FY 2024 Annual Report



Unit Name

Evolutionary Neurobiology Unit

Collaborations

Mei-Fang Lin, National Sun Yat-Sen University, Taiwan, Genome analysis of Zoantharian species Kazuo Inaba, University of Tsukuba, Japan, Gene function analysis in the model ctenophoran Bolinopsis mikado

Research Personnel

Kurato Mohri, Staff Scientist

Chihiro Kawano, Research Unit Technician

Yayoi Hongo, Research Unit Technician

Ryotaro Nakamura, Research Unit Technician

Hongdi Wang, JSPS Fellow

Junko Higuchi, Research Assistant

Akiko Tanimoto, Research Assistant

Minato Miyake, PhD Student

Shagufta Qamar, PhD Student

Liudmila Poliushkevich, Research Intern

Daniel Alejandro Gonzalez Navarrete, Research Intern

Scholarly Contributions and Creative Productions (by Faculty)

Journal Article

- 1. Mbogo, Ivan Gyaviira, Chihiro Kawano, Ryotaro Nakamura, Yuko Tsuchiya, Alejandro Villar-Briones, Yoshitoshi Hirao, Yuuri Yasuoka, Eisuke Hayakawa, Kentaro Tomii, and Hiroshi Watanabe. 2024. "A Transphyletic Study of Metazoan β-Catenin Protein Complexes." Zoological Letters.
- 2. Guzman, Christine, Kurato Mohri, Ryotaro Nakamura, Minato Miyake, Yuko Tsuchiya, Kentaro Tomii, and Hiroshi Watanabe. 2024. "Neuronal and Non-Neuronal Functions of the Synaptic Cell Adhesion Molecule Neurexin in Nematostella Vectensis." Nature Communications 15.
- 3. Hongo, Yayoi, Daisuke Fukuyama, Lee Chuin Chen, Kanako Sekimoto, and Hiroshi Watanabe. 2024. "Ghost Peaks of Aromatic Metabolites Induced by Corona Discharge Artifacts in LC-ESI-MS/MS." Journal of Mass Spectrometry 60.
- 4. Han, Zhongbao, Rin Takano, Yayoi Hongo, Hiroshi Watanabe, and Lee Chuin Chen. 2024. "水中における生体サンプルの直接質量分析に向けた装置開発." Journal of Mass Spectrometry Society of Japan 72:79–80.
- 5. Sheloukhova, Larisa, and Hiroshi Watanabe. 2024. "Evolution of Glial Cells: A Non-Bilaterian Perspective." Neural Development 19:10.
- 6. Mohri, Kurato, and Hiroshi Watanabe. 2024. "Neuromuscular Organization of the Benthic Ctenophore, Vallicula Multiformis." Zoological Letters.

Scholarly Contributions (by Unit Members)

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Name of Unit Member	Туре	Title	Outlet	
Hongdi Wang	Journal Article	Expansion of learning capacity elicited byinterspecific hybridization	Science Advances	
Chihiro Kawano	Poster Presentation at Conference	Exploring the potential ancestral protein complexes of the early-branching animal, Nematostella vectensis, by Co-fractionationmass spectrometry	22nd JHUPO & 20th JSCP	
Kurato Mohri	Poster Presentation at Conference	How did the muscle evolve? Exploring the ancestral traits of muscles from the study of comb jellies	The 47th Annual Meeting of the Molecular Biology Society of Japan	
Ryotaro Nakamura	Poster Presentation at Conference	Dynamics and Functional Analysis of the PRGa Neuropeptide in the Cnidarian Nematostella: Amidated Peptides as Environmental Response Factor	The 48th Annual Meeting of The Japan Sciety for Comparative Endocrinology	
Ryotaro Nakamura	Poster Presentation at Conference	Dynamics and Functional Analysis of the PRGa Neuropeptide in the Cnidarian Nematostella: Amidated Peptides as Environmental Response Factor	The 46th Annual Meeting of The Japanese Society for Comparative Physiology and Biochemistry	
Minato Miyake	Poster Presentation at Conference	Insights into the evolutionary origins of neurons: Lessons from functional analysis of ctenophore transcription factors	OIST Workshop "Principles of Synapse Organization and Neural Network Regulation Gained Through Evolution"	
Minato Miyake	Poster Presentation at Conference	Insights into the origin of neurons from functional analysis of "neurogenic" transcription factors in ctenophores	The 47th Annual Meeting of the Molecular Biology Society in Japan	
Kurato Mohri	Presentation at Conference	How did the muscles evolve? Ancestral molecular mechanisms for muscle differentiation approached from the functional analysis of muscular transcription factors in comb jellies.	57th Annual Meeting of the Japanese Society of Developmental Biologists	
Yayoi Hongo	Presentation at Conference	LC-ESI-MS-MSで覗いた原始的動物代謝	The 31st Chromatography Symposium	

Outreach Activities (For Unit Members Only)

2024	Minato Miyake, Rika-rika-Science Café booth for the Okinawa Zero Carbon Festival 2024 (Okinawa Zoo & Museum), Rika-rika-Science Café / Okinawa Zoo & Museum
2024	Yayoi Hongo, Giving a talk to high school students (Kashiwa High School)
2024	Yayoi Hongo, Giving a talk to high school students (Hamamatsu Seisei High School)
2024	Yayoi Hongo, Giving a talk to high school students (Kamakura High School)
2024	Yayoi Hongo, Onna × OIST Children's School of Science

Workshops and Seminars (Organized and Hosted by Faculty/Units)

Speaker Name(s)	Title	Location	Co-Organizers	Date
	OIST Workshop "Principles of Synapse Organization and Neural Network Regulation Gained Through Evolution"	B250, Center Building, OIST	Yukiko Goda, Bernd Kuhn	2024
Taichi Itoh	Sleep research using behavioral analysis of "Lower" organisms	L4E01, OIST		2024