiology* **2025**, 75.

Suda, K.; Moriyama, Y.; Razali, N.; Chiu, Y.; Masukagami, Y.; Nishimura, K.; Barbee, H.; Takase, H.; Sugiyama, S.; Yamazaki, Y.; Sato, Y.; Higashiyama, T.; Johmura, Y.; Nakanishi, M.; Kono, K. Plasma Membrane Damage Limits Replicative Lifespan in Yeast and Induces Premature Senescence in Human Fibroblasts. *Nature aging* **2024**, 4, 319–335.

Sugiyama, S.; Kono, K. Exocytic Plasma Membrane Flows Remodel Endoplasmic Reticulum-Plasma Membrane Tethering for Septin Collar Assembly. *Science advances* **2024**, 10, eadj1512.

Presentation at Conference

Completed/Published

Kono, K. Healthy Aging by Ameliorating Plasma Membrane Damage. *Convergence: Fostering Interdisciplinary Collaboration for Solving Complex Problems* **2025**.

Kono, K. Ca²⁺-Mediated ER Mitochondria Crosstalk during Plasma Membrane Damage-Dependent Scnescence. *A3 Meeting in Daejeon Korea* **2025**.

Kono, K. Plasma Membrane Damage Induces Cellular Senescence. *SNU Mini-Symposium: Aging and Aging-Related Stress Responses. Seoul University* **2024**.

Kono, K. Plasma Membrane Damage Induces Cellular Senescence. *The 14th Signal Network Conference* **2024**.

Kono, K. Comprehensive Visual Screening Reveals the Trafficking Mechanism of Plasma Membrane Repair Proteins. *The 97th Annual Conference of Japanese Biochemical Society* **2024**.

Kono, K. Plasma Membrane Damage Induces Cellular Senescence. *Workshop on aging* **2024**.

Review

Completed/Published

Sugiyama, S.; Suda, K.; Kono, K. Cytoplasmic Zoning by Protein Phase Transition after Membrane Permeabilization. *Journal of biochemistry* **2024**, 175, 147–153.

Seminars

Completed/Published

Kono, K. Plasma Membrane Damage and Aging. **2025**.

Kono, K. Plasma Membrane Damage Induces Cellular Senescence. **2024**.

Scholarly Contributions (by Unit Members)

Term 1 2024

Nurhanani binti Razali, Seminars, Time-resolved transcriptomic profiling of senescence-associated secretory phenotype (SASP):in vitro and in vivo senescence analyses , Environment & Immunity Seminar 2024, Ewha Womans University College of Medicine

Nurhanani binti Razali, Seminars, Time-resolved transcriptomic profiling of senescence-associated secretory phenotype (SASP): in vitro and in vivo senescence analyses , Lab visit invitation to the Lab. of Molecular Regenerative Medicine, Seoul National University, Seoul National University

Kojiro Suda, Seminars, The Role of Calcium Ion Dynamics and Inter-Organelle Communication During Plasma Membrane Damage-Dependent Cellular Senescence, OIST x Suntory Wellness Joint Symposium

Kojiro Suda, Presentation at Conference, Ca²⁺-mediated ER-mitochondria crosstalk during plasma membrane damage-dependent senescence, EMBO workshop "The endoplasmic reticulum – guardian of cellular homeostasis"

Nurhanani binti Razali, Presentation at Conference, Time-resolved transcriptomic profiling of senescence-associated secretory phenotype (SASP) in multiple senescent cell subtypes , Forum 2024 Pharmaceutical Health Sciences.Environmental Toxicology, The Pharmaceutical Society of Japan

Kojiro Suda, Presentation at Conference, Ca²⁺-mediated ER-mitochondria crosstalk during plasma membrane damage-dependent senescence, Cell Bio 2024-An ASCB|EMBO Meeting

Kojiro Suda, Presentation at Conference, Ca²⁺-mediated ER-mitochondria crosstalk during plasma membrane damage-dependent senescence, The 47th Annual Meeting of the Molecular Biology Society of Japan

Jan Grasic, Poster Presentation at Conference, Time-resolved proteomic profiling of plasma membrane damage-dependent senescence reveals upregulation of wound healing response at the early stage of senescence, OIST RAM

Kamila Kozik, Poster Presentation at Conference, PAK-1 Mediated Upregulation of Macropinocytosis and Vacuole Accumulation in Senescent Cells, ASCB Cell Bio 2024, San Diego USA

Kojiro Suda, Book Chapter, Novel trigger of cellular senescence , Clinical Immunology & Allergology 2024 Nov. issue, 2024

Term 3 2024

Kojiro Suda, Seminars, The Role of Calcium Ion Dynamics and Inter-Organelle Communication During Plasma Membrane Damage-Dependent Cellular Senescence, Cell division, arrest and beyond

Kojiro Suda, Seminars, The Role of Calcium Ion Dynamics and Inter-Organelle Communication During Plasma Membrane Damage-Dependent Cellular Senescence, OIST Molecular and Cellular Biology Seminar

Kamila Kozik, Presentation at Conference, PAK1 is the key regulator of upregulated micropinocytosis in senescent cells , Cell division, arrest and beyond, OIST

Kamila Kozik, Other Scholarly Work, Scientific career in Japan: PhD in cellular senescence, Educational Visit, WULS Poland

Term 2 2025

Kamila Kozik, Presentation at Conference, PAK1 Regulates Vacuole Formation and Macropinocytosis in Cellular Senescence, A3 Meeting in Daejeon Korea

Nurhanani binti Razali, Presentation at Conference, Time-resolved transcriptomic profiling of senescence-associated secretory phenotype (SASP) in multiple senescent cell subtypes, A3 Meeting in Daejeon Korea

Jan Grasic, Poster Presentation at Conference, Protein biomarkers of plasma membrane damage-dependent senescence, A3 Meeting in Daejeon Korea

Kamila Kozik, Poster Presentation at Conference, PAK-1 Dependent Macropinocytosis is Upregulated in Senescent Cells, Research Appreciation Month, OIST

Nurhanani binti Razali, Other Scholarly Work, Atom, Molecules and Chemical Bonds , Team teaching invitation for CLIL-based Biochemistry subject with Assoc. Prof. Barry Kavanagh, Institute for Excellence and Higher Education, Tohoku University

Honors, Awards & Fellowships

Jan 2025 - Apr 2025 OIST's 2025 Faculty Excellence in Mentoring Award, -, 2025, OIST

Honors, Awards & Fellowships (by Unit Members)

Jan 2025 - Apr 2025 Jan Grasic, Best Poster Award, A3 Foresight Meeting, -, 2025, Yonsei University & DGIST, South Korea, -

Sep 2024 - Dec 2024 Jan Grasic, RAM Blitz Talk Winner, -, 2024, OIST Researcher Community (ORC), -

Outreach Activities (by Unit Members)

May 2024 Kojiro Suda, Waratte koraete!, Nippon Television Holdings, Inc.
Kojiro Suda, Grant writing seminar for JSPS Research Fellowship DC clinic 1, 2, OIST
Kamila Kozik, Mysteries of Aging Fibroblasts, BRIDGE Art Exhibition HUMAN-MODEL-WORLD, ISTA, Austria

Sep 2024 Kamila Kozik, Mysteries of Aging Fibroblasts, BRIDGE Art Exhibition HUMAN-MODEL-WORLD, United Nations University, Tokyo

Jan 2025 Kamila Kozik, Human senescent cells to study human aging, Ibidi Calendar 2025
Jan Grasic, OIST Science Festival 2025, OIST