

## Unit Name

Marine Genomics Unit  
Professor Noriyuki Satoh

## Research Personnel

Eiichi shoguchi, Senior Staff Scientist  
Takeshi Noda, Staff Scientist  
Keisuke Nakashima, Staff Scientist  
Yuki Yoshioka, Postdoctoral Scholar  
Haruhi Narisoko, Research Unit Technician  
Mayuki Suwa, Research Unit Technician  
Kanako Hisata, Research Unit Technician  
Kazuko Toyoda, Research Unit Administrators  
Tomomi Teruya, Research Unit Administrators  
Aya Koseki, Research Unit Technician  
Sakura Kikuchi, Research Unit Technician  
Yume Takahashi, Research Intern

## Scholarly Contributions and Creative Productions (by Faculty)

### Journal Article

1. Yoshioka, Y.; Kanai, M.; Gishitomi, S.; Arakaki, N.; Koido, T.; Shinzato, C.; Inoue, J.; Nagata, T.; Satoh, N. Extensive Mitochondrial Genomic Analyses Reveal Dynamic Gene Order Rearrangements in the Class Octocorallia (Cnidaria: Anthozoa). *Gene Reports* 2025, 38.
2. Narisoko, H.; Nagata, F.; Hisata, K.; Fujie, M.; Yoshioka, Y.; Nonaka, M.; Satoh, N.; Nishitsuji, K. Efficiency of Scleractinian-Specific eDNA Metabarcoding Using Specimens from Okinawa Churaumi Aquarium, Japan. *Zoological Science* 2025, 43.
3. Yoshioka, Y.; Kawachi, M.; Kawamitsu, M.; Murzabaev, A.; Satoh, N.; Shinzato, C.; Shoguchi, E. First Genome Sequences of the Dinoflagellate *Effrenium Voratum* Strain Isolated from the Coral *Hydnophora Exesa* in Temperate Japanese Region. *BMC Genomic Data* 2025, 26, 83.
4. Yoshioka, Y.; Suzuki, G.; Fujikura, Y.; Tashiro, S.; Uchida, T.; Shoguchi, E.; Satoh, N.; Shinzato, C. Time-Series RNA-Seq of *Acropora Tenuis* Reveals Molecular Waves Leading to Synchronous Mass Spawning of Scleractinian Corals. *Molecular Ecology* 2025, 34, e70054.
5. HisataKanako; NagataTomofumi; KanaiMegumi; SinnigerFrederic; NagataFumihiko; SuwaMayuki; YoshiokaYuki; HariiSaki; NonakaMasanori; FukamiHironobu; ArakakiSeiji; FujieManabu; ArakakiNana; ZayasuYuna; NarisokoHaruhi; NodaTakeshi; KosekiAya; NishitsujiKoki; InoueJun; ShinzatoChuya; SatohNoriyuki.  
An eDNA Metabarcoding System for Detecting Scleractinian Corals to the Generic Level along the Japanese Coast. *Galaxea, Journal of Coral Reef Studies* 2025, 27, 13.
6. YoshiokaYuki; KanaiMegumi; TsuhakoTakeru; SatohNoriyuki; NagataTomofumi.

Complete Mitochondrial Genomes of Palauastrea Ramosa Yabe & Sugiyama, 1941 and Stylocoeniella Guentheri (Bassett-Smith, 1890) Reveal Their Molecular Phylogenetic Position. *Galaxea, Journal of Coral Reef Studies* 2025, 27, 7.

<https://doi.org/10.3755/galaxea.G27-4>

7. Maeda, K.; Kobayashi, H.; Uchida, T.; Shinzato, C.; Koyanagi, R.; Nagano, A. J.; Satoh, N.; Laudet, V. Genetic Isolation of an Amphidromous Goby Species, *Luciogobius Ryukyuensis*, Highlights Limited Gene Flow in Small Island Populations. *Scientific Reports* 2025, 15, 24193.
8. Shikina, S.; Yoshioka, Y.; Chiu, Y.; Uchida, T.; Chen, E.; Cheng, Y.; Lin, T.; Chu, Y.; Kanda, M.; Kawamitsu, M.; Fujie, M.; Takeuchi, T.; Zayasu, Y.; Satoh, N.; Shinzato, C. Genome and Tissue-Specific Transcriptomes of the Large-Polyp Coral, *Fimbriaphyllia* (*Euphyllia*) *Ancora*: A Recipe for a Coral Polyp. *Communications Biology* 2024, 7.
9. Satoh, N.; Ravsi, T.; Oshima Acikbas, A. H.; Narisoko, H.; Huerlimann, R.; Nishitsuji, K.; Reimer, J. D. Fish and Coral Assemblages of a Highly Isolated Oceanic Island: The First eDNA Survey of the Ogasawara Islands. *Environmental DNA* 2024.
10. Satoh, N.; Yoshioka, Y.; Nagata, F.; Nonaka, M. Molecular Phylogenetic Position of the Family Fungiidae (Cnidaria: Anthozoa) Based on Complete Mitochondrial Genome Sequences. *Galaxea, Journal of Coral Reef Studies* 2024.
11. Satoh, N.; Yoshioka, Y.; Kanai, M.; Gshitomi, S.; Arakaki, N.; Koido, T.; Shinzato, C.; Inoue, J.; Nagata, T. Extensive Mitochondrial Genomic Analyses Reveal Dynamic Gene Order Rearrangements in the Class Octocorallia (Cnidaria: Anthozoa). *Gene Reports* 2025, 38.
12. Satoh, N.; Nishimura, T.; Izumikawa, M.; Kozono, I.; Hashimoto, J.; Fujie, M.; Suenaga, H.; Ikeda, H.; Shin-ya, K. Capability of a Large Bacterial Artificial Chromosome Clone Harboring Multiple Biosynthetic Gene Clusters for the Production of Diverse Compounds. *The Journal of Antibiotics* 2025.

### Scholarly Contributions (by Unit Members)

Name of Unit Member	Type	Title	Outlet	Publisher	Year Pub
Dr. Yuki Yoshioka (JSPS Fellow)	Abstract	Molecular diversity of coral microbiomes shows no relationship with latitude in the western Pacific Ocean	Inter-Research	Science Publisher	2026
Dr. Yuki Yoshioka (JSPS Fellow)	Journal Article	Complete mitochondrial genomes of <i>Palauastrea ramosa</i> Yabe & Sugiyama, 1941 and <i>Stylocoeniella guentheri</i> (Bassett-Smith, 1890) reveal their molecular phylogenetic position	Journal of Coral Reef Studies	Galaxea	N-A
Dr. Eiichi Shoguchi (Senior Scientist)	Journal Article	Possible Novel Sulfolipid Utilization Pathway in Giant Clams and Other Aquatic Invertebrates: Implications for Photosymbiosis and Sulfur Cycling	bioRxiv	The preprint server for biology	2026
Dr. Eiichi Shoguchi (Senior Scientist)	Journal Article	Genomic insights into photosymbiosis in giant clams: Comparisons with coral strategies	bioRxiv	The preprint server for Biology	2025
Dr. Yuki Yoshioka (JSPS Fellow)	Other Scholarly Work	A dataset for forty complete bacterial genome sequences in cultures of the toxic dinoflagellate <i>Ostreopsis cf. ovata</i>	Science Direct	Elsevier	2026

Name of Unit Member	Type	Title	Outlet	Publisher	Year Pub
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 Scientist)	Poster Presentation at Conference	Genome sequences and secondary metabolic genes of the dinoflagellate <i>Effrenium voratum</i> strain isolated from the coral <i>Hydnophora exesa</i> in temperate Japanese region	The 9th annual meeting of Japan Symbiosis Society meeting	Japan Symbiosis Society	2025
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
Dr. Takeshi Takeuchi (Visiting Researcher)	Poster Presentation at Conference	First Report on the Collection of the pearl oyster <i>Pinctada fucata</i> in Miyagi Prefecture			2025
Dr. Yuki Yoshioka (JSPS Researcher)	Poster Presentation at Conference	Azooxanthellate <i>Palythoa</i> (Cnidaria: Anthozoa) genomes reveal toxin-related gene clusters and loss of neuronal genes in hexacorals	The International Chemical Congress of Pacific Basin Societies 2025 (Pacifichem)		2025
Dr. Yuki Yoshioka (JSPS Researcher)	Poster Presentation at Conference	Unraveling the Evolution of Symbiotic Modes in Corals through Genome Analysis	27th Japanese Society for Evolutionary Studies		2025
Dr. Eiichi Shoguchi (Senior Scientist)	Poster Presentation at Conference	UV-absorbing substances in <i>Acropora</i> coral planula larvae and synthetase gene families in the coral genome	The 96th annual meeting of the zoological society of Japan	Zoological Society of Japan	2025
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. Yuki Yoshioka (JSPS Researcher)	Presentation at Conference	The Mechanism of Synchronized Spawning in <i>Acropora</i> corals Revealed by Annual Fluctuations in Gene Expression	Japan Coral Reef Society 28th Annual Meeting		2025
Dr. Yuki Yoshioka (JSPS Researcher)	Seminars	eDNA metabarcoding analyses on coral reefs」 OIST-BRC Workshop on Environmental DNA (eDNA) Metabarcoding System for Coral Reef Survey	Academia Cinica		2025

### Honors, Awards & Fellowships

Term 1 2018 - Ongoing	Order of the Sacred Treasure, Gold Rays with Neck Ribbon, 2018, 2018 Autumn Conferment of a Decoration
Term 2 2014 - Ongoing	Open Science Award, 2014, Database Center for Life Science (DBCLS)

***Outreach Activities [For Unit Members Only]***

- Term 1 2025 Dr. Eiichi Shoguchi, Corals and coral reefs (Scientific lecture), Mie Prefecture [Fiscal Year: 2025-10-31]
- Term 1 2025 Dr. Eiichi Shoguchi (Senior Researcher), Symbiotic dinoflagellates with corals and giant clams, Zoological society of Japan [Fiscal Year: 2025-09-05]

***Workshops and Seminars [Organized and Hosted by Faculty/Units]***

Speaker Name(s)	Title	Location	Date
Satoh Noriyuki	Marine Genomics Mini Workshop 2025	OIST	2025-08-08