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#### Co-Mentor: Giorgio Galli, PhD

Oncology

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Our laboratory is interested in characterizing the role of the Hippo signaling pathway in cancer. While this pathway is a key regulator of organ size and embryonic development, the past decade has highlighted its function in driving tumorigenesis and drug resistance mediated by the aberrant activation of YAP/TAZ-TEAD transcriptional complexes. With significant research reported thus far in the dissection of upstream regulators and downstream targets of the pathway, we are still lacking a detailed mechanistic understanding of the pathway in different disease-relevant settings.

An extensive combination of large-scale functional genomics screens, CRISPR/Cas9 genome editing, epi-/genomic profiling and mass spectrometry-based proteomics will enable the dissection of novel vulnerabilities in cancer indications driven by aberrant Hippo pathway activity and provide unprecedented resolution of YAP-TAZ/TEAD contributions in disease.

We are working in close collaboration with different departments within NIBR Giorgio Galli's lab. (Postdoc Co-Mentor), and offer the opportunity for interactions with academic labs, locally and globally.

### **Selected Publications**

Project DRIVE: A compendium of cancer dependencies and synthetic lethal relationships uncovered by large-scale, deep RNAi screening McDonald ER 3rd, de Weck A, Schlabach MR, Billy E, Mavrakis KJ, Hoffman GR,..., Kauffmann A\*, Stegmeier F\*, Hofmann F\*, Schmelzle T\* (lead contact), Sellers WR\* \*equal senior author contributions *Cell 2017 Jul 27; 170(3):577-592* 

Disordered methionine metabolism in MTAP/CDKN2A-deleted cancers leads to dependence on PRMT5 Mavrakis KJ, McDonald ER 3rd, Schlabach MR, Billy E, Hofmann GR,..., Schmelzle T\*, Hofmann F\*, Stegmeier F\*, Sellers WR\* \*equal senior author contributions Science 2016 Mar 11; 351(6278):1208-13

<u>The tyrosine phosphatase PTPN14 is a negative regulator of YAP activity</u> Michaloglou C, Lehmann W, Martin T, Delaunay C, Hueber A,..., Christofori G, Sellers WR, Hofmann F, Schmelzle T *PLoS One 2013 Apr 16; 8(4):e61916.* 

Click here for additional publications.

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