WWTF Project LS09-044

The dynamics of the miRNA effector complex

Abstract

Post-transcriptional processes play a crucial role in the regulation of eukaryotic gene expression. Over the past decade miRNAs (an abundant class of small non-coding RNAs) emerged as key regulators and have entirely revolutionized the way we think about post-transcriptional gene regulation. miRNAs play an essential role in diverse processes such as development, differentiation, cellular growth control, stress response, and disease development (e.g. cancer). miRNAs regulate target mRNAs by inducing their translational repression and/or degradation. In the proposed project we plan to investigate conformational rearrangements at the protein level, which are crucial for miRNA-mediated repression. A detailed understanding of how proteins interact in the course of miRNA-mediated repression is essential in the efforts to design drugs, which regulate miRNA function during disease development.

Keywords:

miRNA, mRNA degradation, translation regulation

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Further links about the involved persons and regarding the project you can find at

https://archiv.wwtf.at/programmes/life_sciences/LS09-044