



University  
of Basel

Department  
Biozentrum



Swiss Institute of  
Bioinformatics

BIOZENTRUM

The Center for  
Molecular Life Sciences

Basel Computational Biology Seminar

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## “Computational biology in the translation of cancer transcriptomics”

We are computational biologists interested in the systems-level transcriptional dysregulation underlying human disease. I will outline some of our most recent findings and the biologist-friendly tools we have been developing concomitantly with our research. For instance, I will characterise the pan-cancer association of a centrosome amplification gene expression signature with genomic alterations and clinical outcome, describing how this study led us to create an R package for the identification of candidate causal perturbations and phenotype-targeting compounds from differential expression data. I will also show how we are making the analysis of alternative mRNA splicing in large RNA-seq datasets accessible and describe an alternative splicing event that may be at the core of a prognostic molecular signature in colorectal cancer, as well as our efforts to unveil its functional role in the disease's progression.

Date: **Monday, May 13<sup>th</sup>, 2019**  
Time: **16:00 h**  
Room: **Lounge (level 13), Klingelbergstrasse 61**  
(vis-à-vis Pharmazentrum)  
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Zavolan lab