

# Ray Blind 20-Minute Presentation

*Ray Blind, Vanderbilt University*

# 20-minute presentation that highlights

1. Best approaches to acquire preliminary data for a competitive R01 submission and establish your lab
2. Manage the budget as a new PI
3. Grant submission and funding strategies for lab longevity

# Ray Blind's Path

- 2005: NYU PhD, Had to change labs (lost 3 years)
- 2006: UCSF Postdoc advisor moved after only 2 months
- 2007: UCSF/Muhimbili Teaching postdoc in Tanzania (Gates Foundation)
- 2008: UCSF Postdoc (Holly Ingraham / Robert Fletterick)
- 2009: UCSF **IRACDA** Fellowship for teaching
- **2012: NCI K01** – Spouse at UCSC, both got positions at Vanderbilt
- 2015: Vanderbilt Faculty position, 9 10-year tenure clock (COVID)



# During postdoc/first year of independence

1. 3-4 projects
2. Few administrative burdens (budgets, projections, effort allocations, etc).
3. Teaching one class (night school at Berkeley)

## **Now:**

1. ~20 projects
2. Many administrative burdens
3. Director of PhD program (Quantitative & Chemical Biology)

What have I learned that would make those first couple years easier?

## Highlight 1: Best approaches to acquire preliminary data for a competitive R01 submission and establish your lab

- 1. Best approaches to acquire preliminary data for a competitive R01 submission and establish your lab**
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# Project management or: how I learned to stop worrying and love the chaos

[bit.ly/3K4e0FL](https://bit.ly/3K4e0FL)



*Temper your expectations on productivity!*

Shared Lab Project Management

File Edit View Insert Format Data Tools Extensions Help

100% Default...

J3	A	B	C	D	E	F	G	H	I	J
1	Paper	Person	Progress		Task / Figure / Question	New?	High Priority	Waitin' on what?		Updates or notes
2	1 hormone	Abby	Done!		Express, purify, cut LRH-1 LBD for crystallography		High Priority			
3	1 hormone	Abby			Co-crystals, LRH-1 LBD + DAX		High Priority			
4	1 Risperidone	Abby	Done!		Get trained on high throughput screening center fluorescence polarization instrument with Harry, Ethan and James tool	New				
5	1 Risperidone	Abby			Co-crystals, LRH-1 LBD + DAX + Bilirubin					
6	2 IPMK	Beth	Done!		Give pratima plates for RNA seq of WT+WT and WT+KD			Done but...		
7	2 IPMK	Beth	Workin' on it!		Solve all of my [molecular genetics] problems with yeast! See about localizing and expressing WT and KD IPMK in yeast and doing ChIP etc etc to understand what IPMK is doing in chromatin					
8	3 HDAC7	Beth	Workin' on it!		See if I can create two readouts in yeast to measure IP vs PIP functions of IPMK. If works can use to identify IPMK mutants with selective defects					
9	3 HDAC3	Beth	I hate my life :)		H4ac ChIP seq from H4A-IPMK (WT and KD) complemented cells			Still going! testing out ChIP qPCR and then will redo ChIP for seq		
10	3 HDAC3	Beth	Workin' on it!		Do classic HDAC3 regulated genes chage acetylation in IKO7 via ChIP qPCR			looking for good genes to use		
11	3 HDAC3	Beth	On hold		HDAC1,2,3,8 expression in U251 cells, WT vs. IKO					Ethan did one trial of this
12	6 IPMK-AS	Beth	Workin' on it!		What genes are changed upon acute inhibition of AS IPMK?			will check sequence and try to get other AS lines from my clones that still have WT IPMK. If that doesn't improve then proliferation is not our key assay (can try Lucia's labeling)		
13	3 HDAC3	Beth - Kelly	Waitin' on it!		does Sirt1 activity change in IKO?					Work on this with Rotation student
14	2 nuclear PIP2	Ethan	Workin' on it!		IF of FLAG-SF-1 (WT, Pocket and 2HD mutants) in Tet-inducible HEK cells			optimizing IF conditions		
15	2 nuclear PIP2	Ethan			Order SF-1 LBD for mammalian expression from Vectorbuilder, determine if just the LBD induces nPIP2 in HEK and/or other cell lines					
16	2 nuclear PIP2	Ethan			Does LRH-1 transfection induce nuclear PIP2 in HEK293? We have all relevant mutants for LRH-1.					
17	2 nuclear PIP2	Ethan			Can siRNAs against candidate kinases and/or PIPases prevent SF-1 from inducing nuclear PIP2 signal?					
18	2 nuclear PIP2	Ethan			Does SF-1 or LRH-1 transfection into HepG2, PC12, U251MG, any other cell line we have, induce nuclear PIP2?					

+ Projects Lab Biniz Undergrads Rotations Weekly Project Management Example Ray's 2010 Postdoc example

## Highlight 2: Manage the budget as a new PI

1. Best approaches to acquire preliminary data for a competitive R01 submission and establish your lab
- 2. Manage the budget as a new PI**
3. Grant submission and funding strategies for lab longevity.





## Highlight 3: Grant submission and funding strategies for lab longevity

1. Best approaches to acquire preliminary data for a competitive R01 submission and establish your lab
2. Manage the budget as a new PI
3. **Grant submission and funding strategies for lab longevity.**

# My grant strategy

Vanderbilt Startup never expires, no yearly tax

**2012 – NCI K01 (440K/4 years)**

**Bold = new only (no R01)**

- 2015 – Started position, immediately started writing grants.
- **2016 – Vanderbilt Diabetes award (200K/2 years)**
- **2016 – Vanderbilt ACS IRG Pilot (35K/1 year)**
- 2016 – Vanderbilt Diabetes Drug Screen (50K/1 year)
- 2017 – Vanderbilt Cancer Drug Screen (Pitch) (120K/2 years)
- **2017 – V-Foundation for Cancer Research V-Scholar (200K/2 years)**
- **2017 – ACS Research Scholar Award (660K/4 years)**
- 2018 – Interval Vanderbilt equipment TIPS awards (X-ray home source)
- **2019 – NCI R21 (235K/2 years)** (total prior to first R01 = over 1.3 million)
  
- 2020 – NIGMS R01 (880K/4 years)
- 2020 – NIGMS R01 (800K/4 years)
- 2020 – CSRS Study Section
- 2022 – ACS TLC (30K/1 year)
- 2022 – NIA R21 MPI (50K/2 years)
- 2022 – NIGMS R01 Co-I (165K/5 years)

# Highlights recap

1. Best approaches to acquire preliminary data
  - Project Management Software, or make your own!
  - **Temper your expectations on productivity.**
2. Manage the budget as a new PI
  - Learn to speak accounting – ask questions to get to know **their** language. Be very nice to your admins.
3. Grant submission and funding strategies for lab longevity.
  - Consider protecting your ESI/New Investigator status, or not!
  - Good practice **not** in standing study sections.