

Unit Name

Genomics and Regulatory Systems Unit
Professor Nicholas M Luscombe

Research Personnel

Charles Plessy, Senior Staff Scientist
Yongkai Tan, Research Unit Technician
Aki Masunaga, Research Unit Technician
Gaspar Sanchez Serna, Postdoctoral Scholar
Yuri Belisario Yepez Mora, Postdoctoral Scholar
Nicolas Dierckxsens, Postdoctoral Scholar
Xiujun Huang, Research Assistant
Kian Lee Murray, PhD Student
Johannes Nicolaus Wibisana, PhD Student
Zikun Yang, Research Intern
Raymond Edward Fedrick, Research Intern
Anika Mittal, Research Intern
Estela Moreno Aparicio, Research Intern
Ritika Gupta, Research Intern
Amir Ata Ghaffarian Moslemi, Research Intern

Scholarly Contributions and Creative Productions (by Faculty)

Journal Article

1. Gavriouchkina, D.; Tan, Y.; Parey, E.; Ziadi-Künzli, F.; Hasegawa, Y.; Piovani, L.; Zhang, L.; Sugimoto, C.; Luscombe, N.; Marlétaz, F.; Rokhsar, D. S.
A Single-Cell Atlas of the Bobtail Squid Visual and Nervous System Highlights Molecular Principles of Convergent Evolution. *Nature Ecology and Evolution* 2025, 9.
2. Pan, T.; Miao, J.; Sun, K.; Nie, H.; Luscombe, N. M.; Li, W.; Zhang, S.; Yang, L.; Wang, H.; Zhou, Y.; Tu, G.; Shu, Y.; Zhang, B.; Wu, X.
Genomic Insights and the Conservation Potential of Captive Breeding: The Case of Chinese Alligator. *Science Advances* 2025, 11.
3. Sánchez-Serna, G.; Badia-Ramentol, J.; Bujosa, P.; Ferrández-Roldán, A.; Torres-Águila, N. P.; Fabregà-Torrus, M.; Wibisana, J. N.; Mansfield, M. J.; Plessy, C.; Luscombe, N. M.; Albalat, R.; Cañestro, C.
Less, but More: New Insights From Appendicularians on Chordate Fgf Evolution and the Divergence of Tunicate Lifestyles. *Molecular Biology and Evolution* 2025, 42.
4. Wang, K.; Suyama, R.; Mizutani, N.; Matsuo, M.; Peng, Y.; Seki, M.; Suzuki, Y.; Luscombe, N. M.; Dantec, C.; Lemaire, P.; Toyoda, A.; Nishida, H.; Onuma, T. A.

Transcriptomes of a Fast-Developing Chordate Uncover Drastic Differences in Transcription Factors and Localized Maternal RNA Composition Compared with Those of Ascidians. *Development* (Cambridge) 2025, 152.

5. Wibisana, J. N.; Plessy, C.; Dierckxsens, N.; Masunaga, A.; Miao, J.; Luscombe, N. M.
The Complete Mitogenome of an Unidentified Oikopleura Species. *F1000Research* 2025, 13.
6. Modic, M.; Kuret, K.; Steinhauser, S.; Faraway, R.; van Genderen, E.; Ruiz de Los Mozos, I.; Novljan, J.; Lee, F.; ten Berge, D.; Luscombe, N.; Ule, J.; Vičič, Ž.
Poised PABP–RNA Hubs Implement Signal-Dependent mRNA Decay in Development. *Nature Structural and Molecular Biology* 2025, 31.
7. Plessy, C.; Mansfield, M.; Bliznina, A.; Masunaga, A.; West, C.; Tan, Y.; Liu, A.; Fabrega-Torru, M.; Roncalli, V.; Navratilova, P.; Thompson, E.; Onuma, T.; Nishida, H.; Luscombe, N.; Cañestro, C.; Ferrández-Roldán, A.; Grašič, J.; Río Pisula, M.; Sánchez-Serna, G.
Extreme Genome Scrambling in Marine Planktonic Oikopleura Dioica Cryptic Species. *Genome Research* 2025, 34.

Scholarly Contributions (by Unit Members)

Name of Unit Member	Type	Title	Outlet	Publisher	Year Pub
Nicolas Dierckxsens	Journal Article	The evolutionary landscape of mitogenomes: Insights from <i>Elsholtzia blanda</i> and comparative analysis of ten related species	Ecological Genetics and Genomics	Elsevier	07-Jan-2025
Charles Plessy	Poster Presentation at Conference	Genome scrambling in the Tree of Life	15 International Workshop on Advanced Genomics		2025
Charles Plessy	Poster Presentation at Conference	Genome scrambling in the Tree of Life	RECOMB 2025 (Seoul)		2025
Johannes Nicolaus Wibisana	Poster Presentation at Conference	Gene regulation of the scrambled genome of <i>Oikopleura dioica</i>	CSHL Mechanisms of Eukaryotic Transcription 2025		2025
Nicolas Dierckxsens	Poster Presentation at Conference	Targeted haplotype-aware assembly of low-complexity regions and small genomes with NOVOloci	Revolutionizing Next-Generation Sequencing (6th edition) in Antwerp		19-Mar-2025
Sanchez Serna G	Presentation at Conference	Less, but More: New Insights from Appendicularians on Gene Loss and Evolutionary Innovations	SMBE 2025 (Pekin)		2025
Charles Plessy	Presentation at Conference	Genome scrambling in the Tree of Life	SMBE 2025 (Pekin)		2025
Charles Plessy	Presentation at Conference	Genome scrambling in the Tree of Life	MBSJ 2025 (Yokohama)		2025
Charles Plessy	Presentation at Conference	Genome scrambling in the Tree of Life	JFR 2025 (Tokyo)		2025
Johannes Nicolaus Wibisana	Presentation at Conference	Unraveling Genome Scrambling in a Miniature Chordate Genome Using Multiple Chromosome-Level Assemblies	MBSJ 2025 (Yokohama)		2025

Name of Unit Member	Type	Title	Outlet	Publisher	Year Pub
Charles Plessy	Seminars	Genome scrambling in the Tree of Life	Seminar given at Academia Sinica in Taipei		2025
Charles Plessy	Seminars	Automation, containerisation and pipelinisation for bioinformatics: easier for you to run it, easier for others to reproduce it	Online lecture given for the Yokohama City University Advanced Medical Research Center Bioinformatics Laboratory Courses		2025
Charles Plessy	Seminars	Genome scrambling in the Tree of Life	Seminar given at the University of Tokyo, Graduate School of Frontier Sciences, Kashiwa campus.		09-Jan-2025

Honors, Awards & Fellowships [By Unit Members Only]

Term 3 2025 - Term 3 2025 Charles Plessy, Poster Prize, ポスター賞, 2025, 15 International Workshop on Advanced Genomics, ポスター賞 [Fiscal Year: 2025-07-02]

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

Speaker Name(s)	Title	Location	Co-Organizers	Date
Jake Taylor-King	AI in Drug Discovery	OIST campus		2026-01-21
Leo Speidel, Garrett Hellenthal, Masatoshi Matsunaami, Yosuke Kawai	Evolution Seminar - From ancient genomics to modern Biobanks in Japan	L4F01	Evolutionary and Synthetic Biology Unit (Fyodor Kondrashov)	2025-12-01
Nicholas Treen	Leveraging Tunicate Trans-splicing Mechanisms to Develop RNA Editing Tools	OIST campus		2025-10-08