

Unit Name

Molecular Neuroscience Unit
Associate Professor Marco Terenzio

Collaborations

Indrek Koppel, Tallinn University of Technology, Estonia, Transgenic mouse line for cell type-specific analysis of newly synthesized protein (PICSL mouse)

Paola Laurino, OIST, Japan, SUPREM: an engineered non-site-specific m6A RNA methyltransferase with highly improved efficiency

Research Personnel

Susan Boerner, Research Unit Technician

Sandra De la Fuente Ruiz, Postdoctoral Scholar

Philip Freund, Postdoctoral Scholar

Laurent Guillaud, Senior Staff Scientist

Amy Xia Yi Yong, PhD Student

Youjung Han, PhD Student

Maria Fransiska Emily, PhD Student

Esteban Gabriel Fregoso Fernandez, PhD Student

Claudia Vernamonte, Research Intern

Scholarly Contributions and Creative Productions (by Faculty)

Journal Article

1. Guillaud, L.; Garanzini, A.; Zakhia, S.; De la Fuente, S.; Dimitrov, D.; Boerner, S.; Terenzio, M.
Loss of Intracellular ATP Affects Axoplasmic Viscosity and Pathological Protein Aggregation in Mammalian Neurons. *Science Advances* 2025, 11.
2. Fioretti, P. V. V.; Barbieri, A.; Migazzi, A.; Bressan, D.; Grassano, M.; Donini, L.; Rocuzzo, M.; Torrieri, M. C. C.; Conci, F.; Ferracci, E.; Invernizzi, S.; Bowden, K. M.; Bacchetti, F.; Cappelli, S.; Peroni, D.; Belli, R.; Pancher, M.; Mugoni, V.; Scarduelli, G.; Gianesello, M.; Pasetto, L.; Canarutto, G.; Carra, S.; Soldano, A.; Bisio, A.; Robbiati, S.; Valentini, C.; Nardella, C.; Piazza, S.; D'Agostino, V. G. G.; Quattrone, A.; Sleiman, S.; Whitfield, J. R.; Soucek, L.; Vignoli, B.; Viero, G.; Tiberi, L.; Zippo, A.; Demichelis, F.; Bonetto, V.; Milanese, M.; Buratti, E.; Verde, F.; Ticozzi, N.; Calvo, A.; Ratti, A.; Shaw, P. J.; Terenzio, M.; Chiacchiera, F.; Pennuto, M.; Basso, M.
MYC-Driven Gliosis Impairs Neuron-Glia Communication in Amyotrophic Lateral Sclerosis. *Brain : a journal of neurology* 2025.
3. Paglione, M.; Restivo, L.; Zakhia, S.; Llobet Rosell, A.; Terenzio, M.; Neukomm, L. J.
Local Translatome Sustains Synaptic Function in Impaired Wallerian Degeneration. *EMBO reports* 2025.

Poster Presentation at Conference

1. Terenzio, M.

Development of Biomarker-Based Diagnostic Tools for ALS. FY2024 COI-NEXT Annual Symposium 2025.

Presentation at Conference

1. Terenzio, M.
Regulation of Local Translation and Cytoplasmic Viscosity in Axons of Aging Neurons. Korean Society for Brain and Neuroscience (KSBNS) 2025.
2. Terenzio, M.
Cytoplasmic Concentration of ATP Regulates Axonal Protein Aggregation in Neurodegenerative Diseases. Dong-A International Symposium, Axon and Myelin 2025.

Scholarly Contributions (by Unit Members)

Name of Unit Member	Type	Title	Outlet
Sandra De la Fuente Ruiz	Poster Presentation at Conference	CHARACTERIZATION OF NEURODEGENERATIVE MECHANISMS BEHIND FAMILIAL AND SPORADIC ALS PATHOLOGY USING HUMAN MOTOR NEURONS	ENCALS meeting 2025
Maria Emily	Poster Presentation at Conference	Impairment in Axonal Translation Caused by Reduction in ATP Level During Aging in Sensory Neurons	Phase Transitions in Cellular Signaling and Disease (FASEB meeting), Melbourne, Florida, U.S.A
Laurent Guillaud	Presentation at Conference	ATP-dependent viscoadaptation and protein aggregation during neurodegeneration and aging	LLPS Symposium 2025 at Ritsumeikan University, Biwako-Kusatsu Campus, Japan
Maria Emily	Seminars	Impairment in Axonal Translation Caused by Reduction in ATP Level During Aging in Sensory Neurons	National Institutes of Health(NIH), USA

Honors, Awards & Fellowships [By Unit Members Only]

- Term 2 2026 - Term 2 2026 Maria Emily, Impairment in Axonal Translation Caused by Reduction in ATP Level During Aging in Sensory Neurons, , January, 2026, Federation of American Societies for Experimental Biology(FASEB) [Fiscal Year: 2026-01-14]
- Term 2 2025 - Term 2 2026 Youjung Han, iGEM Okinawa Team Member, , 2025, iGEM [Fiscal Year: 2025-10-31]

Other Institutional Service

- Term 3 2024 - Ongoing Member of the Faculty Council, (University) [Fiscal Year: 2024-09-01]
- Term 2 2024 - Ongoing Chair of the Library Committee, (University) [Fiscal Year: 2024-04-01]

Outreach Activities [For Unit Members Only]

- Term 2 2026 Philip Freund, Science Challenge 2026, OIST [Fiscal Year: 2026-03-09]
- Term 2 2026 Amy Xia Yi Yong, Online Information Session for Students from King's College London, King's College London [Fiscal Year: 2026-01-21]
- Term 1 2025 Esteban Gabriel Fregoso Fernandez, OIST career fair , OIST [Fiscal Year: 2025-09-06]
- Term 2 2025 Esteban Gabriel Fregoso Fernandez, An interdisciplinary approach to axonal injuries in medicine [Fiscal Year: 2025-03-12]

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

Speaker Name(s)	Title	Location	Date
Francesco Bavato	Blood Markers of Neuroaxonal Remodelling in Psychiatry: From the Lab to Clinical Use and Back	Seminar Room Lab5D23, OIST	2025-11-19
Philip Freund	Role of axonal importin β 1 in presynaptic local translation and spatial memory	Seminar Room Lab5D23, OIST	2025-03-25
Mike Fainzilber	How does a neuron grow?	Seminar Room Lab5D23, OIST	2025-03-19