University of Tsukuba
Shimoda Marine Research Center
Annual Report

2025

March 2026

Overview of our activities

The Shimoda Marine Research Center conducts research on marine organisms from a wide range of perspectives, including molecular biology, cell biology, development, physiology, phylogeny and evolution, ecology, and environmental science. In particular, since the discovery of CO_2 seeps along the coast of Shikine-jima, the Center has established the Shikine-jima Station and has been active as an international hub for ocean acidification research. Building on this background, the Center serves as one of Japan's leading marine research facilities, welcoming many researchers from universities and research institutes in Japan and overseas, and developing a wide range of collaborative research projects. We will continue to strengthen our partnerships with overseas research institutions while keeping abreast of international developments, and will contribute to the advancement of marine research worldwide.

The faculty members who make up the Center are diverse and highly accomplished. In terms of personnel changes, Assistant Professor Shiba, in the field of cell biology, will move to Ochanomizu University, and Assistant Professor Kagawa, in the field of evolutionary ecology, will move to Tokai University, both at the end of FY2025. We wish them continued success in their new positions. Following the successive moves of mid-career faculty members to new positions since last year, the Center is now in a period of transition. At the same time, the appointment of Assistant Professor Tsuyuki has been decided, and we also plan to recruit further early-career researchers. We hope that the excellent research environment of the Shimoda Marine Research Center will foster a positive cycle of human resource development.

In terms of operations, we have decided to revise the fees for using research vessels in response to rising fuel costs caused by increasing international tensions. We also renovated the seawater sinks in the large field-course room. Furthermore, repairs to the seawater intake pipe, which had been an outstanding issue for several years, are now being considered for support through the university budget, with the cooperation and approval of many heads of university organizations. I hope that the Center, which is loved by the local community and highly recognized internationally, will continue to develop sustainably and make further progress with the addition of new members.

Tomoki Chiba, Director, Shimoda Marine Research Center

Summary

Overview of the Center

The Shimoda Marine Research Center of the University of Tsukuba is a research and educational facility for marine biology, located in the rich marine environment of the southern Izu Peninsula. The ocean is the origin of life on Earth and has given rise to its biological diversity. To understand the Earth and humanity, knowledge of marine organisms is essential. The 21st century is an era of life sciences and environmental studies. At the Shimoda Marine Research Center, we conduct both fundamental and advanced research and education in marine biology to deepen our understanding of the basic principles of life and the interactions between organisms.

The Center is staffed by eight faculty members engaged in research on marine organisms from various perspectives, including molecular biology, cell biology, physiology, developmental biology, taxonomy, animal behaviour, and ecology—spanning from molecular to ecological levels. The Center also hosts many researchers from universities and research institutions in Japan and abroad, fostering collaborative research efforts. Marine biology is important not only for those pursuing biological sciences but also for developing human resources across a wide range of fields. At the Center, field courses are held not only for students from the University of Tsukuba's School of Biological Sciences and the Graduate School of Life and Earth Sciences, but also for students from other universities in Japan and overseas.

Location and Environmental Conditions

The center is located at the end of Oura Bay, a branch of Shimoda Bay, to the south of Shimoda City center. While the outer bay opens directly to the Kuroshio Current and the open ocean, the inner bay retains some characteristics of a more sheltered, inner-bay environment. Situated at the boundary between temperate and subtropical zones, the area is home to both temperate underwater kelp forests—dominated by species such as *Eisenia bicyclis* (arame) and *Ecklonia cava* (kajime)—and reef-building corals typical of tropical regions. However, these ecosystems are now beginning to show signs of change.

The marine organisms used at the Center include *Ciona intestinalis*, *Halocynthia roretzi*, *Halocynthia aurantium*, *Strongylocentrotus nudus*, *Tripneustes gratilla*, *Mesocentrotus purpuratus*, *Pseudocentrotus depressus*, *Diadema setosum*, feather stars, nudibranchs, platyhelminths,

Xenoturbella, acoelomorphs, flatworms, ctenophores, corals, flatfish species such as *Pleuronectes yokohamae*, *Paraplagusia japonica*, and *Paralichthys olivaceus*, as well as *Thalassoma cupido*, *Panulirus japonicus* (Japanese spiny lobster), *Strombus luhuanus* (a species of conch), *Ecklonia cava* (kajime), *Nemacystus decipiens* (muchi-mo), *Sargassum fusiforme* (hijiki), and *Porphyra yezoensis* (habanori), among others.

Facilities and Equipment

The Shimoda Marine Research Center campus includes three research laboratory buildings, a training hall, a marine organism culture room, an ocean observation building, and accommodation facilities. The Center is equipped with diving and sampling gear for field research and experiments, various aquaria for indoor experiments, filtered seawater systems, and a full range of instruments for research in molecular biology, biochemistry, and cell biology. Additional facilities include a recombinant DNA laboratory, a laboratory animal facility (for mice), a transgenic animal facility, seminar rooms, and a library.

Seawater is continuously pumped from a depth of 3 meters into storage tanks and supplied to both culture and experimental facilities. Research vessels are available, enabling biological sampling using dredges, trawls, and plankton nets. About 45 km southeast of the Center, on Shikine-jima (Niijima Village, Tokyo), a specialized research facility called the "Shikine-jima Station" supports an ocean acidification project. Numerous researchers from Japan and abroad stay there to conduct fieldwork and analyses.

Diving Equipment and Facilities

Wetsuits, tanks, masks, snorkels, gloves, boots, fins

Biological Sampling Equipment

Plankton nets, Neuston nets, Ekman grab, Smith-McIntyre grab, dredges, sledge nets, trawl nets, Niskin bottles

Research Equipment

Time-of-Flight Mass Spectrometer (TOF-MS), Elemental Analyzer–Isotope Ratio Mass Spectrometer (EA-IRMS), light-sheet microscope, super-resolution microscope (LatticeSIM), DNA sequencer, PCR instruments (including quantitative PCR), microplate reader, various optical microscopes, confocal laser microscope, electron microscopes (TEM, SEM), soft X-ray imaging system, calcium imaging system, high-speed video camera, HPLC, CTD sensors, and ultra-low temperature freezers.

Accommodation

The Center provides two dormitory buildings: the two-story W Building and the three-story E Building, accommodating up to 33 people. These are available for trainees, resident graduate students, and visiting researchers. Facilities include a dining hall, bathrooms, and a common lounge. Three meals a day are available on weekdays upon request.

List of Buildings and Facilities

Shimoda Marine Research Center Building (Total 3,931m²)

Research Building 1	3-story reinforced concrete building (10 laboratories, 9 experimental rooms, 2 observation and measurement rooms, 2 electron microscope rooms, 1 specimen room, 1 library, 1 seminar room, 1 low-temperature room, 3 dark rooms, 1 printing room, and 5 other rooms).
Research Building 2	2-story reinforced concrete building (3 laboratories, 5 experimental rooms, 1 lecture room, 1 archive storage room, 1 analysis room, 1 dark room)
Research Building 3	2-story reinforced concrete building (4 laboratories, 1 experimental room, 1 collaborative analysis room, 1 collaborative research space, 1 conference/seminar room, 1 measuring equipment room, and 3 other rooms)
Fieldcourse Building	1-story reinforced concrete building (1 large fieldcourse room, 1 indoor mesocosm facility, and 1 indoor breeding room)
Workshop	1-story reinforced concrete building (1 workshop, 1 storage room, 1 workroom, and 1 shower room)
Accommodation	3-story reinforced concrete building (24 Western-style rooms, 3 Japanese-Style rooms, 1 cafeteria, 2 bathrooms, and 1 lounge)
Vessels	Tsukuba II (19t, 612 HP×2, 40-person capacity) Karetta (0.5t, 9.9 HP, 6-person capacity) SMRC (Inflatable boat, 8 HP, 4-person capacity) Oberia (Rowing boat, 2-person capacity)
Seawater facilities	Fresh seawater is constantly pumped from a depth of 3 m to a 56-ton tank located approximately 13 m above sea level, and is supplied non-stop to the indoor and outdoor breeding facilities and laboratories in each research building.

Shikine-jima Station Building (total 149.6m²)

Experimental facilities	1-story building of wood and stone, with a galvanized steel sheet roof. Building The facilities are equipped with a fridge, freezer, drying oven, a microscope, a workbench, a sink, and various other laboratory equipment.
Accommodation	Wooden one-story building with galvanized steel plate roof (2 Western-style rooms, 2 Japanese-style rooms, 1 dining room, and 1 bathroom).
Vessels	Akane (0.5t, 20hp, 7-person capacity).

Staff Members in the Center

Faculty	Director, Professor	千葉　智樹 Tomoki CHIBA	Molecular Cell Biology
	Professor	稲葉　一男 Kazuo INABA	Cell Biology
	Professor	笹倉　靖徳 Yasunori SASAKURA	Developmental Genetics
	Associate Professor	谷口　俊介 Shunsuke YAGUCHI	Developmental Biology
	Associate Professor	中野　裕昭 Hiroaki NAKANO	Evolutionary Zoology
	Assistant Professor	柴　小菊 Kogiku SHIBA	Cell Biology
	Assistant Professor	Ben HARVEY	Environmental Ecology
	Assistant Professor	香川　理 Osamu KAGAWA	Evolutionary Ecology
Technician		大植　学 Manabu OOUE	～2025.8.31
		髙野　治朗 Jiro TAKANO	
		George NORTHEN	
		山根　正太郎 Shotaro YAMANE	
Full-time Research Fellow		谷　侑磨 Yuma TANI	
		谷口　順子 Junko YAGUCHI	2025.10.16～
Part-time Research Fellow		笹倉　暁子	
		岩本　裕之	2025.8.1～
		Mitushasi Guinther Hiromu	2025.11.1～2025.12.15
		齊藤　瞭汰	2026.3.16～
Specialist		田村　幸人	
Administration		土屋　理恵	
		土屋　富士子	

Part-time	Administrative assistant	ノーセン　真結花	2025.04.01～
Part-time	Cleaning Staff	山田　順子	
		田中　文子	
		渡邉　恵	
Part-time	Research Technician	大畑　雅江	
		中野　亜子	～2025.9.30
		加納　穂澄	
		田中　佐貴子	
		小宮　万智子	
		須賀　文香	
		金守　美里	
		谷田部　牧子	

Enrolled between 2025.4.1-2026.3.31

Research Activities

1) Research Introduction

Marine Molecular Biology Division

Genetics (Sasakura)

Ascidians (sea squirts) are the closest invertebrate relatives of vertebrates. Using *Ciona intestinalis*, a species with a well-annotated genome and established gene manipulation techniques, we are investigating gene functions during body formation and exploring the mechanisms underlying the evolutionary emergence of ascidians on Earth. In particular, we focus on the metamorphosis process, where ascidians undergo a dramatic transformation from a tadpole-like larva to a sessile adult. We also generate and maintain various transgenic and mutant lines using genetic engineering and genome editing techniques, contributing to the National BioResource Project by distributing these valuable lines to researchers worldwide.

Research Themes:

- Developmental genetics of ascidians
- Neurodevelopmental and physiological mechanisms of ascidian metamorphosis
- Acquisition of ascidian-specific traits

Cell Biology (Inaba・Shiba)

Flagella and cilia are vital motile structures responsible for swimming and generating water flow, conserved from unicellular organisms to vertebrates. Using various marine organisms—ascidians, sea urchins, fish, ctenophores—we study the structure, function, and evolution of flagella and cilia. Through this research, we address fundamental biological phenomena such as fertilization, morphogenesis, evolution, and marine ecology.

Research Themes:

- Structure, function, and evolution of eukaryotic flagella and cilia
- Regulation of sperm motility and adaptation to fertilization environments
- Genomics and proteomics of marine invertebrates

Developmental Biology (Yaguchi)

We study body axis and nervous system formation during embryogenesis using sea urchin embryos and larvae. Our research also examines how neurons function in movement and maintenance of the larval body. These studies aim to understand how life has adapted to three-dimensional space on Earth and the role of nervous systems in that process.

Research Themes:

- Mechanisms of body axis and neural formation in early embryos
- Functional analysis of neurons in early development
- Impact of external environmental stimuli (light, temperature) on development

Marine Ecology Division

Phylogeny and Evolution (Nakano)

Many evolutionarily important animals such as *Xenoturbella*, acoelomorphs, and placozoans remain poorly studied. We investigate their morphology, ecology, and development to uncover the origins, evolution, and diversity of bilaterians and metazoans.

Research Themes:

- Evolution and diversity of basal metazoans (e.g., *Xenoturbella*, placozoans, acoelomorphs)
- Zoological and natural history studies of marine invertebrates
- Phylogenetic and evolutionary study of coloration diversity in nudibranchs

Environmental Ecology (Harvey)

We aim to understand how environmental change—such as ocean acidification, warming, and marine heatwaves—alters marine ecosystems. Using field surveys, tank experiments, and modelling, we study a wide array of topics: species ecophysiology, biomineralization, population genetics, biodiversity, community metabarcoding, regime shifts, ecosystem functioning, and ecosystem services. These efforts help clarify the global impacts of climate change on coastal ecosystems.

Research Themes:

- The role of ocean acidification and warming in biodiversity, community structure, and stability
- Impacts of acidification and warming on calcification, physiology, and biological functions
- Effects of marine heatwaves on biogeographic distributions, range shifts, and aquaculture

Evolutionary Ecology (Kagawa)

The ocean is filled with incredible biodiversity. How did this diversity emerge, and how has it been maintained? Despite numerous evolutionary ecology theories, many mysteries remain. Through fieldwork, ecological experiments, statistical modelling, and population/phylogenomic analysis, we investigate fundamental questions in biodiversity science.

Research Themes:

- Speciation and phylogenetic diversification in marine organisms
- Influence of physical environments on population genetic structure and dynamics
- Determinants of marine community structure

2) Research Supervision of Students at the Center

University of Tsukuba, Life and Environmental Sciences, Biology

Undergraduate, 4th Year	イセエビの無鞭毛精子形成における鞭毛関連タンパク質の局在
Undergraduate, 4th Year	シダ類精子における多繊毛分布と走化性応答時の運動解析
Undergraduate, 4th Year	ウニ幼生食道神経の発生
Undergraduate, 4th Year	平板動物H11の飼育系統確立に向けた飼育条件の検討
Undergraduate, 4th Year	ウノアシに寄生するカイアシ類ウノアシノミコトについての研究
Undergraduate, 4th Year	カサゴ亜目魚類から得られた寄生性扁形動物の分類学的研究
Undergraduate, 4th Year	How seasonal intertidal microclimate shapes tidepool and emergent rock communities

Biology Degree Program, Graduate School of Science and Technology (Life and Earth Sciences Division), University of Tsukuba

Masters, 1st Year	ホヤの変態の分子メカニズム
Masters, 1st Year	クシクラゲ櫛板巨大繊毛の形成メカニズム
Masters, 1st Year	クシクラゲ櫛板繊毛タンパク質の転写調節に関する研究
Masters, 1st Year	日本産*Virroconus*属（腹足綱イモガイ科）の同定と分布
Masters, 1st Year	Development of a method for the quantitative assessment of fish grazing pressure in temperate reefs
Masters, 2nd Year	ホヤの変態の分子メカニズム
Masters, 2nd Year	二酸化炭素によるニホンウナギ精子の運動停止反応
Masters, 2nd Year	サンゴの共生・白化に関連する褐虫藻の運動調節の研究
Masters, 2nd Year	バフンウニのモデル生物化研究
Masters, 2nd Year	グライコミクスを用いた海洋糖鎖の鉛直分布評価
Masters, 2nd Year	熱分解性に基づく海藻藻体の微生物分解速度の推定
Masters, 2nd Year	Assessing the Vulnerability of Sea Urchin Early Life Stages to Marine Heatwaves
Masters, 2nd Year	Genetic and Environmental Contributions to Skeletal Parameters in Two Coral Genera Across the Pacific Ocean
PhD, 1st Year	マガキガイ異型精子の遊泳方向と顆粒体の分泌
PhD, 1st Year	Impacts of tropicalisation and ocean acidification on marine habitats and their associated biological communities
PhD, 1st Year	The effects of ocean acidification and warming on the interactions between benthic animals and their environment.
PhD, 2nd Year	海藻群集からの溶存態有機物の生産量の測定
PhD, 3rd Year	Distribution and fluxes of microplastics in Japanese coastal areas
PhD, 3rd Year	Predicting genetic lineages of the reef-building corals *Porites* spp., *Pocillopora* spp. and *Millepora* spp. based on colony morphology

3) Publications

Marine Molecular Biology Division

Genetics

Kawamorita H, Fujiwara H, Fujita K, Hozumi A, Udagawa S, Yoshida R, Kiyomoto M, Sasakura Y, Ogasawara M. 2026. Possible functional origin of TPO-like genes in chordates revealed by their pleiotropic expression and disturbed phenomena in protochordates. **Cell and Tissue Research**, 403(1): 7.

Fujiwara H, Nakayama S, Iguchi R, Sekiguchi T, Sasakura Y, Kiyomoto M, Ogasawara M. 2025 Non-Contiguous and Multi-Regional Expression of Pancreas-Related Genes along the Lancelet Gut. **Zoological Science**, 43(1).

Hozumi A, Totsuka NM, Onodera A, Wang Y, Hamada M, Shiraishi A, Satake H, Horie T, Hotta K, Sasakura Y. 2025 Stimulatory and inhibitory G-protein signaling relays drive cAMP accumulation for timely metamorphosis in the chordate *Ciona*. **eLife**, 13: RP99825.

Kuroiwa K, Mita-Yoshida K, Hamada M, Hozumi A, Nishino AS, Sasakura Y. 2025 Tunicate-specific protein Epi-1 is essential for conferring hydrophilicity to the larval tunic in the ascidian *Ciona*. **Developmental Biology**, 520: 41–52.

Saito R, Hyodo T, Kamakura N, Fujikake Y, Nishino JM, Sasakura Y, Nishino AS, Fujiwara S. 2025 *Hox3* Is Required for Post-Metamorphic Heart Development in Adult *Ciona*. **Development, Growth & Differentiation**, 67(9): 500–515.

Sasakura Y, Sunanaga T, Onuma TA, Satake H. 2025 Germ cell formation and reproduction in tunicates. **Developmental Biology**, 527: 226–249.

Cell Biology

Shibata A, Yamamoto C, Tani Y, Yanase R, Shiba K, Sato Y, Yabuki A, Inaba K. 2025. The photophobic response in the apusomonad *Podomonas kaiyoae* is mediated by coordination of cilia and actin filaments. **Communications Biology** 8(1):1787.

Yamamoto T, Takeuchi K, Nagata Y, Mizuno A, Harada H, Ishikawa T, Maeda S, Ohka F, Yanase R, Shiba K, Ueno H, Inaba K, Saito R. 2025. Dpcd induces hydrocephalus because of partial defects in the inner dynein arms, with abnormal ciliary motility. **Cytoskeleton (Hoboken).** 1–13.

Nakayama T, Harada R, Yabuki A, Nomura M, Shiba K, Inaba K, Inagaki Y. 2025. Marked Genome Reduction Driven by a Parasitic Lifestyle: Two Complete Genomes of Endosymbiotic Bacteria Possibly Hosted by a Dinoflagellate. **Microbes and Environment** 40(2):ME25005.

Sakato-Antoku M, Patel-King RS, Inaba K, Balsbaugh JL, King SM. 2025. Isoform-specific phosphorylation of axonemal dynein heavy chains. **Molecular Biology of the Cell.** 36(6):ar67.

Sakato-Antoku M, Patel N, Inaba M, Rao Q, Yang J, Patel-King RS, Inaba K, Balsbaugh JL, King SM. 2025. Phyloproteomics reveals conserved patterns of axonemal dynein methylation across the motile ciliated eukaryotes. **Molecular Biology of the Cell** 36(4):ar49.

稲葉一男（監修）『最新 精子学』, 筑波大学出版会，2025 年 12 月

稲葉一男．精子研究の歴史と現状, 精子鞭毛の構造と運動の仕組み, 精子形態の多様性と進化, 魚類の精子, 異型精子の形態と働き, 気候変動と精子機能の変化, 結語．稲葉一男（監修），『最新 精子学』，筑波大学出版会，2025 年 12 月，pp.1-6, 48-53, 134-139, 157-161, 179-183, 324-327, 331-334.

柴 小菊．精子運動の調節機構．稲葉一男（監修），『最新 精子学』，筑波大学出版会，2025 年 12 月，pp.64-68.

柴 小菊. 細胞の行動. 中垣　俊之・石川　拓司 (編),『細胞の行動力学』, 東京大学出版会, 2025 年 12 月，pp.1–45.

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Developmental Biology

Tsuyuzaki K, Yaguchi J, Yamamoto T, Ikeo K, Yaguchi S. 2026. Single-cell transcriptomic resources for tracing neurogenesis and cell fate specification in sea urchin embryos. **Development**, 153(4): dev205025.

Yaguchi S. 2026. Emergence of a Central Nervous System: A Two-Step Evolutionary Model Suggested by Sea Urchin Experiments. **Zoological Science**, 43(1).

Suzuki H, Yaguchi J, Tsuyuzaki K, Yaguchi S. . 2025. Unraveling the regulative development and molecular mechanisms of identical sea urchin twins. **Nature Communication***s*, 16(1): 8005.

Yaguchi J, Tsuyuzaki K, Sawada I, Horiuchi A, Sakamoto,N, Yamamoto T, Yamashita T, Yaguchi S. . 2025. Non-visual photoreceptive brain specification in sea urchin larvae. **Nature Communications**, 16(1): 10054.

Marine Ecology Division

Phylogenetics and Evolutionary Biology

Nakano H. 2025. Placozoa pp.156-157 in ‘Aquatic Small Beautiful Organism- Small Benthos and Plankton Encyclopedia’. ed: Nakamura Y, Yamasaki H, Tanaka H. Asakura Publishing Co., Ltd.

Nakano H. 2025. Xenacoelomorpha pp.172-175 in ‘Aquatic Small Beautiful Organism- Small Benthos and Plankton Encyclopedia’. ed: Nakamura Y, Yamasaki H, Tanaka H. Asakura Publishing Co., Ltd.

Environmental Ecology

Hudson CJ, Jolly J, Connell SD, Ravasi T, Harvey BP. 2025. Effects of long-term ocean acidification exposure on the structural, mineralogical, and mechanical properties of sea urchin (Echinometra spp.) skeletons at a natural volcanic CO_2 seep. **Environmental Science & Technology**,

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Perry CT, De Bakker DM, Webb AE, Comeau S, Harvey BP, Cornwall CE, Alvarez-Filip L, Pérez-Cervantes E, Morris J, Enochs IC, Toth LT, O'Dea A, Dillon EM, Meesters EH, Precht WF. 2025. Reduced Atlantic reef growth past 2 °C warming amplifies sea-level impacts. **Nature**, 646:619–626.

Wada S, Kurosawa S, Agostini S, Harvey BP, Satoh Y, Milazzo M, Hall-Spencer JM. 2025. Elevated carbon dioxide does not increase macroalgal community photosynthesis. **Communications Earth & Environment**, 6:840.

Cornwall CE, Timmerman O, Andersson A, Berbece DM, Branson O, Comeau S, Courtney TA, Donner SD, Enochs I, Harvey BP, Isaak AL, Koch HE, Logan CA, Perry CT, Schoepf V, Toth LT, Webb A. 2026. Persistence of coral reef structures into the twenty-first century. **Nature Reviews Earth & Environment**, 7:151–161.

Evans R, Harvey BP, Marshall KE, Russell BD. 2026. Geographic distribution of mariculture species determines the impacts of thermal variability on growth performance and thermal resilience. **Environmental Research**, 124016.

Firth LB, Desiderato A, Knights AM, Aguirre JD, Astudillo JC, Azofeifa-Solano JC, Bilton DT, Chee SY, Christie HC, Christofoletti RA, Curd A, Dafforn KA, Dethier MN, Dong Y, Droual G, Dubois SF, Espinosa F, Evans AJ, Foggo A, Hawkins SJ, Hanley ME, Harvey BP, Heery E, Hong S, Hsiung AR, Hui TTY, Humet M, Iken K, Jethva SB, Kim JH, Kon K, Konar B, Kundu RS, Lau JWT, Leung KMY, Li X, Sun Y, Lima FP, Lis E, Liversage K, Loke LHL, Martinez AS, Mayer-Pinto M, Mendonça V, McQuaid CD, Moore PJ, Morris RL, Msangameno D, Nieto-Vilela R, Ondiviela B, Oróstica MH, Ostalé-Valriberas E, Palomo MG, Rinde E, Seabra R, Sibaja-Cordero JA, Silva A, Strain EMA, Todd P, Turner MS, Vinagre C, Wangkulangkul K, Want A, Sempere-Valverde J. 2026. Micro-refuges or ecological traps: context-dependent effects of rock pools on intertidal biodiversity across latitudes. **Global Ecology and Biogeography**, 35:e70208.

Fujii M, Ono T, Yamada M, Ooue M, Ito T, Yang J-H, Horiuchi Y, Oiwane H, Wakita M, Wada S. 2025. Biogeochemical properties of shallow-water CO_2 seeps on Himeshima Island and Showa Iwojima Island, Japan. **Progress in Earth and Planetary Science**, 12: 101.

Mitchell A, Hayes C, Hudson CJ, Connell SD, Harvey BP, Agostini S, Jolly J, Ravasi T, Booth DJ, Nagelkerken I. 2026. Marine heatwaves, ocean warming and acidification reshape reef fish gut microbiomes. **Molecular Ecology**, 35:e70275.

Evolutionary Ecology

Kagawa O, Itoh H, Nakajima N, Fukumori H. 2025. Phylogenetic history of the acquisition of molluscan hosts in acotylean flatworms. **Biology Letters**, 21:20240721.

Kagawa O. 2025. Host specificity of a chiton-associated flatworm based on field and laboratory observations. **Journal of the Marine Biological Association of the United Kingdom**, 105:e126.

Suenaga T, Saito T, Kagawa O, Suyama Y, Tsunamoto Y, Watanabe S, Yanagisawa T, Taira M, Chiba S. 2026. Hidden in the dark: complex evolutionary history revealed by genome-wide analyses of cave amphipods. **Journal of Evolutionary Biology**, 39:412–422.

Technical Staff

Fujii M, Ono T, Yamada M, Ooue M, Ito T, Yang J-H, Horiuchi Y, Oiwane H, Wakita M, Wada S. 2025. Biogeochemical properties of shallow-water CO_2 seeps on Himeshima Island and Showa Iwojima Island, Japan. **Progress in Earth and Planetary Science**, 12: 101.

4) Conference Presentations and Invited Lectures

Marine Molecular Biology Division

Genetics

【Poster Presentation】笹倉靖徳、保住暁子、Wang Yanbin、西野純子、白石慧、渡辺健宏、佐竹炎、西野敦雄, 海産脊索動物ホヤ幼生におけるクレアチンシャトル関連分子の機能, 第４８回日本分子生物学会年会、パシフィコ横浜、神奈川県横浜市 2025.12.4

【Poster Presentation】Yanbin Wang, Akiko Hozumi, Akira Shiraishi, Takeshi Kawada, Honoo Satake, Yasunori Sasakura. *Xbp1.d* a transcription factor regulating metamorphosis in *Ciona intestinalis*. 日本動物学会第９６回大会、ぽーとめっせなごや、愛知県名古屋市、2025.9.5.

【Oral Presentation】笹倉靖徳、Yanbin Wang、ホヤ特異的遺伝子群の変態における機能とその考察、第７回ホヤ研究集会、高知大学、高知県高知市、2025.11.9

【Oral Presentation】笹倉靖徳、佐藤ゆたか、三浦徹、吉田学、ナショナルバイオリソース・カタユウレイボヤ事業とその将来、第７回ホヤ研究集会、高知大学、高知県高知市、2025.11.9

Cell Biology

【Oral Presentation】○水野なつみ, 水野克俊, 柴小菊, 稲葉一男, 山田雅巳, 折坂誠, 吉田好雄, マウス精子における非ヒストンタンパク質翻訳後修飾の解析, 第 66 回日本卵子学会学術集会, 広島コンベンションホール, 広島県広島市, 2025.5.31-6.1.

【Poster Presentation】○Katsutoshi Mizuno, Natsumi Shimizu-Mizuno, Tomohiro Kubo, Kogiku Shiba, Kazuo Inaba, Makoto Orisaka, and Masami Yamada, Analysis of the Role of Protein Methylation in Ciliary Function, 2025 JSCB 77th / JSDB 58th Meeting (日本細胞生物学会/日本発生生物学会　合同大会) , ウインクあいち, 愛知県名古屋市, 2025.7.16-18.

【Poster Presentation】○Miku Kagawa, Minori Hagita, Takuro Nakayama, Kogiku Shiba, Takako Kato-Minoura, Shinya Matsuda, Kazuo Inaba, Yuji Inagaki, Kentaro Nakano, tARP is an actin-related protein required for ciliary function that is conserved in ciliates and related eukaryotic groups, 2025 JSCB 77th / JSDB 58th Meeting (日本細胞生物学会/日本発生生物学会　合同大会), ウインクあいち, 愛知県名古屋市, 2025.7.16-18.

【Oral Presentation】○水野なつみ, 水野克俊, 柴小菊, 稲葉一男, 山田雅巳, 折坂誠, 吉田好雄, マウス精子において非ヒストンタンパク質翻訳後修飾が果たす役割について, 第 43 回日本受精着床学会, 名古屋マリオットアソシアホテル/ JR ゲートタワーカンファレンス愛知県名古屋市, 2025.8.28-29. *世界体外受精会議記念賞候補演題採択

【Oral Presentation】○横屋 稜, 柴 小菊, 稲葉 一男, マガキガイ異型精子の顆粒体分泌により正型精子の凝集と細胞死が誘導される, 日本動物学会第 96 回名古屋大会 2025, ポートメッセなごや, 愛知県名古屋市, 2025. 9.4-6.

【Oral Presentation】○森 凛太朗, 柴 小菊, 稲葉 一男, 二酸化炭素によるニホンウナギ精子の運動停止反応, 日本動物学会第 96 回名古屋大会 2025, ポートメッセなごや, 愛知県名古屋市, 2025. 9.4-6.

【Oral Presentation】○岩本裕之, 横屋稜, 芝山雄基, 小坂実央, 大岩和弘, 稲葉一男, 急速凍結したクシクラゲ櫛板の X 線回折像から再構成した繊毛軸糸の 3 次元構造, 日本動物学会第 96 回名古屋大会 2025, ポートメッセなごや, 愛知県名古屋市, 2025. 9.4-6.

【Oral Presentation】○木下 颯, 柴 小菊, 吉田 学, 吉田 薫, カタユウレイボヤ精子運動活性化における pH 変化の影響, 日本動物学会第 96 回名古屋大会 2025, ポートメッセなごや, 愛知県名古屋市, 2025. 9.4-6.

【International Conference】【Invited Lecture】Kogiku Shiba, Chemotaxis Strategy of Ascidian Sperm Revealed by “Ethological Dynamics in Diorama Environments” , Oxford-Japan Symposium on Cell Behaviors in Simple to Complex Environments, Mathematical Institute, University of Oxford, Oxford, UK, 22nd–26th, September 2025.

【Poster Presentation】○水野克俊, 水野なつみ, 柴小菊, 稲葉一男, 伊藤貴文, 折坂誠, 山田雅己, マウス精子における核外タンパク質メチル化の機能解析, 第 98 会日本生化学会大会, 国立京都国際会館, 京都府京都市, 2025.11.3-5.

【Oral Presentation】柴小菊, 精子鞭毛運動調節メカニズムに関する研究, 第 7 回ホヤ研究会, 高知大学朝倉キャンパス 共通教育棟 2 号館 222 番教室, 高知県高知市, 2025.11.8-9.

【Oral Presentation】稲葉一男, 繊毛の多様性と進化, 第 14 回繊毛研究会, 名古屋市立大学桜山キャンパス同窓会館, 愛知県名古屋市, 2025.12.18-19.

【Oral Presentation】○柴小菊, 稲葉一男, 吉田学, 中垣俊之, 飯間信, ホヤ精子走化性における倍数変化感知 (FCD) モデルの検証, 生体運動研究合同班会議 2026, KDDI 維新ホール, 山口県山口市, 2026.1.9-11.

【Oral Presentation】○朝賀伸一, 北之坊誠也, John Murray, Ke Hu, 柴小菊, 稲葉一男, 共生に伴うサンゴ細胞骨格タンパク質の動態解析, 生体運動研究合同班会議 2026, KDDI 維新ホール, 山口県山口市, 2026.1.9-11.

【Oral Presentation】○森 凛太郎, 柴 小菊, 稲葉 一男, 二酸化炭素によるニホンウナギ精子鞭毛の運動抑制メカニズム, 生体運動研究合同班会議 2026, KDDI 維新ホール, 山口県山口市, 2026.1.9-11.

【Oral Presentation】○森 凛太郎, 柴 小菊, 稲葉 一男, 二酸化炭素によるニホンウナギ精子鞭毛の運動抑制メカニズム, 生体運動研究合同班会議 2026, KDDI 維新ホール, 山口県山口市, 2026.1.9-11.

【Oral Presentation】○岩本裕之, 横屋稜, 大岩和弘, 稲葉一男, クライオ電顕データを利用した運動中の繊毛軸糸の構造予測, 生体運動研究合同班会議 2026, KDDI 維新ホール, 山口県山口市, 2026.1.9-11.

【International Conference】【Invited Lecture】Kogiku Shiba, Makoto Iima, How Ascidian Sperm Navigate Toward Eggs Using Chemical Gradients: Integrating Experiments and Mathematical Models, The 2nd International Symposium on Cellular Ethological Dynamics in Diorama Environments, Hall 8A, 8th Floor, TKP Garden City PREMIUM Sendai Nishiguchi, Sendai, Miyagi, 2026.3.13.

【Poster Presentation】○横屋 稜, 柴 小菊, 稲葉 一男, マガキガイ異型精子の顆粒体分泌により正型精子の凝集と細胞死が誘導される, 学術変革領域研究(A)「ジオラマ環境で覚醒する原生知能を定式化する細胞行動力学」第 8 回領域全体会議, 東北大学片平キャンパス片平さくらホール, 宮城県仙台市, 2026.3.14-15.

Developmental Biology

【Poster Presentation】○須賀　文香, 谷口　順子, 谷口 俊介, エゾバフンウニ(Strongylocentrotus intermedius)のモデル生物化への挑戦 2026, 日本動物学会　関東支部第 78 回大会, 埼玉大学 2026.3.14.

【Poster Presentation】○直井　幸喜; 長塚　愛生; 谷口　順子; 谷口 俊介, ウニ幼生における食道神経の発生 2026, 日本動物学会　関東支部第 78 回大会, 埼玉大学, 埼玉県さいたま市 2026.3.14.

【Invited Lecture】YAGUCHI Shunsuke, Light-modulated neural control of sphincter regulation in the evolution of through-gut 2025 日本生物物理学会第 63 回大会, 奈良県コンベンションセンター, 奈良県奈良市 2025.9.24-26.

【International Conference】【Oral Presentation】YAGUCHI Shunsuke, Developmental single-cell transcriptomics illuminates molecular pathways involved in sea urchin neurogenesis 2026, Developmental Biology of the Sea Urchin and Other Marine Invertebrates XXVIII, MBL, Woods Hole, MA, USA, 2025.4.2-5.

Marine Ecology Division

Phylogenetics and Evolutionary Biology

【Oral Presentation】○波々伯部夏美、藤原義弘、河戸勝、小川晟人、自見直人、酒向実里、下岡敏士、福岡雅史、手良村知功、喜瀬浩輝、齋藤直輝、櫛田優花、中野裕昭、白木祥貴、関口翔悟、角井敬知、小林格、Kurt Bryant B. Bacharo、木村昭一、木村妙子、「しんかい 6500」で明らかになった熊野灘・志摩海脚のベントス相、2025 年 日本ベントス学会・日本プランクトン学会合同大会、東北大学新青葉山キャンパス　青葉山コモンズ、宮城県仙台市、2025.9.9-12

【Oral Presentation】【Invited Lecture】◯塙宗継、小田賢幸、中野裕昭、平板動物の個体間融合と卵母細胞形成誘導：単純な体構造と柔軟な融合能を併せ持つ実験材料としての可能性、日本動物学会第９６回大会、ポートメッセなごや、愛知県名古屋市、2025.9.4-6

【Poster Presentation】林牧子、神澤由己 、星野修 、◯中野裕昭、ヒドロ虫上にみられる未記載種を中心とした扁形動物門原卵黄目の系統分類学的研究、日本動物学会第９６回大会、ポートメッセなごや、愛知県名古屋市、2025.9.4-6

【Poster Presentation】◯林牧子、香川理、神澤由己 、山田彩斗 、ジョシュア・ハイツマン 、深町昌司、中野裕昭、分子系統解析に基づいたイロウミウシ科アオウミウシ属の系統の再検討、日本動物学会第９６回大会、ポートメッセなごや、愛知県名古屋市、2025.9.4-6

【Poster Presentation】◯塙宗継、小田賢幸、中野裕昭、平板動物キメラの個体間融合の多様性と行動変化、日本動物学会第９６回大会、ポートメッセなごや、愛知県名古屋市、2025.9.4-6

【Poster Presentation】◯林牧子、香川理、神澤由己 、山田彩斗 、ジョシュア・ハイツマン 、深町昌司、中野裕昭、イロウミウシ科アオウミウシ属の分子系統解析、日本貝類学会令和 7 年度大会、東京家政学院大学 千代田三番町キャンパス、東京都千代田区、2025.5.17-18

【Poster Presentation】◯山田彩斗 、中野裕昭、伊豆半島南部沖水深 60m 以深の浅海域でのドレッジ採集による有殻腹足類相調査、日本貝類学会令和 7 年度大会、東京家政学院大学 千代田三番町キャンパス、東京都千代田区、2025.5.17-18

Environmental Ecology

【Oral Presentation】◯Rhian Evans, Ben P Harvey, Bayden D. Russell, The effects of summer and winter marine heatwaves on growth is determined by latitude and species traits, 2025 International Temperate Reefs Symposium, 2025.7.1-5

【Oral Presentation】◯Callum Hudson, Ben P Harvey, Sean Connell, J. Jolly, T. Ravasi, Long-term

ocean acidification exposure negatively impacts the structural and mechanical properties of sea urchin skeletons at a natural volcanic CO_2 seep, 2025 International Temperate Reefs Symposium, 2025.7.1-5

【Oral Presentation】◯Sylvain Agostini, Jason Hall-Spencer, Ben P Harvey, Natural analogues of the future ocean to understand and protect marine ecosystems under climate change and ocean acidification, One Ocean Science Congress, 2025.6.3-6

【Poster Presentation】◯Yiyi Li, Callum J. Hudson, Rhi Hunt, Ben P Harvey, Effect of ocean acidification on the ecological and physiological responses of two sea urchin species *Echinometra* sp. A and *Diadema setosum*, 2025 International Temperate Reefs Symposium, 2025.7.1-5

【Poster Presentation】◯Renata Ramos Gomes, Thamíris Christina Karlovic de Abreu, Maria de Lourdes Zani

Teixeira, Michel Michaelovitch de Mahiques, June Ferraz Dias, Integrating Acoustic Surveys and Biological Sampling to Characterize Ecosystems: A Case Study in the Alcatrazes Archipelago, São Paulo, Brazil, 2025 International Temperate Reefs Symposium, 2025.7.1-5

【Poster Presentation】◯Halyna Romashko, Ben P Harvey, Assessing the vulnerability of sea urchin early life-stages to marine heatwaves, 2025 International Temperate Reefs Symposium, 2025.7.1-5

【Poster Presentation】◯Ryoji Fukui, Sylvain Agostini, Development of a method for the quantitative assessment of fish grazing pressure in temperate reefs, 2025 International Temperate Reefs Symposium, 2025.7.1-5

【Oral Presentation】◯Yiyi Li, Ben P Harvey, Effect of ocean acidification on the ecological and physiological responses of two sea urchin species, *Echinometra* sp. A and *Diadema setosum*, 2025 ESSAS Annual Science Meeting: “Ecological, social and economic dynamics of high-latitude coastal systems”, 2025.6.24-26

【International Conference】【Invited lecture】◯Ben P Harvey, Ecosystem shifts under ocean acidification and warming – insights from CO_2 seeps and other natural analogues, 2025 ESSAS Annual Science Meeting: “Ecological, social and economic dynamics of high-latitude coastal systems”, 2025.6.26.

Evolutionary Ecology

【Invited Lecture】香川理, 貝を乗り換えて生まれた種 奄美で発見されたカイゴロモの種分化, 第53回鹿大島嶼研勉強会 奄美分室で語りましょう, 2025.6.2.

【Oral Presentation】◯石井康人, 平野尚浩, 上島励, 千葉聡, 伊藤舜, 香川理, 種内系統が示す気候変動への応答の差異：ゲノミクスと生態ニッチモデリングの統合, 日本貝類学会令和 7 年度大会, 2025.5.17.

Technical Staff

5) Press Releases

https://www.tsukuba.ac.jp/journal/biology-environment/20250620141500.htm
ホヤが大人になるための時間を計る仕組みを解明（笹倉靖徳）

https://www.tsukuba.ac.jp/journal/biology-environment/20250905180000.html
ウニが双子をつくる仕組みを解明（谷口俊介）

https://www.tsukuba.ac.jp/journal/biology-environment/20251120141500.html
ウニ幼生に光で行動を調節する脳のような神経細胞群が存在することを発見（谷口俊介）

https://www.tsukuba.ac.jp/journal/biology-environment/20251225140000.html
鞭毛・繊毛の進化の鍵となる単細胞生物アプソモナドの光回避応答を発見（稲葉一男）

https://www.tsukuba.ac.jp/journal/biology-environment/20260226190000.html
ウニ胚と幼生の発生過程を単一細胞レベルで追跡できるデータベースを公開（谷口俊介）

https://www.tsukuba.ac.jp/journal/biology-environment/20251209100000.html
CO2 シープは未来の海を知る 「自然の実験室」（Ben P Harvey）

https://www.tsukuba.ac.jp/journal/biology-environment/20250924140000.html
気温 2℃上昇でサンゴ礁が成長不能になり沿岸浸水リスクが増大する（Ben P Harvey）

6) Awards and Prizes

笹倉靖徳ら、Development, Growth and Differentiation Editor-in-Chief Prize 2025

笹倉靖徳ら、Zoological Science Award and Fujii Award 2025.9.4

Yiyi Li, Best Student Presentation Prize, 2025 Ecosystem Studies of the Subarctic and Arctic Seas (ESSAS) Open Science Meeting

7) Newspaper articles and TV coverage

稲葉一男, TBS ラジオ　秘密諜報員みなみかわ第 8 回「ミクロの毛から生命進化のルーツを探れ」, 2025.5.22.

谷口俊介　日テレ「ザ・鉄腕 DASH」2025 年 6 月 19 日　監修

Ben P Harvey, 東京新聞　「＜ドキ時（ドキ）！サイエンス＞東京・式根島海底から噴き出す CO2　「未来の海」の姿を探る」2025 年 11 月 24 日　https://www.tokyo-np.co.jp/article/451325

8) International Collaborative Research

Israel – Tel Aviv University – Oded Rechavi

"Research related to *Rediscovering Vienna's Lost 'Epigenetic' Treasure*" (Sasakura)

USA – University of Connecticut School of Medicine – Stephen M. King

"Research on the structure and function of ciliary and flagellar proteins" (Inaba)

Czech Republic – University of South Bohemia – Otomar Linhart

"Analysis of proteins in sturgeon sperm" (Inaba)

Mexico – National Autonomous University of Mexico (UNAM) – Takuya Nishigaki

"Commonality and diversity in the regulation of sperm flagellar motility in metazoans" (Inaba and Shiba)

USA – Janelia Research Campus, Howard Hughes Medical Institute – Teng-Leong Chew

"Research on the ultrastructure of the haptophyte motility apparatus" (Inaba)

Switzerland – Paul Scherrer Institute – Takashi Ishikawa

"Research on the molecular structure of axonemal dynein" (Inaba)

Australia – Deakin University – Alecia Bellgrove

"Research on the motility of brown algal gametes" (Inaba and Shiba)

USA – Arizona State University – Hu Ke

"Research on the symbiotic relationship between corals and zooxanthellae" (Inaba)

USA – University of Florida – Joseph Ryan

"Research on sensory receptors in ctenophores" (Inaba)

Netherlands – Hubrecht Institute – Miguel Leung

"Analysis of ciliary structure using cryo-electron microscopy" (Inaba)

USA – Stanford University – Hunter Fraser, Tal Gordon, and Ayelet Voskoboynic

"Research on ascidian development and regeneration" (Sasakura)

USA – Swarthmore College – Bradley Davidson, Hannah Gruner, and CJ Pickett

"Research on ascidian metamorphosis and adult tissue formation" (Sasakura)

Sweden and others – Gothenburg Natural History Museum and others – Kennet Lundin and colleagues

"Research on the phylogenetic position of Xenacoelomorpha" (Nakano)

France – Marseille Institute for Developmental Biology – Andrea Pasini

"Research on cellular functions in placozoans" (Nakano)

Germany – Kiel University – Harald Gruber-Vodicka

"Research on symbionts of placozoans" (Nakano)

UK – University of Southampton – Luis A. Yañez-Guerra

"Research on cell signalling in placozoans" (Nakano)

USA – Brown University – Gary M. Wessel

"Research on genome editing in echinoderms" (Yaguchi)

France – Sorbonne University – Jenifer Croce

"Research on neurogenesis in sea urchin larvae" (Yaguchi)

Italy, France, and others – ICONA Network – Ben Harvey

"International collaboration through the ICONA Network" (Ben Harvey)

New Zealand – Victoria University of Wellington – Chris Cornwall

"Carbonate production and coralline algal responses to climate change" (Ben Harvey)

Hong Kong – The University of Hong Kong – Bayden Russell

"Temperature tolerance and the impacts of marine heatwaves on marine organisms" (Ben Harvey)

Australia – The University of Adelaide – Ivan Nagelkerken and Sean Connell

"Environmental change and fish behavioural ecology in a changing ocean" (Ben Harvey)

9) Joint Research with Companies

10) Organized Conferences, Symposiums, and Research Meetings

Educational Activities

1) Lectures and fieldcourses

University Fieldcourse

Period	University Department	Subject Area	#
2025.5.26-30	静岡大学理学部生物科学科	生物科学臨海実習	17
2025.6.9-12	山梨大学生命環境学部環境科学科	環境生物学実習（臨海実習）	17
2025.7.7-11	筑波大学生物学類	動物発生学臨海実習	13
2025.7.21-25	筑波大学生物学類	動物分類学臨海実習	14
2025.8.4-8	筑波大学生物学類	生物学公開臨海実習 「伊豆半島沿岸の生態と多様性」	2
2025.8.25-29	筑波大学	水圏生態学臨海実習	14
2025.9.8-12	筑波大学生物学類	生殖生物学臨海実習	15
2025.9.18-19	名古屋大学	大学院実習（森林生物調査法）	12
2025.9.23-26	筑波大学自然保護寄附講座 筑波大学理工情報生命学術院生命地球環境学研究群	マリン生態環境科学 「海の生物と環境の相互作用」	3
2025.10.6-8	筑波大学大学院共通	海洋生物の世界と海洋環境講座	8
2026.1.20-23	健康科学大学健康科学部	海洋生物臨海実習	9
2026.3.2-6	筑波大学生物学類	水圏生物学実習	13
2026.3.16-20	筑波大学生物学類	植物分類学臨海実習	18

Lectures and Seminars

期　　間	大　学　等　名	実　習　等　名	人数
2025.6.30-7.4	筑波大学理工情報生命学術院生命地球環境学研究群	サイエンスプレゼンテーション	5
2025.8.18-22	筑波大学	夏季集中授業「マリンスポーツ」	13
2026.1.26-28	筑波大学生命環境学群生物学類	生物寺子屋	2
通年不定期開催（オンライン）	筑波大学理工情報生命学術院生命地球環境学研究群	マリンバイオロジー特論	7
2024.11.7-8（オンライン）	筑波大学理工情報生命学術院生命地球環境学研究群	マリン分子生命科学I	2

2) Demonstrations and workshops

第 36 回国際生物学オリンピック派遣生徒の特別教育

3) Academic Activities and Social Contributions

Zoological Science (Advisory board) （稲葉一男)

Zoological Letters (Associate Editor)（稲葉一男）

日本学術会議連携会員（稲葉一男）

日本動物学会関東支部代表委員（稲葉一男）

日本動物学会男女共同参画委員（柴小菊）

日本動物学会関東支部委員（柴小菊）

マリンバイオ共同推進機構 JAMBIO 機構長（中野裕昭）

JAMBIO 沿岸生物合同調査（担当）（中野裕昭）

World Association of Marine Stations (WAMS) Management Group （中野裕昭）

World Association of Marine Stations (WAMS) Steering Committee （中野裕昭）

日本動物学会 ZDW (ZooDiversity Web) 委員（中野裕昭）

Scientific Reports (Editorial Board) （中野裕昭）

理科年表　生物部（監修）（中野裕昭）

World Association of Marine Stations (WAMS) Secretariat （Harvey）

日本発生生物学会理事（谷口俊介）

日本動物学会国際交流委員（谷口俊介）

日本動物学会教育委員（谷口俊介）

Scientific Reports (Editorial Board) （谷口俊介）

Development Growth and Differentiation (Editorial Board)（谷口俊介）

幼魚水族館バフンウニ・エゾバフンウニ展示（谷口俊介・谷口順子）

4) Provision of Research Materials

塙　宗継　　山梨大学大学院総合研究部医学域，アカヒトデ、ムラサキウニ、ボウシュウボラ、ウミシダ

柴田　大輔　神奈川工科大学応用化学生物学科，オニヤドカリ、ウミウシ、ナマコ、アカヒトデ、ムラサキウニ

野村　真未　山形大学 理学部 理学科　植物プランクトン

ホヤ研究者コミュニティ，カタユウレイボヤ遺伝子組換え系統

5) Public Outreach

Open Lectures

国際生物学オリンピック日本委員会 第 1 回特別教育（高校生 6 名に対する教育)、2025 年 3 月 31 日-4 月 2 日、筑波大学下田臨海実験センター

柴小菊，「海の中のミクロの世界―鞭毛と繊毛」，下田市水産・海洋学講座, 2026 年 3 月 3 日，下田市民文化会館

稲葉一男，「マリンステーションの歴史と過去・現在・未来における意義」，「さまざまな海産生物の鞭毛・繊毛の研究」，公開臨海実習における招待講演, 2026 年 3 月 9 日，北海道大学北方生物圏フィールド科学センター室蘭臨海実験所

Researchers using the Center

1) Main Research Topics of those Researchers

Research Subject	PI affiliation	#	Host
カタユウレイボヤ卵へのマイクロインジェクション技術の習得	高知大学	1	笹倉
ホヤ胚を用いた発生生物学実験	早稲田大学	1	笹倉
研究打合せ	北海道大学	2	笹倉
共生微生物についての研究打ち合わせを	産業総合研究所	2	笹倉
実験方法の確認および習得	サントリー生命科学財団	1	笹倉
クシクラゲ類カブトクラゲを用いた実験	自然科学研究機構 生命創成探究センター	1	稲葉
繊毛虫テトラヒメナのアクチン様タンパク質および MAF に関する研究打ち合わせ	筑波大学	1	稲葉
クシクラゲ幼生を用いた拡張顕微鏡法の利用のため	Heidelberg University	1	稲葉
クシクラゲおよびその他の海産無脊椎動物における繊毛の構造と機能	フロリダ大学 ホイットニー海洋生物科学研究所	1	稲葉
Behavior analysis for ctenophore sleeping	筑波大学	1	稲葉
ウニの殻と棘の、構造および運動機構の解析	中央大学	2	稲葉
ホヤ精子の顕微鏡観察とサンプリング	福井大学学術研究院医学系部門医学領域	1	稲葉
シダ類および褐虫藻の運動制御に関する研究打ち合わせ（共同研究）	名古屋大学大学院生命農学研究科	2	稲葉
クラミドモナスの粘性環境下での繊毛波形解析	大阪大学大学院理学研究科	2	稲葉、柴
1)エダアシクラゲ放精過程に見られる精巣上皮繊毛の運動解析、2)コモリクラゲ触手の先端の運動解析	広島大学	4	柴
ニホンウナギ胚のライブイメージングによる体節形成機構の解析	自然科学研究機構基礎生物研究所	2	柴
実験打合せと施設見学	静岡大学	1	柴
上衣細胞の微細構造解析ならびに in vivo イメージングに関する共同研究の打ち合わせ	筑波大学生命環境系	3	柴

繊毛虫テトラヒメナのアクチン様タンパク質の機能欠損の解析	筑波大学生命環境系	2	柴
ウニアミノ酸解析の共同研究	九州大学大学院薬学研究院	2	谷口
ウニ遺伝情報解析の共同研究	千葉大学	2	谷口
タイワンホウキガニおよびクラゲムシ類の採集	北里大学海洋生命科学部	4	谷口
バフンウニ胚を用いた実験	ブラウン大学	1	谷口
ムラサキウニの受取(生殖巣の発達度合いの確認)	神奈川工科大学工学部応用化学生物学科	1	谷口
下田臨海実験センターとの共同研究に関する相談	静岡県水産海洋技術研究所伊豆分場	1	谷口
下田臨海実験センター利用の可能性に関する議論	合同会社デトロイト トーマツ	2	谷口
海中ロボット試験	東京大学生産技術研究所	13	谷口
研究打ち合わせ	IRD ニューカレドニア	1	谷口
鍋田湾内における水温分布計測	筑波大学システム情報系	14	谷口
一般社団法人タラオセアンジャパン Tara JAMBIO ブルーカーボンプロジェクト調査・啓発イベント	タラ オセアン ジャパン	14	谷口
一般社団法人タラオセアンジャパン Tara JAMBIO ブルーカーボンプロジェクト啓発イベント		12	谷口
ウミウシ類など海産無脊椎動物の採集、観察、分子系統解析	慶應義塾大学経済学部生物学教室	1	中野
J-OBIS と RINKAI とのデータ連携にかかる打ち合わせ	海洋研究開発機構	1	中野
Placozoa diversity and microbiomes (Exchange of placozoa strains for research on the placozoa development and microbiome)	Kiel University, Germany	2	中野
プラスチックプレートに付着したバイオフィルムの定性および定量評価	筑波大学理工情報生命学術院	1	中野、柴、Harvey
海産無脊椎動物を用いた進化系統学的研究に関する打ち合わせ、研究室見学	株式会社スパイスボックス	1	中野
海藻類の青い構造色に関する研究	九州大学	2	中野
海中クローラーの海域試験（小型の海中クローラーをつくばIIに搭載し、主に砂地の浅海域において走	海洋研究開発機構	7	中野

行性能に関する各種試験を行う。）			
恵比須島における藻類の調査	東京海洋大学	6	中野
生物進化に関する高校生課題研究の相談・打ち合わせ	筑波大学附属駒場高等学校	2	中野
第 27 回 JAMBIO 沿岸生物合同調査	東京大学	12	中野
珍無腸動物の進化学的研究 ／Evolutionary studies on Xenacoelomorpha	東京大学大学院理学系研究科附属臨海実験所	1	中野
平板動物の多様性に関する研究	山梨大学	1	中野
平板動物を対象とした睡眠に関する共同研究	東京大学理学系研究科	3	中野
小型 CO2 計設置、「つくば II」に各種センサーを設置、センサー点検・回収	気象研究所	2	Harvey
Harvey 助教の培養システムの見学と打ち合わせ	筑波大学生命環境系	1	Harvey
Manuscript preparation and publication with collaborator	広島大学・瀬戸内 CN 国際共同研究センター	1	Harvey
ブルーカーボンに対する海洋酸性化の影響予測	広島大学・瀬戸内 CN 国際共同研究センター	2	Harvey
日本全国の藻場の光合成測定	広島大学・瀬戸内 CN 国際共同研究センター	2	Harvey
海洋酸性化の生物への影響について研究打ち合わせ・実験	沖縄科学技術大学院大学	1	Harvey
施設水槽を利用したセンサー運用試験に関する打ち合わせ・現場確認	産業技術総合研究所	2	Harvey
海洋観測（式根島）観測機器準備作業	産業技術総合研究所	3	Harvey
海洋酸性化がウニに及ぼす生理学的・分子生物学的影響の研究	早稲田大学	1	Harvey
海洋酸性化がウニに及ぼす生理学的・分子生物学的影響の研究	沖縄科学技術大学院大学	1	Harvey
環境省モニタリングサイト 1000（沿岸域調査）に関する藻場調査	三重大学大学院	14	Harvey
飼育設備の見学・研究打合せ	東京大学大学院農学生命科学研究科	3	Harvey
伊豆半島における陸生貝類によるきのこ類の子実体摂食に関する調査研究	慶應義塾大学経済学部	1	香川

2) Research Output from Researchers using the Center

Issued by

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