ARNA **Seminar Series**

**Wednesday, January 21 at 11 am**

(Bâtiment Bordeaux Biologie Santé auditorium)

# Whi3 Condensation and RNA Regulation: A Molecular Switch for Yeast Deceptive Courtship Memory

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Prions and prion-like proteins are master regulators of cellular memory and stress adaptation, driving critical decisions such as cell cycle entry. In *Saccharomyces cerevisiae*, the prion-like protein Whi3 acts as a molecular switch: its condensation encodes the memory of deceptive courtship, enabling cells to bypass G1-phase arrest and restart division. But how does Whi3 sense and integrate signals? What triggers its condensation, and is Whi3 alone in this role?

In this seminar, I will present our efforts to reconstitute Whi3 condensation *in vitro*, and discuss how Whi3's conformational change triggers a functional switch—shifting from repressing *CLN3* mRNA translation in its soluble state to enabling cell cycle progression upon condensation. I will show how Whi3 integrates the biophysical state of the plasma membrane to form condensates and will explore how Whi3 and other prion-like proteins assemble into a regulatory network, orchestrating the pivotal decision of cell cycle entry.

Host: Eric Cornes, ARNA laboratory