

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

Visiting researcher grant (€10,000), Pasteur Technology Training Program

2025

Short 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.

Travelling grant, Gordon Research Conference Chromosome Dynamics

2023

1st place (€2,400), Hackathon Digital 4 Genomics

2022

Predicting physical interactions between nuclear parasites and host chromosomes

Fellowships

Post-doctoral research fellowship (3 years fully funded), Association pour la Recherche sur le Cancer

2021

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. **Serizay, Khoury Damaa, Boudjema, Balagué, Faucourt, Delgehyr**, et al. Cyclin switch tailors a cell cycle variant to orchestrate multiciliogenesis. *Cell Reports* 2025.
5. 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.
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. Pandya-Jones, Markaki, **Serizay**, Chitiashvili, Mancia Leon, Damianov, et al. A protein assembly mediates Xist localization and gene silencing. *Nature* 2020.
12. **Serizay**, Dong, Jänes, Chesney, Cerrato, and Ahringer Distinctive regulatory architectures of germline-active and somatic genes in *C. elegans*. *Genome Research* 2020.
13. 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.
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 9 th Gordon Conference on Chromosome Structure and Function, US
	Selected	Talk at the 3R Conference (Replication, Repair, Recombination), FR
	Selected	Talk at the 20 th Bioconductor, US
2023	Invited	Talk at Qbio Symposium, FR
	Organizer	European Bioconductor Conference, BE
	Selected	Talk at the 19 th Bioconductor, US
	Selected	Talk at the 9 th Gordon Conference Chromosome Dynamics, IT
2022	Selected	Talk at the 5 th EMBO European Cilia Conference, GE
	Selected	Poster at the EMBO Workshop: Cell Cycle: one engine–many cycles, GE
2021	Invited	Talk at the 2 nd 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 <i>C. elegans</i> 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

2023–...	Workshop: Developing R/Bioconductor packages for Genomics (Physalia Courses)
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

Corina Pascal	<i>PhD</i>	–	2024–...
Manon Perrot	<i>PhD</i>	–	2023–...
Ghislaine Sonagnon	<i>Master</i>	n.d.	2025
Emilie Doan	<i>Master</i>	n.d.	2024
Lea Meneu	<i>PhD</i>	Then hired at Syntato (UK)	2022–2024
Michella Khoury	<i>PhD</i>	Then Junior post-doc at Institut de Biologie de l'Ecole Normale Supérieure (FR)	2021–2024
Damaa			
Thomas Brochier	<i>Master</i>	Then PhD at Max Planck Institute MPI-CBG (GE)	2018
Ruxandra Tesloianu	<i>Master</i>	Then PhD at Sanger Institute (UK)	2018