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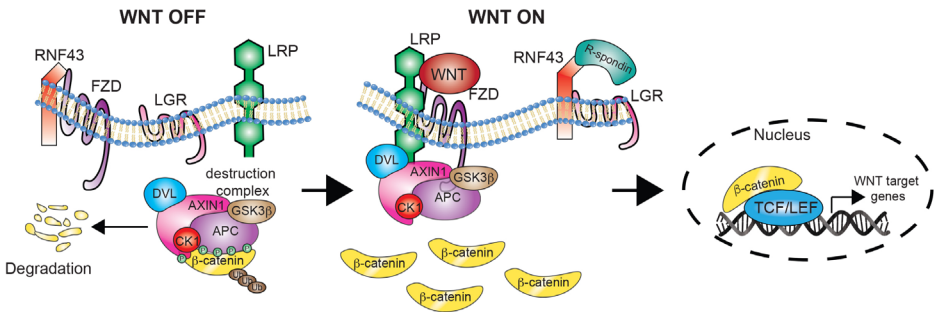
Genetic screens provide global information about how genes are regulated in normal homeostasis and how they are deregulated in disease. Recent technological advances are revolutionising our ability to use these approaches. Research in the Rosenbluh lab uses state of the art functional genomic tools that include pooled CRISPR and ORF loss/gain of function screens and apply these technologies towards understanding and targeting of β-catenin driven colon cancer.

Research Projects

1. **Genetic screens for identifying drug targets in β-catenin driven colon cancers.**
2. **Identification and characterization of drugs for colon cancer therapy.**
3. **Development of new high-throughput genomic technologies.**



The WNT/β-catenin signaling pathway.

Selected significant publications:

1. **Rosenbluh J**, Xu H, Harrington W, Gill S, Wang X, Vazquez F, Root DE, Tsherniak A, Hahn WC. 2017. Complementary information derived from CRISPR Cas9 mediated gene deletion and suppression. *Nature Communications*, Accepted.
2. **Rosenbluh J**, Mercer J, Shrestha Y, Oliver R, Tamayo P, Doench JG, Piccioni F, Horn H, Fagbami L, Yang-Zho D, Perrimon N, Jaffe J, Lage K, Boehm JS, Hahn WC. 2016. Integrated genetic and proteomic interrogation of WNT/β-catenin cancer dependencies. *Cell Systems*, 3(3):302-316.
3. Shao DD, Xue W, Krall, EB, Bhutkar A, Piccioni F, Wang X, Schinzel AC, Sood S, **Rosenbluh J**, Kim WJ, Zwang Y, Root DE, Jacks T, Hahn WC. 2014. KRAS and YAP1 converge to regulate EMT and tumor survival. *Cell*, 158(1):171-184.
4. **Rosenbluh J,** Nijhawan D, Cox AG, Li X, Neal JT, Schafer EJ, Zack TI, Wang X, Tsherniak T, Schinzel AC, Shao DD, Schumacher SE, Weir BA, Vazquez F, Cowley GS, Root DE, Mesirov JP, Beroukhim R, Kuo CJ, Goessling W, Hahn WC. 2012. β-catenin driven cancers require a YAP1 transcriptional complex for survival and tumorigenesis. *Cell*, 2012 151(7):1457-1473
5. **Rosenbluh J**, Wang X, Hahn WC. 2014. Genomic insights into WNT/β-catenin signaling. *Trends in Pharmacological Science*, 35(2):103-9.