Module 2 Readings

Required:

Phenotypic screening-related:

Eder J, Sedrani R, and Wiesmann C. (2014). The discovery of first-in-class drugs: origins and evolution. *Nature Reviews Drug Discovery*, 13(8): 577-87.

Initial publication with NCATS collaboration (High-throughput screening using assays to detect PNC formation):

Norton JT, Titus SA, Dexter D, Austin CP, Zheng W, and Huang S. (2009). Automated High-Content Screening for Compounds That Disassemble the Perinucleolar Compartment. *Journal of Biomolecular Screening*, 14(9):1045-53.

Recommended:

Earlier research papers on Perinucleolar Compartments (PNCs) and association with cancer:

Huang S, Deerinck TJ, Ellisman MH, and Spector DL. (1997). The dynamic organization of the perinucleoloar compartment in the cell nucleus. *Journal of Cell Biology*, 137(5): 965-974.

Kamath RV, Thor AD, Wang C, Edgerton SM, Slusarczyk A, Leary DJ, Wang J, Wiley EL, Jovanovic B, Wu Q, Nayar R, Kovarik P, Shi F, and Huang S. (2005). Perinucleolar compartment prevalence has an independent prognostic value for breast cancer. *Cancer Research*, 65(1) 246-53.

Norton JT, Pollock CB, Wang C, Schink JC, Kim JJ, and Huang S. (2008). Perinucleolar compartment prevalence is a phenotypic pancancer marker of malignancy. *Cancer*, 113(4):861-9.

Phenotypic Screening:

Swinney DC and Anthony J. (2011). How were new medicines discovered? *Nature Reviews Drug Discovery*, 10(7),10(7):507-19.

Haasen D, Schopfer U, Antczak C, Guy C, Fuchs F, Selzer P. How Phenotypic Screening Influenced Drug Discovery Lessons from Five Years of Practice. *Assay Drug Dev Technol*. 2017 AugSep;15(6)239-246.

Moffat JG, Vincent F, Lee JA, Eder J, and Prunotto M. (2017). Opportunities and challenges in phenotypic drug discovery an industry perspective. *Nature Reviews Drug Discovery*, 16(8)531-543.