

Institut Jean-Pierre Bourgin

Séminaire

Jeudi 19 octobre, à 14h00

Dr. Sebastian Marquardt

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Rules and Roles of non-coding Transcription

RNA Polymerase II (Pol II) transcription occurs mainly outside of genes, which is referred to as “pervasive transcription”. This raises the question: does pervasive transcription serve a purpose? My lab studies the roles of pervasive transcription near genes in yeast and plants. Long non-coding RNA (lncRNA) molecules can serve important functions in cells, for example by recruiting chromatin modifying enzymes to target loci. However, lncRNA often lack sequence conservation and accumulate to low levels as they are targeted for degradation by nuclear RNA decay pathways. These considerations pose a challenging question to the field: how could lncRNA that are not conserved on sequence level nevertheless elicit equivalent functions? My lab addresses this question by focusing on gene regulation through the process of transcribing lncRNA in the vicinity of genes. Proper execution of gene expression by Pol II relies on a “positional information” system across genes. As lncRNA and mRNA Pol II transcripts use similar molecular hallmarks to inform the positional information system, lncRNA transcription near genes can confuse this system to affect gene expression. I will present our latest findings addressing gene regulation through the act of non-coding Pol II transcription in yeast and plants.

Invité par **Grégory Mouille**

Ce séminaire aura lieu dans l’Amphithéâtre Bât. 10