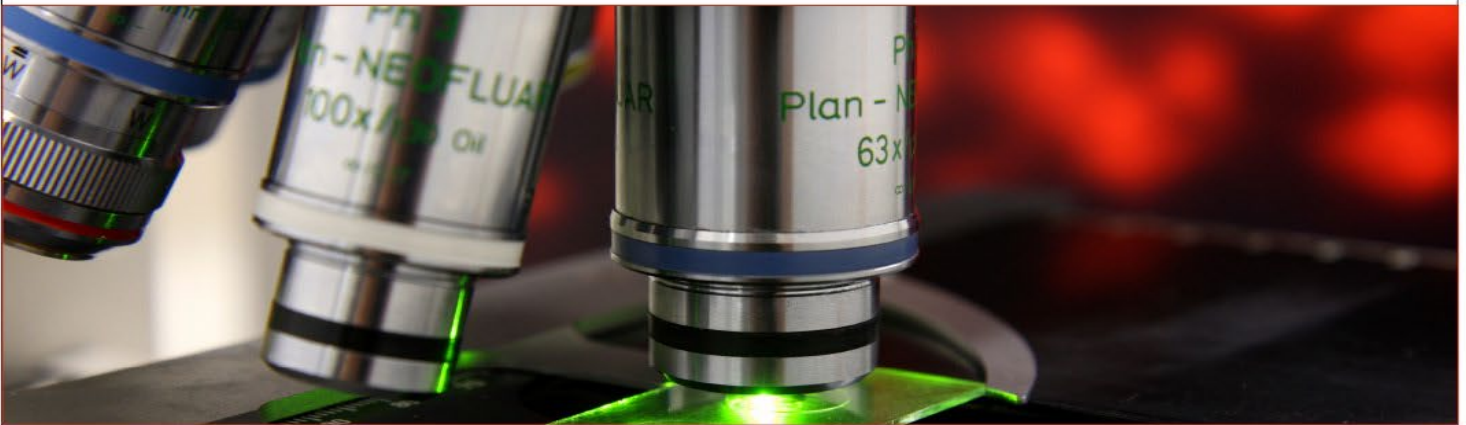


# SÉMINAIRES ET CONFÉRENCES



## JINGWEN SONG

### “ Multifaceted roles of C2H2 zinc finger-transcription factors in tumorigenesis ”

RNA processing events enhances gene regulatory potential by increasing the diversity of mRNA transcripts. RNA 3'UTR shortening through alternative polyadenylation correlates with enhanced proliferation of cancer cells. Cys2-His2 zinc finger proteins (C2H2-ZNFs) represent one of the largest classes of human transcription factors, and many of them are widely recognized for their roles in controlling gene expression through potent DNA binding. In our study, we show that C2H2-ZNFs contribute to the multi-layered control of transcriptomic profiles in tumorigenesis by regulating both transcription and alternative polyadenylation. We identified Sp1 as a novel RNA-binding protein and a potent regulator of alternative polyadenylation. Sp1 inhibits the usage of distal cleavage sites by binding upstream of the poly(A) sites and interfering with the function of the cleavage and polyadenylation complex. We also show that Sp1 has great oncogenic potential by modulating the mRNA stability of large numbers of proliferative-related oncogenes at post-transcriptional level, and the RNA-related role of Sp1 is independent of its DNA-binding ability.

Our findings shed new light on the long-established transcription factors, revealing their previously unknown role in regulating RNA processing events in tumorigenesis. This work will open new avenues for targeting post-transcriptional regulation in RNA-based cancer therapy.



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**Le lundi 13 mars, 11h30**

**Pavillon Joseph-Armand-Bombardier, Salle : 1035  
ET**

[Lien Zoom séminaire](#)

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