

Les mardis de
L'IAB

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**REACTIVATION OF SOMATIC ENDOGENOUS
RETROVIRUSES IN DROSOPHILA OVARIES:
FROM GERMLINE INVASION TO TAMING**

21. NOVEMBER 2023 – 11 AM – LECTURE HALL

Most *Drosophila* transposable elements are LTR retrotransposons, some of which belong to the genus *Errantivirus* and share structural and functional characteristics with vertebrate endogenous retroviruses. Like endogenous retroviruses, it is unclear whether errantiviruses retain some infectivity and transposition capacity. We created conditions where control of the *Drosophila* ZAM errantivirus through the piRNA pathway was abolished leading to its de novo reactivation in somatic gonadal cells. After reactivation, ZAM invaded the oocytes and severe fertility defects were observed. While ZAM expression persists in the somatic gonadal cells, the germline then set up its own adaptive genomic immune response by producing piRNAs against the constantly invading errantivirus, restricting invasion. Our results suggest that although errantiviruses are continuously repressed by the piRNA pathway, they may retain their ability to infect the germline and transpose, thus allowing them to efficiently invade the germline if they are expressed.

Invited by : Claire Vourc'h

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Allée des Alpes, 38700 La Tronche (tram line B, stop : Grand Sablon)
The seminar is followed by discussions and exchanges with the speaker and a sandwich buffet is offered