

# The Genomics of Transposable Elements

## Unmasking their Complex Contribution to Genome Function and Evolution

### PSL-Qlife Winter School in Quantitative Biology – February 6<sup>th</sup>-10<sup>th</sup> , 2023

Monday, February 6<sup>th</sup>

8:45 - 9:00 am **V. Colot, P. Charnay**  
Introduction

*Room 316*

9:00 - 10:30 am **Josefa Gonzalez**  
Transposable elements in adaptive evolution: linking genotype to phenotype.

*Room 316*

10:30 -11:00 am *Coffee break - Room 305*

11:00 - 12:30 am **Deborah Bourc'his**  
DNA and RNA modifications of transposons

*Room 316*

12:30 - 1:30 pm *Lunch*

*Room 305*

1:30 - 5:00 pm  
Digital workshop  
Part1

**How TEs contribute to genome sequences?**

*Room 321*

Josefa Gonzalez  
Marta Coronado-Zamora  
Simón Orozco

1:30 - 5:00 pm  
Digital workshop  
Part1

**How TEs contribute to the epigenome?**

*Room 313*

Deborah Bourc'his  
Aurélie Teissandier  
Lolita Lecompte

1:30 - 5:00 pm  
Digital workshop  
Part2

**How TEs contribute to genome sequences?**

*Room 321*

Leandro Quadrana  
Pierre Baduel  
Louna De Oliveira  
Pol Vendrell

1:30 - 5:00 pm  
Digital workshop  
Part2

**How TEs contribute to the epigenome?**

*Room 313*

Helen Rowe  
Rocio Enriquez-Gasca  
Larisa Okorokova  
Lolita Lecompte

5:00 - 5:30 pm *Coffee break - Room 305*

5:30 - 6:30 pm **Sandra Duharcourt**  
Control of transposable elements by Polycomb in Paramecium

*Salle Favard*

6:30 - 7:30 pm  
**Poster session I**  
**Wine, beer and cheese**

*Room 316*

Tuesday, February 7<sup>th</sup>

9:00 - 10:30 am **Helen Rowe**  
Transposable elements as gatekeepers of chromatin remodeling and inflammation

*Room 316*

10:30 -11:00 am *Coffee break - Room 305*

11:00 - 12:30 am **Leandro Quadrana**  
Causes and consequences of transposable elements mobilization

*Room 316*

12:30 - 1:30 pm *Lunch*

*Room 305*

1:30 - 5:00 pm  
Digital workshop  
Part2

**How TEs contribute to genome sequences?**

*Room 321*

Leandro Quadrana  
Pierre Baduel  
Louna De Oliveira  
Pol Vendrell

1:30 - 5:00 pm  
Digital workshop  
Part2

**How TEs contribute to the epigenome?**

*Room 313*

Helen Rowe  
Rocio Enriquez-Gasca  
Larisa Okorokova  
Lolita Lecompte

5:00 - 5:30 pm *Coffee break - Room 305*

5:30 - 6:30 pm **Jan Korbel**  
Deciphering genomic structural variation in the human genome using long-read sequencing

*Salle Favard*

7:30 pm  
**Speakers/TAs dinner**

Wednesday, February 8<sup>th</sup>

9:00 - 10:30 am **Felipe Karam Teixeira**  
Small RNAs and the control of genome functioning

*Room 316*

10:30 -11:00 am *Coffee break - Room 305*

11:00 - 12:30 am **Richard Durbin**  
Transposons in genome sequences from across the tree of life

*Salle Favard*

12:30 - 1:30 pm *Lunch*

*Room 305*

1:30 - 5:00 pm  
Digital workshop

**How TEs contribute to genome activity?**

*Room 321*

Felipe Karam Teixeira  
Daniel Gebert  
Amir Hay

1:30 - 5:00 pm  
Digital workshop

**How TE evolutionary dynamics impact on chromatin structure and function?**

*Room 313*

Helen Rowe  
Rocio Enriquez-Gasca  
Larisa Okorokova  
Lolita Lecompte

5:00 - 5:30 pm *Coffee break - Room 305*

5:30 - 6:30 pm **Michael Imbeault**  
KRAB zinc finger proteins, transposable elements and the evolution of gene regulatory networks

*Salle Favard*

Thursday, February 9<sup>th</sup>

9:00 - 10:30 am **Gaël Cristofari**  
Genomic approaches to study transposable elements in the human genom

*Room 316*

10:30 -11:00 am *Coffee break - Room 305*

11:00 - 12:30 am **Jose Tubio**  
The dynamics of transposable elements in cancer

*Room 316*

12:30 - 1:30 pm *Lunch*

*Room 305*

1:30 - 5:00 pm  
Digital workshop

**How to measure TE expression?**

*Room 313*

Gaël Cristofari  
Sophie Lanciano  
Larisa Okorokova  
David Pratella

1:30 - 5:00 pm  
Digital workshop

**How to use Nanopore sequencing to explore TEs associated with disease?**

*Room 321*

Jose Tubio  
Sonia Zumalave  
Iago Otero Coto

5:00 - 5:30 pm *Coffee break - Room 305*

5:30 - 6:30 pm  
**Poster session II**

*Room 316*

6:30 - 7:30 pm  
**Cocktail**

*Room 305*

Friday, February 10<sup>th</sup>

9:00 - 10:30 am Discussion/restitution with students

*Room 316*

10:30 -11:00 am *Coffee break - Room 305*

11:00 - 12:30 am **Christine Beck**  
Transposable element mediated rearrangements in mammalian genomes

*Room 316*

12:30 - 1:30 pm *Lunch*

*Room 305*

1:30 - 5:00 pm  
Digital workshop

**Nanopore sequencing and the contribution of TEs to allelic and epiallelic variation**

*Room 321*

Vincent Colot  
Pierre Baduel  
Louna De Oliveira

1:30 - 5:00 pm  
Digital workshop

**How do TEs contribute to structural variation?**

*Room 313*

Christine Beck  
Parithi Balachandran  
Ardian Ferraj

5:00 pm *Coffee break and departure*

*Room 305*