

Unit Name

Evolutionary and Synthetic Biology Unit

Students Supervised:

- Igors Dubanevics
- Bakhytzhan Akdavletov
- Kopcak Dominik

Scholarly Contributions and Creative Productions (by Faculty)

Journal Article

1. Palkina, K.; Karataeva, T.; Perfilov, M.; Fakhranurova, L.; Markina, N.; Somermeyer, L.; Garcia-Perez, E.; Vazquez-Vilar, M.; Rodriguez-Rodriguez, M.; Vazquez-Vilriales, V.; Shakhova, E.; Mitiochukina, T.; Belozerova, O.; Kovalchuk, S.; Alekberova, A.; Malyshevskaya, A.; Bugaeva, E.; Guglya, E.; Balakireva, A.; Sytov, N.; Bezlikhotnova, A.; Boldyreva, D.; Babenko, V.; Kondrashov, F.; Choob, V.; Orzaez, D.; Yampolsky, I.; Mishin, A.; Sarkisyan, K.
A Hybrid Pathway for Self-Sustained Luminescence. *Science Advances* 2024, 10.
2. Andrianova, M.; Seplyarskiy, V.; Terradas, M.; Mur, P.; Soto, J.; Aiza, G.; Kondrashov, A.; Bazykin, G.; Valle, L.; Borràs, E.; Kondrashov, F.; Sánchez-Heras, A.
Discovery of Recessive Effect of Human Polymerase δ Proofreading Deficiency through Mutational Analysis of POLD1-Mutated Normal and Cancer Cells. *European Journal of Human Genetics* 2024, 32.

Presentation at Conference

1. Kondrashov, F.
Epistasis and the Speed of Evolution. FENS SATELTIE EVENT 2024 - Convergence, divergence, and computational optimization in neural circuit evolution 2024.

Seminars

1. Kondrashov, F.
Fitness Landscape or Orthologous GFP Genes, 2025.03.24, Séminaire Programme Gradué Chimie PSL, PSL Paris. 2025.
2. Kondrashov, F.
Fitness Landscape of Orthologous GFP Genes, 2024.11.21, National Institute of Genetics, Shizuoka, Japan. 2024.

Scholarly Contributions (by Unit Members)

Name of Unit Member	Type	Title	Outlet	Publisher	Year Pub
Shingo Miyauchi	Journal Article	Contrasting and conserved roles of NPR pathways in diverged land plant lineages	New Phytologist	Wiley	2024

Name of Unit Member	Type	Title	Outlet	Publisher	Year Pub
Shingo Miyauchi	Journal Article	General Trends of Genomic Signatures of the Ectomycorrhizal Symbiosis in Fungi: A Comparison Across Multiple Lineages	The Mycota	Springer	2024
Shingo Miyauchi	Journal Article	Transcriptomics reveal a mechanism of niche defense: two beneficial root endophytes deploy an antimicrobial GH18-CBM5 chitinase to protect their hosts	New Phytologist	Wiley	2024
Shingo Miyauchi	Journal Article	Extreme overall mushroom genome expansion in <i>Mycena</i> s.s. irrespective of plant hosts or substrate specializations	Cell Genomics	Cell Press	2024
Shingo Miyauchi	Journal Article	Characterisation and comparative analysis of mitochondrial genomes of false, yellow, black and blushing morels provide insights on their structure and evolution	IMA Fungus	Pensoft	2025
Shingo Miyauchi	Journal Article	Conserved immunomodulation and variation in host association by Xanthomonadales commensals in Arabidopsis root microbiota	Nature Plants	Nature	2025
Shingo Miyauchi	Presentation at Conference	Visual Fungal Omics	Conference: Molecular Biology, Ecology and Genomics of Mycorrhizal and Plant-associated Fungi		
Shingo Miyauchi	Presentation at Conference	Discoveries of genomic treasures in deep-sea fungi	European Conference on Fungal Genetics (ECFG17)		

Outreach Activities (For Unit Members Only)

2025-02-01	Dominik Kopčák, Science Festival, OIST
2024-11-18	Shingo Miyauchi, Appointed as Chief Technology Officer (honorary), Florence Quantum Labs
2024-09-01	Shingo Miyauchi, Advisory board (honorary) for a US startup company, Florence Quantum Labs

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

Speaker Name(s)	Title	Location	Date
Dr. Andrey Parkhitko	Targeting Age-Dependent Metabolic Reprogramming for Life- and Healthspan Extension	Seminar room L4F01	2025-01-20
Prof. Vasili Hauryliuk	Bioinformatics-driven discovery of novel antiphage immunity systems	Seminar Room L4F01	2024-11-26
Prof. Deepa Agashe	Mutating mutators and how they change evolution	L5D23	2024-11-05
Prof. Krushnamegh Kunte	Evolution of novel balanced polymorphism	L5D23	2024-11-05
Dr. Olga Bochkareva	Computational identification and biological interpretation of genome rearrangements in microbes	L4F01	2024-05-14

Speaker Name(s)	Title	Location	Date
Daryna Zavadzka	Protist Oddity	L4F01	2024-04-08