University of Basel
Department Biozentrum

SIB Swiss Institute of Bioinformatics

BIOZENTRUM
The Center for Molecular Life Sciences

Basel Computational Biology Seminar

Manuel Irimia

EMBL/CRG Research Unit in Systems Biology

Centre for Genomic Regulation (CRG)

Barcelona, Spain

"Proteome remodeling by neuronal-specific microexons"

One of the major challenges for the development of complex multicellular organisms is to generate dozens of cell types from a single genomic sequence. Through differential processing of introns and exons, alternative splicing can produce cell type-specific protein isoforms that allow optimization of their specific cellular roles or even the emergence of novel functions. One of the most striking examples of this is provided by microexons in vertebrate neurons. These tiny exons, which can encode as few as one or two aminoacids, are switched on during neuronal differentiation and show the highest evolutionary conservation of all AS types. I will discuss some of the current progress in our understanding of the impact of neural microexons in function and dysfunction as well as when and how they have originated in animal evolution.

Date: **Monday, March 18th, 2019**

Time: **16:00 h**

Room: **Lounge (level 13), Klingelbergstrasse 61**
(vis-à-vis Pharmazentrum)

Contact: Maria Katsantoni (maria.katsantoni@unibas.ch), Zavolan lab

Oriane Mauger (oriane.mauger@unibas.ch), Scheiffele lab