FY 2024 Annual Report



Unit Name

Marine Genomics Unit

Research Personnel

Eiichi Shoguchi, Senior Staff Scientist

Keisuke Nakashima, Staff Scientist

Takeshi Noda, Staff Scientist

Yuki Yoshioka, Postdoctoral Scholar

Kanako Hisata, Research Unit Technician

Mayuki Suwa, Research Unit Technician

Haruhi Narisoko, Research Unit Technician

Kazuko Toyoda, Research Unit Administrators

Tomomi Teruya, Research Unit Administrators

Sakura Kikuchi, Research Unit Technician

Aya Koseki, Research Unit Technician

Yume Takahashi, Research Intern

Alessandro Formaggioni, Visiting Research Student

Scholarly Contributions and Creative Productions (by Faculty)

Journal Article

- 1. Satoh, Noriyuki, Timothy Ravsi, Ayse Haruka Oshima Acikbas, Haruhi Narisoko, Roger Huerlimann, Koki Nishitsuji, and James Davis Reimer. 2024. "Fish and Coral Assemblages of a Highly Isolated Oceanic Island: The First EDNA Survey of the Ogasawara Islands." Environmental DNA.
- 2. Satoh, Noriyuki, Yuki Yoshioka, Fumihiko Nagata, and Masanori Nonaka. 2024. "Molecular Phylogenetic Position of the Family Fungiidae (Cnidaria: Anthozoa) Based on Complete Mitochondrial Genome Sequences." Galaxea, Journal of Coral Reef Studies.
- 3. Satoh, Noriyuki, Yuki Yoshioka, Megumi Kanai, Shogo Gishitomi, Nana Arakaki, Tatsuki Koido, Chuya Shinzato, Jun Inoue, and Tomofumi Nagata. 2025. "Extensive Mitochondrial Genomic Analyses Reveal Dynamic Gene Order Rearrangements in the Class Octocorallia (Cnidaria: Anthozoa)." Gene Reports 38.
- 4. Satoh, Noriyuki, Takehiro Nishimura, Miho Izumikawa, Ikuko Kozone, Junko Hashimoto, Manabu Fujie, Hikaru Suenaga, Haruo Ikeda, and Kazuo Shin-ya. 2025. "Capability of a Large Bacterial Artificial Chromosome Clone Harboring Multiple Biosynthetic Gene Clusters for the Production of Diverse Compounds." The Journal of Antibiotics.
- 5. Satoh, Noriyuki, and Kaz Kawamura. 2024. "Embryonic Development of the Gastrodermis in the Coral Acropora Tenuis." Zoological Science.

- 6. Satoh, Noriyuki, Haruhi Narisoko, Shinichiro Nagahama, Frederic Sinniger, Nobuhiro Okada, Yuki Shimizu, Yuki Yoshioka, Kanako Hisata, and Saki Harii. 2024. "Using Underwater Mini-ROV for Coral EDNA Survey: A Case Study in Okinawan Mesophotic Ecosystems." Coral Reefs 44:209–219.
- 7. Kawamura, Kaz, and Noriyuki Satoh. 2024. "Embryonic Development of the Gastrodermis in the Coral Acropora Tenuis." Zoological Science 41.
- 8. Satoh, Noriyuki, Frederic Sinniger, Haruhi Narisoko, Shinichiro Nagahama, Nobuhiro Okada, Yuki Shimizu, Yuki Yoshioka, Kanako Hisata, and Saki Harii. 2024. "Using Underwater Mini-ROV for Coral EDNA Survey: A Case Study in Okinawan Mesophotic Ecosystems." Coral Reefs.
- 9. Satoh, Noriyuki, Shinya Shikina, Yi-Ling Chiu, Taiga Uchida, Emma Chen, Yin-Chu Cheng, Yu-Ling Chu, et al. 2024. "Genome and Tissue-Specific Transcriptomes of the Large-Polyp Coral, Fimbriaphyllia (Euphyllia) Ancora: A Recipe for a Coral Polyp." Communication Biology.
- 10. Satoh, Noriyuki, Kazuhiro W. Makabe, Hannah I. Jensen, Alexander C A Fodor, Jennifer Hsu, William R. Jeffery, and Billie J. Swalla. 2024. "Cymric, a Maternal and Zygotic HTK-16-Like SHARK Family Tyrosine Kinase Gene, Is Disrupted in Molgula Occulta, a Tailless Ascidian." Pub Med.
- 11. Satoh, Nori, Kanako Hisata, Sakura Kikuchi, and Hiroki Takahashi. 2024. "ScRNA-Seq Analysis of Cells Comprising the Amphioxus Notochord." Developmental Biology.
- 12. Satoh, Noriyuki, Koki Nishitsuji, Shinichiro Nagahama, Haruhi Narisoko, Kazuo Shimada, Nobushiro Okada, and Yuki Shimizu. 2024. "Possible Monitoring of Mesophotic Scleractinian Corals Using an Underwater Mini-ROV to Sample Coral EDNA." Royal Society Open Science.

Scholarly Contributions (by Unit Members)

Name of Unit Member	Туре	Title	Outlet	Publisher	Year Pub
Dr. Takeshi Takeuchi (Visiting Reseacher)	Book Chapter	Current Advances in Pearl Research PART II		Kouseisha Publishing	Pub
Dr. Yuki Yoshioka (JSPS Fellow)	Journal Article	Azooxanthellate Palythoa (Cnidaria: Anthozoa) Genomes Reveal Toxin- related Gene Clusters and Loss of Neuronal Genes in Hexacorals	Genome Biology and Evolution	Oxford Acadmic	2024
Dr. Eiichi Shoguchi (Senior Staff Scientist)	Journal Article	Functional analyses of bacterial genomes found in Symbiodiniaceae genome assemblies	BRIEF REPORT	Environmental Microbiology Reports	2024
Dr. Yuki Yoshioka (JSPS Fellow)	Journal Article	Complete mitochondrial genomes of Palauastrea ramosa Yabe & Sugiyama, 1941 and Stylocoeniella guentheri (Bassett-Smith, 1890) reveal their molecular phylogenetic position	Journal of Coral Reef Studies	Galaxea	N-A
Dr. Takeshi Takeuchi(Visiting Researcher)	Other Scholarly Work	Shinju Shimbun	Monthly article since July of 2024	Ise News Paper Publishing	2024
Dr. Eiichi Shoguchi (Senior Staff Scientist)	Poster Presentation at Conference	Horizontal gene transfer between different genera in Symbiodiniaceae	日本藻類学 会第 49 回 大会		2025

Name of Unit Member	Туре	Title	Outlet	Publisher	Year Pub
Dr. Takeshi Takeuchi (Visiting Researcher)	Poster Presentation at Conference	First Report on the Collection of the pearl oyster Pinctada fucata in Miyagi Prefecture			2025
Dr. Eiichi Shoguchi (Senior Staff Scientist)	Poster Presentation at Conference	Gene analyses of ultra-conserved genomic regions between two symbiotic algae from corals and giant clams	N-A	四学会合同沖縄 大会@琉球大学	2024
Dr. Eiichi Shoguchi (Senior Staff Scientist)	Poster Presentation at Conference	Exploring cell-cell interactions involved in horizontal gene transfer between symbiotic algae from corals and giant clams		日本分子生物学 会	2024
Dr. Takeshi Takeuchi (Visiting Researcher)	Presentation at Conference	Genetic Research Project on Pearl Oysters		The 4th Pearl Industry Fair Japan	2024
Dr. Takeshi Takeuchi (Visiting Researcher)	Presentation at Conference	Genomic Analysis Methods for Sustainable Pearl Aquaculture		The 5th Pearl Industry Fair Japan	2024
Dr. Takeshi Takeuchi (Visiting Researcher)	Presentation at Conference	Genetic Research Project on Pearl Oysters		Meeting of the Nacreous Layer Formation Study	2024
Dr. Eiichi Shoguchi (Senior Staff Scientist)	Presentation at Conference	シャコガイのゲノム解読と網羅的遺 伝子発現解析による共生関連遺伝 子の探索	Dr.内田大 賀	日本水産学会春 季大会	2024
Dr. Eiichi Shoguchi (Senior Staff Scientist)	Presentation at Conference	Observations of cell-cell interactions in symbiotic algae of corals and giant clams		第 95 回日本動物 学会九州大会	2024
Dr. Eiichi Shoguchi (Senior Staff Scientist)	Presentation at Conference	Genomic analyses of the genus Palythoa (Part1)		第二回領域会議	2024
Dr. Yuki Yoshioka (JSPS Fellow)	Presentation at Conference	Dynamic gene rearrangements of mitochondrial genome in the Subclass Octocorallia (Cnidaria: Anthozoa)		第26回日本進化 学会神奈川大会	2024
Dr. Yuki Yoshioka (JSPS Fellow)	Presentation at Conference	The mitochondrial genomes of four fungiids that have been long-term residents at the Okinawa Churaumi Aquarium		日本サンゴ礁学会 第27回大会	2024

Honors, Awards & Fellowships

Sep 2018 - Ongoing Order of the Sacred Treasure, Gold Rays with Neck Ribbon, 2018, 2018 Autumn Conferment of a Decoration

Jan 2014 - Ongoing Open Science Award, 2014, Database Center for Life Science (DBCLS)

Outreach Activities (For Unit Members Only)

2024-12-20 Dr. Takeshi Takeuchi (Visiting Researcher), 真珠養殖に使用のアコヤガイ宮城県

沖で初確認 温暖化影響か, NHK News