M2D1: System Design

10/8/13

- Writing visit from Leslie
- OH ANS R 5-6P 16-336 (by appt, say 12-3ish) Safety visit from Marissa SKH W 7-88
- Short pre-lab discussion + Hi, Kin!
- EGFR signaling pathway simulation
- Pick your inhibitor!
- Mock inhibitor study

A few announcements:

- I. ModI: Abstract + Data Summary due Thursday at Ilam
- 2. Mod1: Methods return target is M2D3
- 3. Check your schedule -- Journal Club time!
- 4. Plan ahead: M2D4 is long (no more surprises)

Module 2 overview: Explore the system: twake choice b/w 3:nh:bito/5 Define the problem: 5KH 0.001 0 2 4 6 8 10 12 14 16 18 20 (µM) PI3K/AKT Ras/ERK STAT activation Grunt et al. Biochem. Biophys. Res. Commun. 385:454-459(2009) pathway pathway Bidkhori G, Moeini A, Masoudi-Nejad A .PLoS ONE 7(10): (2012) Increasing [EGF] Test the Test our hypothesis: parameters: (:) to Jos 1.4×10⁰⁷ 1.2×10⁰⁷ 1.0×10⁰⁷ 80000000 pY1068-EGFR LY (10 um) LY (1 um) LY (0.1 um) **LY** (0.01 um) LY (0.001 um) EGFR/pY-EGFR **LY** (0) 6000000 0.0001 0.001 0.01 0.1 100 [Erlotinib], μM Total EGFR cell viasility co-inhibition

Today in the lab:

- EGFR simulations -- if you run into trouble, let us know right away!

 Normal, Increased EGFR, (no PTEN -- if time)
- We have 6 multi-channel pipettes -- stagger your start (a few may choose to start right away)

Next time in the lab:

- Choose JC day & paper (list will be finalized on Thursday AM)
- EGFR mutation analysis by PCR and sequencing
- Learn how to present the research of others