

BIOTECHNOLOGY AND BIOSCIENCES SEMINARS



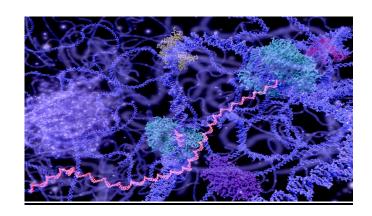
Dipartimento di Biotecnologie e Bioscienze – UNIMIB

Thursday, March 21, 2024, 4:30 p.m., U4-TELLUS building, room U4-01

Alternative splicing regulates expression of the neuroprotective cold-shock protein RBM3 and the leukemia-associated splicing factor RBM39

<u>Daniel Jutzi</u> <u>and</u> Marc-David Ruepp

UK Dementia Research Institute at King's College London



Abstract: RNA-binding proteins (RBPs) have a central role in regulating post-transcriptional gene expression and thus their expression levels must be tightly controlled. While many RBPs bind to and influence the fate of their own messenger RNAs (mRNAs) via negative or positive feedback loops, others are embedded in regulatory networks, where multiple RBPs bind to and cross-regulate their mRNAs to maintain homeostasis. The importance of the tight regulation of expression is highlighted by the fact that alterations in RBP abundance have been linked to a wide range of human diseases including neurodegenerative disorders and cancer. In this seminar, we will provide insights into the molecular mechanisms underlying autoregulation of the leukemia-associated RNA-binding motif protein 39 (RBM39) and temperature-dependent cross-regulation of the neuroprotective cold-shock RNA-binding motif protein 3 (RBM3) via alternative splicing. Consequently, our results open up novel opportunities to modulate expression of these RBPs for therapeutic intervention.

Host: Silvia Barabino

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