

Unit Name

Optical Neuroimaging Unit

Research Personnel

Soheil Keshmiri, Staff Scientist
Christopher Roome, Staff Scientist
Mykola Medvidov, Research Unit Technician
Shinobu Nomura, Research Unit Technician
Kazuo Mori, Research Unit Technician
Sigita Augustinaite, Research Unit Technician
Koronfel Lina Mohamed, PhD Student
Galetzka Cedric, PhD Student
Denman Charlotte Rebekah, PhD Student
Jana Soumen, PhD Student
Gavrilova Aleksandra, PhD Student
Eltabbal Mohamed Mostafa Kamal, PhD Student
Tjon Saffira Yan, PhD Student
Higuchi Taisuke, PhD Student

Scholarly Contributions and Creative Productions (by Faculty)

Journal Article

1. Wang, H.; Takagi, H.; Stoney, P.; Echeverria, A.; Kuhn, B.; Hsu, K.; Takahashi, T.
Anoxia-Induced Hippocampal LTP Is Regeneratively Produced by Glutamate and Nitric Oxide from the Neuro-Glial-Endothelial Axis. *iScience* 2024, 27.
2. Li, M.; Kuhn, B.
Protocol for Inducing Severe Scn2a Insufficiency in Mice by Intracerebroventricular Antisense Oligonucleotide Injection. *STAR protocols* 2024, 5, 103094.
3. Tran, H.-D.; Denman, C. R.; Shin, M.-K.; Jeon, D.; Kuhn, B.; Jo, J.
Establishment of TH-EGFP Human Embryonic Stem Cell Line for Specific Labeling of Dopaminergic Neurons. *Stem Cell Research* 2024.

Poster Presentation at Conference

1. Jana, S.; Roome, C. J.; Kuhn, B.
Modulation of Dendritic Voltage Signaling in Purkinje Neurons by Inhibitory Inputs in Awake Mice. *FENS* 2024.
2. Roome, C.; Kuhn, B.

Investigating Input-Output Computations of Purkinje Neuron Dendrites in Vivo. FENS 2024.

Presentation at Conference

- 1. Kuhn, B.
Imaging Neuronal Activity with Two-Photon Microscopy in Behaving Mice. Keio University - OIST Joint Symposium, OIST 2025.
- 2. Kuhn, B.
Imaging Neuronal Activity with Two-Photon Microscopy in Behaving Mice. Serendipity Symposium, Ishigaki 2024.

Seminars

- 1. Kuhn, B.
A Quick Summary of the Last 14 Years' Research in the Kuhn Unit (Wang Lab, Princeton University). 2025.
- 2. Kuhn, B.
Two-Photon imaging of Protein Kinase A Activity in Cortical Pyramidal Somata and Dendrites in Mice (TSVP Symposium on Neuromodulation on Adaptive Learning, OIST). 2024.
- 3. Kuhn, B.
Two-Photon imaging of Neuronal Activity in Awake Mice (Kyushu University). 2024.

Scholarly Contributions (For Unit Members Only)

Name of Unit Member (Author-Presenter)	Type	Title	Outlet	Publisher	Year Pub
Heidi TeppolaGuerel	Journal Article	Arginine vasopressin activates serotonergic neurons in the dorsal raphe nucleus during neonatal development in vitro and in vivo	Neuropharmacology	Elsevier Ltd.	2025

Honors, Awards & Fellowships (only by unit members)

2024-04-01	Heidi TeppolaGuerel, Postdoctoral Fellowships for Research in Japan, 外国人特別研究員, 2023, JSPS, 幼少期のストレスが縫線体-体性感覚系ニューロン・アストロサイトネットワークの機能的発達に及ぼす影響
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Other Institutional Service

2025-03-06 - Ongoing	Student Candidate Interviews, (University)
2025-03-06 - Ongoing	Faculty Candidate Interviews , (University)
2024-10-28	Lecture and OIST tour for KOSEN -KMITL in Thailand, (University)
2024-07-23	Onna x OIST Children's School of Science 2024 , (University)
2024-07-23	Teacher at the Onna OIST Children's School of Science, (University)
2024-07-23	OIST Chair for the Onna OIST Children's School of Science, (University)
2024-06-11	A City that was stunning - Edo before it became Tokyo. The Tokugawa shoguns' capital 1603-1868, (University)
2024-02-21	Samurai - Japan´s history poster boys put into perspective – A tour through 800 years of political and cultural history, (University)

2024-02-21	Lecturer at the OIST Science Challenge, (University)
2024-01-24	Organizer of the visit of Prof. Heinrich Menkhaus (Faculty of Law and Graduate School of Law, Meiji University, Chair of the German JSPS Alumni Association), The German JSPS Alumni Association, Presenting Scientific alumni activities between Japan and the German-speaking area, The German JSPS Alumni Association, (University)
2024-01-11	Organizer of the visit of the German Ambassador, Dr. Clemens von Goetze and Consul General Melanie Saxinger (Osaka), (University)

Outreach Activities (For Unit Members Only)

2024-12-11	Taisuke Higuchi, Nagasaki Minami High School visit, OIST
2024-08-24	Taisuke Higuchi, Admissions Workshop dinners with shortlisted applicants, OIST
2024-08-06	Taisuke Higuchi, OIST-KEIO International Research Summer Camp 2024, Keio univ, OIST
2024-07-23	Kazuo Mori, Aleksandra Gavrilova, Saffira Yan Tjon, Taisuke Higuchi, Onna x OIST Children's School of Science 2024 , OIST
2024-07-04	Aleksandra Gavrilova, OIST Computational Neuroscience Course 2024, OIST
2024-07-01	Taisuke Higuchi, OIST Computational Neuroscience Course 2024, OIST

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

Title	Location	Co-Organizers	Date
Principles of Synapse Organization and Neural Network Regulation Gained Through Evolution	OIST	Yukiko Goda, Hiroshi Watanabe, Bernd Kuhn	2024-11-07
Okinawa Computational Neuroscience Course	OIST	Erik De Schutter, Kenji Doya, Tomoki Fukai, Bernd Kuhn	2024-06-01