Jacques Serizay
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Current position

Tenured research scientist, FR (CNRS "Chargé de Recherche") 2025–…
Institut Pasteur, Department of Genetics and Genomics, FR
CNRS UMR3525, Genetics of Genomes, FR

Previous positions

Post-doctoral researcher 2020–2025
Institut Pasteur, Department of Genetics and Genomics (Koszul lab), FR
Institut de Biologie de l'École Normale Supérieure (Spassky lab), FR
Visiting researcher 2014–2015
UCLA, Department of Biological Chemistry (Plath lab), US

Education

PhD in Genomics 2016–2020
University of Cambridge, UK
PhD supervisor: Pr. Julie Ahringer
Diploma of the École Normale Supérieure 2016
École Normale Supérieure de Cachan, FR
MSc in Genetics and Development Biology 2016
École Normale Supérieure de Cachan & Magistère Européen de Génétique, FR
BSc in Biology and Health 2013
École Normale Supérieure de Cachan & Université Orsay Paris-Sud, FR

Other scientific appointments

Elected member of the Technical Advisory Board, Bioconductor consortium 2024–2027
Contribute to strategic decisions and technical leadership for advancing bioinformatics research.
Spearhead initiatives promoting open-source tool development within the consortium.
Certified Carpentries Instructor, the Carpentries organization 2024
Lead workshops to teach foundational programming, data science and bioinformatics to researchers.
Package reviewer, Bioconductor consortium 2024
Review emerging tools, fostering innovation across the Bioconductor ecosystem.
Ensure quality and adherence to coding standards for bioinformatics packages.
Member of the steering committee of the Tidyomics working group, international 2024
Develop and promote tidy principles for multi-omics data analysis.
Promote collaborations to enhance reproducibility and data integration practices.

Scholarships and awards

Grants & awards

2025 Visiting researcher grant (€10,000), Pasteur Technology Training Program: *Short research stay in the lab of Dr. Stefano Mangiola (Adelaide, AU) to contribute to the development of innovative AI tools dedicated to single-cell multi-omics data analysis.*
2023 Travelling grant, Gordon Research Conference Chromosome Dynamics
2022 1st place (€2,400), Hackathon Digital 4 Genomics: *Predicting physical interactions between nuclear parasites and host chromosomes*

Fellowships

2021 Post-doctoral research fellowship (3 years fully funded), Association pour la Recherche sur le Cancer
2016 Student fellowship (**£56,976**), Medical Research Council Doctoral Training Grant
2012 Student fellowship (**€63,168**), École Normale Supérieure Paris-Saclay

Scientific contributions

Peer-reviewed publications

*Since 2018, I have written a total of **15 published journal articles** (including **1 review**) and **1 preprint**, (**10 as (co)first** author including **7 as (co)corresponding author**).*

1. **Meneu, Chapard, Serizay**, Westbrook, Routhier, Ruault, et al. Sequence-dependent activity and compartmentalization of foreign DNA in a eukaryotic nucleus. ***Science 2025***.
2. **Singh, Serizay, Couble**, Cabahug, Rosa, Chen, et al. High-resolution map of the *Plasmodium falciparum* genome reveals MORC/ApiAP2-mediated links between distant, functionally related genes. ***Nature Microbiology 2025***.
3. Bignaud, Conti, Thierry, **Serizay**, Labadie, Poulain, et al. Phages with a broad host range are common across ecosystems. ***Nature Microbiology 2025***.
4. Khoury Damaa, **Serizay**, Balagué, Boudjema, Faucourt, Delgehyr, et al. Cyclin O controls entry into the cell-cycle variant required for multiciliated cell differentiation. ***Cell Reports 2025***.
5. **Serizay**, Khoury Damaa, Boudjema, Balagué, Faucourt, Delgehyr, et al. Cyclin switch tailors a cell cycle variant to orchestrate multiciliogenesis. ***Cell Reports 2025***.
6. **Serizay**, and Koszul Epigenomics coverage data extraction and aggregation in R with tidyCoverage. ***Bioinformatics 2024***.
7. Hutchison, Keyes, Crowell, **Serizay**, Soneson, Davis, et al. The tidyomics ecosystem: enhancing omic data analyses. ***Nature Methods 2024***.
8. **Serizay**, Matthey-Doret, Bignaud, Baudry, and Koszul Orchestrating chromosome conformation capture analysis with Bioconductor. ***Nature Communications 2024***.
9. **Serizay**, and Ahringer periodicDNA: an R/Bioconductor package to investigate k-mer periodicity in DNA. ***F1000Research 2021***.
10. **Serizay**, and Ahringer Generating fragment density plots in R/Bioconductor with VplotR. ***Journal of Open Source Software 2021***.
11. **Serizay**, Dong, Jänes, Chesney, Cerrato, and Ahringer Distinctive regulatory architectures of germline-active and somatic genes in *C. elegans*. ***Genome Research 2020***.
12. Athie, Marchese, González, Lozano, Raimondi, Juvvuna, et al. Analysis of copy number alterations reveals the lncRNA ALAL-1 as a regulator of lung cancer immune evasion. ***Journal of Cell Biology 2020***.
13. Pandya-Jones, Markaki, **Serizay**, Chitiashvili, Mancia Leon, Damianov, et al. A protein assembly mediates Xist localization and gene silencing. ***Nature 2020***.
14. **Serizay**, and Ahringer Genome organization at different scales: nature, formation and function. ***Current Opinion in Cell Biology 2018***.
15. Jänes, Dong, **Schoof, Serizay**, Appert, Cerrato, et al. Chromatin accessibility dynamics across *C. elegans* development and ageing. ***eLife 2018***.

Contribution to scientific conferences and symposiums

2025	**Invited**	**Keynote** talk at the European Bioconductor Conference 2025, ES
	Selected	Poster at EMBO Workshop: EvoChromo: Evolutionary approaches to research in chromatin, ES
2024	**Invited**	Talk at JOBIM Symposium: Open Days in Biology, Informatics and Mathematics, FR
	Invited	Talk at Physics meets Biology Symposium, FR
	Selected	Talk at the 9th Gordon Conference on Chromosome Structure and Function, US
	Selected	Talk at the 3R Conference (Replication, Repair, Recombination), FR
	Selected	Talk at the 20th Bioconductor, US
2023	**Invited**	Talk at Qbio Symposium, FR
	Organizer	European Bioconductor Conference, BE
	Selected	Talk at the 19th Bioconductor, US
	Selected	Talk at the 9th Gordon Conference Chromosome Dynamics, IT
2022	Selected	Talk at the 5th EMBO European Cilia Conference, GE
	Selected	Poster at the EMBO Workshop: Cell Cycle: one engine–many cycles, GE
2021	**Invited**	Talk at the 2nd annual Qlife conference, FR
2020	Selected	Talk at the CSHL Conference Systems Biology: Global Regulation of Gene Expression, US
2019	Selected	Talk at the International *C. elegans* Conference, US
2017	Selected	Talk at the International *C. elegans* Conference, US

Open-source software development

momics	Store and manipulate multi-omics data	[PyPi]
metator	Bin metagenomic contigs based on proximity ligation data	[PyPi]
tidyCoverage	Extract and aggregate genomic track signals	[Bioconductor]
HiCExperiment	Data structure for Hi-C in R	[Bioconductor]
HiContacts	In-depth Hi-C investigation in R	[Bioconductor]
plyinteractions	Genomic grammar for genomic interactions	[Bioconductor]
tidyomics	Open project to create tidy analysis packages for omics data	[Bioconductor
OHCA	Orchestrating Hi-C analysis with Bioconductor	[Book]
BiocBook	Write, containerize and publish versioned technical monographs	[Bioconductor]

Educational activities

2022–… Workshop: Single cell RNA seq analysis with R/Bioconductor (Physalia Courses)
2021–… Workshop: NGS analysis for gene regulation and epigenomics (Physalia Courses)
2021 Workshop: Introduction to Multi-omics Data Integration and Visualisation (EBI, UK)
2018 Teaching: 1A Biology of the Cells (University of Cambridge)

Student supervision

2020–… Co-supervision of **4 PhD students** (Lea Meneu: then hired by a biotech spinout; Michella Khoury Damaa: carrying out a junior post-doc in Alice Meunier's lab; Manon Perrot and Corina Pascal, currently 2nd and 3rd year PhD candidates); **2 Master students** (Ghislaine Sonagnon, Emilie Doan)

2018–2020 **2 Master students** (Thomas Brochier: then completed a PhD at MPI-CBG, GE; Ruxandra Tesloianu: then completed a PhD at Sanger Institute, UK)