

The F99/K00 D-SPAN Award Webinar

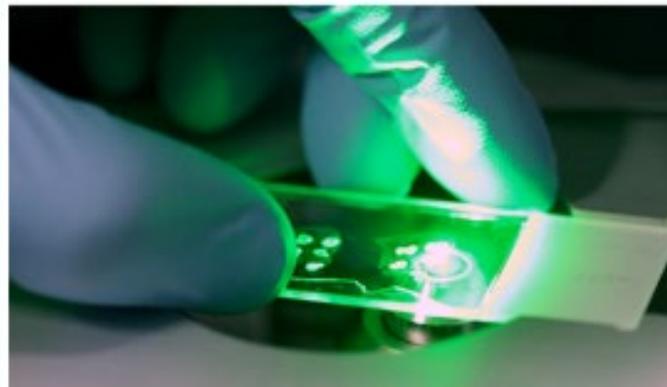
- Thank you for joining the webinar. We will begin shortly.
- Listen to the webinar via your computer speakers or dial in using the telephone number provided on the screen.
- Type any questions into the Q&A box. Questions will be addressed after the presentation.
- The recording and webinar resource materials will be available in a few weeks.



NIH Blueprint for Neuroscience Research

**NIH Blueprint
Diversity
Specialized
Predoctoral to
Postdoctoral
Advancement in
Neuroscience
(D-SPAN) Award
(F99/K00)**

February 24, 2020



Moderator



Lauren Ullrich, PhD
Scientific Program Manager
NINDS

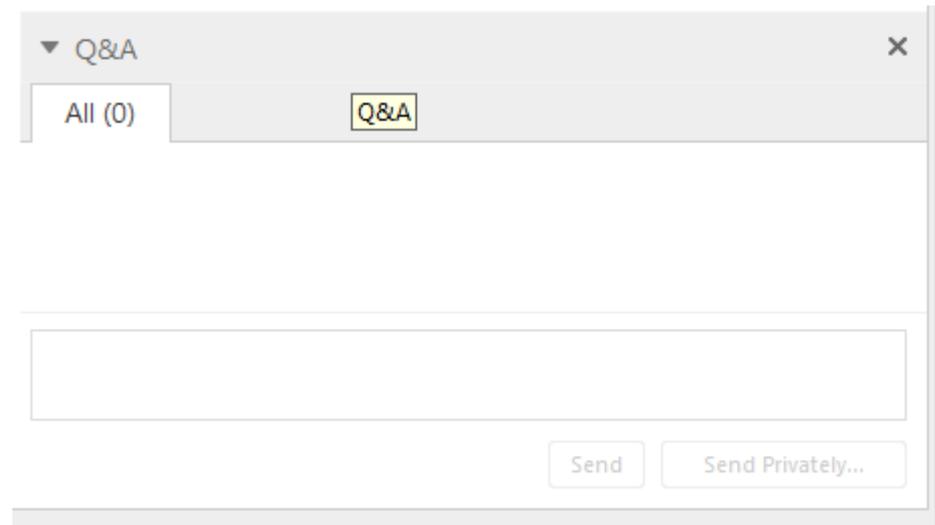
Contact Us

NINDSDiversityTraining@
ninds.nih.gov

Twitter: @NINDSDiversity

Questions

- You will be muted during the webinar
- Type your questions into the Q&A box
- Q&A will be at the end of the webinar



The screenshot shows a Q&A interface. At the top, there is a header with a dropdown arrow and the text 'Q&A', and a close button 'x'. Below the header, there are two tabs: 'All (0)' and 'Q&A'. The 'Q&A' tab is selected. Below the tabs is a large text input field. At the bottom right of the input field, there are two buttons: 'Send' and 'Send Privately...'.

Outline of the Webinar

- Introductions
- Program Overview
- Applicant Perspective
- Q&A

Speakers

Michelle Jones-London, PhD

Chief, Office of Programs to Enhance
Neuroscience Workforce Diversity
(OPEN)
NINDS/NIH



Nathaniel Harnett, PhD
Postdoctoral Fellow
McLean Hospital/Harvard
Medical School

Nadia Khan, PhD

Postdoctoral Fellow
Icahn School of Medicine
at Mount Sinai



Alberto Lopez, PhD
Postdoctoral Fellow
Vanderbilt University

Stephanie Noble, PhD

Postdoctoral Associate
Yale University School
of Medicine





National Institute of
Neurological Disorders
and Stroke

Introduction to the F99/K00 Mechanism

Michelle Jones-London

Chief, Office of Programs to Enhance
Neuroscience Workforce Diversity
NINDS



NIH Blueprint: NIH Neuroscience Partnership

- The NIH Blueprint is a collaborative and coordinated effort across 13 NIH Institutes
- D-SPAN funds research from all participating Blueprint Institutes and the BRAIN Initiative

• NEI • NICHD • NIMH • OBSSR
• NIA • NIDCR • NINDS • BRAIN
• NIAAA • NIDA • NINR
• NIBIB • NIEHS • NCCIH

Format

FORMAT



The D-SPAN F99/K00 award is intended for individuals who have demonstrated an interest in a neuroscience research career in any NIH Blueprint or BRAIN Initiative mission-relevant area

Intended for

1. Individuals from underrepresented groups in neuroscience research (NOT-OD-20-031)
2. Applicants should be PhD students with 1-2 years of research left at time of award (cannot apply for K00 portion only) – must be at the dissertation phase
3. US citizen or permanent resident only
4. Current F31 awardees and applicants eligible
5. May not be in a clinical, health-professional or dual-degree program
6. **MUST** have mission relevance to one of the neuroscience Institutes listed on FOA!

Resources

<https://neuroscienceblueprint.nih.gov/nih-blueprint-d-span-award-f99k00>

- Putting Together Your Strongest F99/K00 Application
- 2017 Informational Webinar
- D-SPAN Scholars Twitter list <https://twitter.com/NINDSDiversity/lists/d-span-scholars>
- Podcast

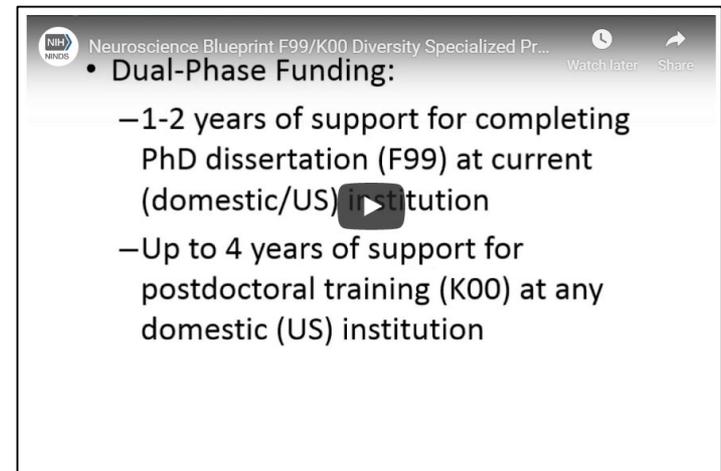


NIH National Institute of Neurological Disorders and Stroke

Putting Together Your Strongest F99/K00 Application

The NIH Blueprint Diversity Specialized Predoctoral to Postdoctoral Advancement in Neuroscience (D-SPAN) F99/K00 award opportunity provides late-stage graduate students from diverse backgrounds with strong training in neuroscience with the resources and tools that will help facilitate a transition to a productive postdoctoral research position and will provide career development opportunities relevant to their long-term career goal of becoming independent neuroscience researchers. The award is intended for PhD students from diverse backgrounds with 1-2 years left in a research doctoral degree program who are performing neuroscience research within the BRAIN Initiative or Neuroscience Blueprint missions at a U.S. domestic institution. Individuals may receive up to 6 years combined support for both phases, which includes up to 2 years in the F99 fellowship phase and up to 4 years in the K00 career development phase.

D-SPAN applicants should present a complete, consistent, and compelling story of how the proposed research and training plans over the next 5-6 years will build on past accomplishments to achieve the applicant's career goals. The challenge for this application is articulating your vision of four years of postdoctoral training without knowing where or with whom that training will be conducted. The proposal must be energetic, all components working



NIH NINDS Neuroscience Blueprint F99/K00 Diversity Specialized Pr... Watch later Share

- **Dual-Phase Funding:**
 - 1-2 years of support for completing PhD dissertation (F99) at current (domestic/US) institution
 - Up to 4 years of support for postdoctoral training (K00) at any domestic (US) institution

Questions?

- Initial Point of Contact:
 - Michelle Jones-London, PhD
 - National Institute of Neurological Disorders and Stroke (NINDS)
 - NINDSDiversityTraining@mail.nih.gov



National Institute of
Neurological Disorders
and Stroke

**Stephanie
Noble, PhD**
Postdoctoral
Associate
Yale University
School
of Medicine





National Institute of
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and Stroke

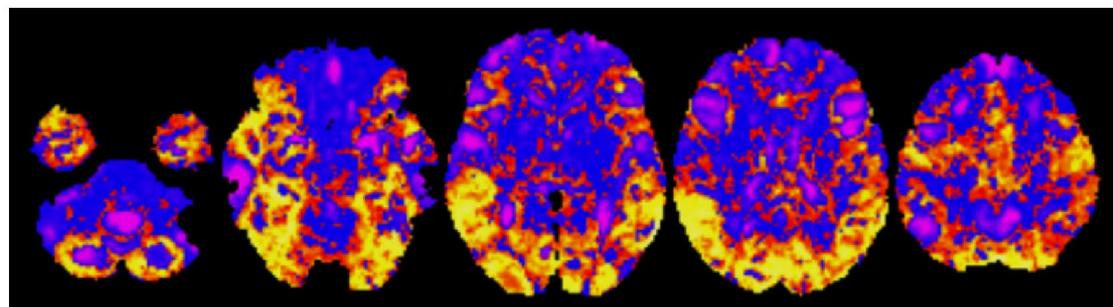
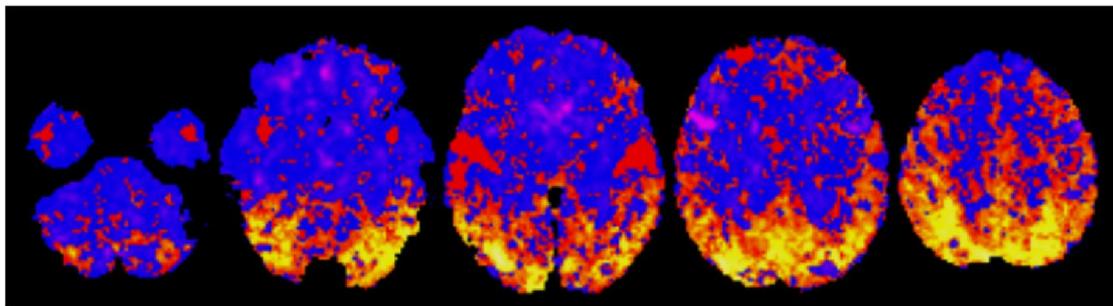
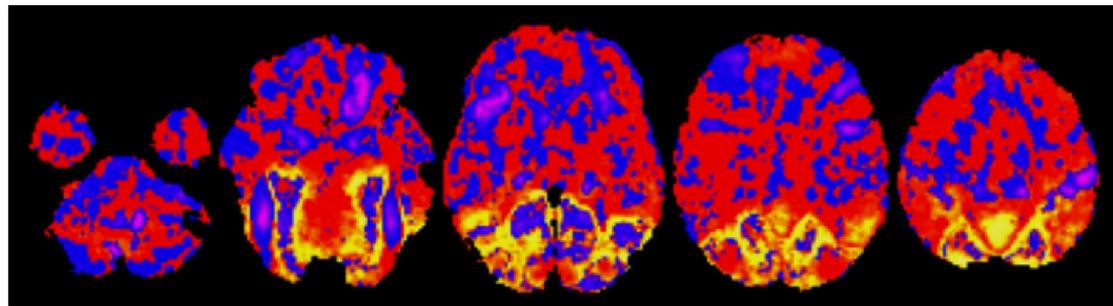
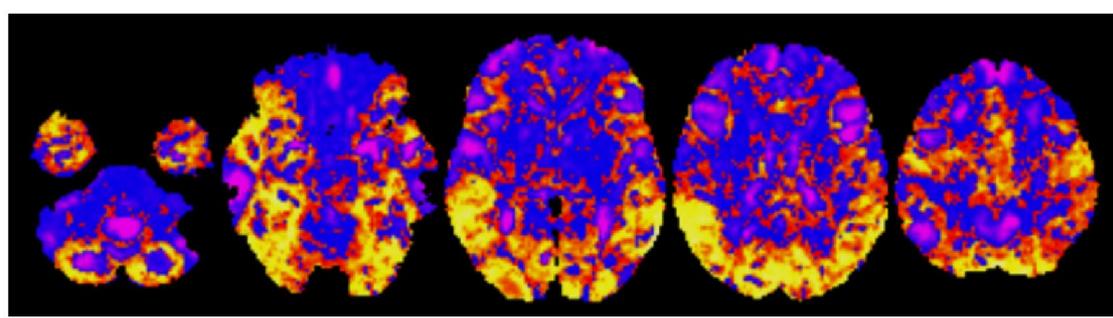
Stephanie Noble
DSPAN Cohort 2

BSE, Chemical & Biological Engineering,
Princeton University

CSO, goBlue Labs, LLC

PhD, Interdepartmental Neuroscience
Program, Todd Constable, Yale University

Postdoc, Radiology & Biomedical
Imaging, Dustin Scheinost, Yale University



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Understanding the training component

- Opportunity to look at the bigger picture
 - What motivates me?
 - Where do I want to be in 5-10 years?
 - How do I get there?

Understanding the training component

- Gap-based analysis
 - Identify long-term career goal
 - Identify gaps – what stands between you and your goal?
 - How will you fill those gaps?

Understanding the training component

- Gap-based analysis

- Identify long-term career goal

- ▷ Neuroimaging statistical/computational methodology dev't
- ▷ Independent researcher in research-intensive university

- Identify gaps – what stands between you and your goal?

- ▷ Scientific: software development, statistical theory, etc.
- ▷ Professional: more independent project mgmt, job search, etc.

- How will you fill those gaps?

- ▷ Personalized tutorials: software development principles, etc.
- ▷ Short & formal coursework: intro to JavaScript, academic job search workshop by Yale CTL, etc
- ▷ Conferences, seminars, & workshops
- ▷ Plan for postdoc (F99 Aim 3): Who? How? Network at conferences, on-site visits, etc.

My training plan

Specificity is key! (In practice, things may evolve)

Examples can answer many q's

- As many similar grant applications / reference letters as possible
 - ...especially those with training components

Never too early to start

Bring your PI and grants office into the
loop ASAP



National Institute of
Neurological Disorders
and Stroke

Nadia N. Khan, PhD

Postdoctoral
Fellow

Icahn School of
Medicine at Mount
Sinai



My Scientific Interests and Background

Scientific curiosity: How does the brain interpret experience and translate this into circuit function and behavior?

PhD: Dr. Avtar Roopra, University of Wisconsin

- Studied a model of acquired epilepsy, where a type of transient experience (seizures) occur
- Identify how the brain responds on a molecular level to this sudden, physical experience
- Epigenetic mechanisms, gene expression
- Very molecular biology focused



Where I am now

Post doc: Dr. Tristan Shuman's lab, Mount Sinai

- Identify circuits responsible for seizures and memory impairments in epilepsy
- Stayed in the same field, but now I look at this problem through the lens of systems biology
- *in vivo* electrophysiology, *in vivo* calcium imaging, animal behavior. No molecular biology!



How I hope to connect my PhD and Post-doc training:

From a molecular to systems level, how does the brain translate trauma into changes in circuit function and behavior? How can this precipitate disease?

Preparing my F99/K00 application

Tip #1: Make your application a personal reflection of you and your goals

- What is my background and training thus far?
- What are some critical gaps in knowledge I have noticed in my field?
- Based on my background, why am I the most ideal candidate to fill in these gaps?

Example from my Aim 3:

- I have a critical understanding of the cellular and molecular changes that occur during epilepsy
- I do not have the circuit, network or behavior knowledge to understand how this affects physiology or behavior
- I will find a post-doc that specifically addresses these deficits
- I want to be an investigator that is capable of understanding disease from top → down and bottom → up!

Preparing my F99/K00 application

Tip #2: Be honest about your deficits

- What are some deficits that I have as a trainee looking to become the next strong leader in neuroscience?
- How will your plan for the K00 help to address and fill these deficits?

Example from my Aim 3 and Training Plan:

- **Technical:** I will join a post-doc where I can learn about neuronal circuits, circuit manipulation techniques, and behavior.
- **Teaching:** Tenure review will require a graded performance of my teaching skills in the classroom. While I develop my research skills in the lab, I need to get hands-on experience in the classroom. I will join a lab that makes this possible.
- **Communication skills:** Good written and oral communication skills are crucial for obtaining consistent research funding and disseminating my findings to the public and the scientific community. I will write 1 grant/year, plan to publish 3 first-author papers and 1-2 review papers, and present at least 2x a year at scientific conferences.
- **Mentoring and training future scientists:** I've always mentored undergrads. If I want to be a PI and successful mentor, I need experience mentoring graduate students. I will find a lab that allows me to gain and sharpen these skills.

Preparing my F99/K00 application

Tip #3: Work closely with your mentor to develop your application

- PIs whom have served on study sections have insight into what makes an application “stand out” to a broader reviewing committee
- What kind of review criteria will be assessed about me and my application?
- What are concerns a review committee would flag for concern about an applicant?
- How do I communicate my research and goals succinctly to a study section member who may not be in my field?
- If your PI has not served on study section, consider seeking out others who have! Give them a draft and see if they can give you feedback on your research strategy or training plan.
- *Make sure your training plan reflects your PI’s plan for you in their sponsor statement!*

*If you want to learn about how study section works, tune into this podcast!



Please don't hesitate to reach out to me with any questions! I am happy to help you!



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National Institute of
Neurological Disorders
and Stroke

Nathaniel Harnett, PhD

Postdoctoral
Fellow

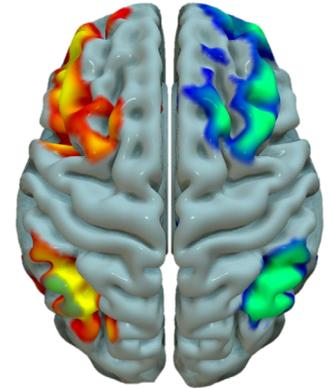
McLean

Hospital/Harvard
Medical School



Nate Harnett, PhD

- BA, Psychology
(Ithaca College, '13)
 - Mentor: Brandy Bessette-Symons, PhD
- PhD, Psychology/Behavioral Neuroscience
(University of Alabama at Birmingham, '18)
 - F99 Mentor: David C. Knight, PhD
- Postdoctoral Research Fellow
(McLean Hospital/Harvard Medical School)
 - K00 Mentor: Kerry J. Ressler, MD/PhD
- Research: Multimodal human MRI of fear neurobiology, trauma, and PTSD susceptibility



My background when applying

1st Cohort of the DSPAN (F99/K00 award)

- Publications:
 - Five (three 1st author)
- Prior awards:
 - Two fellowships (one internal, one external, none from NIH)
- Prior rejections:
 - Two rejected NSF applications, one rejected HHMI application, two rejected NRSAs

A few tips for the F99/K00 application based on some success (and failure)

1) Understand the review criteria

- The review criteria for the F99/K00 is online and freely available
- How is what you are writing or have written related to the review criteria?
 - Do you make sure to address each part of the criteria?
 - How can you make it clearer?

Section V. Application Review Information

NEW **Important Update:** See [NOT-OD-18-227](#) for updated review language for due dates on or after January 25, 2019.

1. Criteria

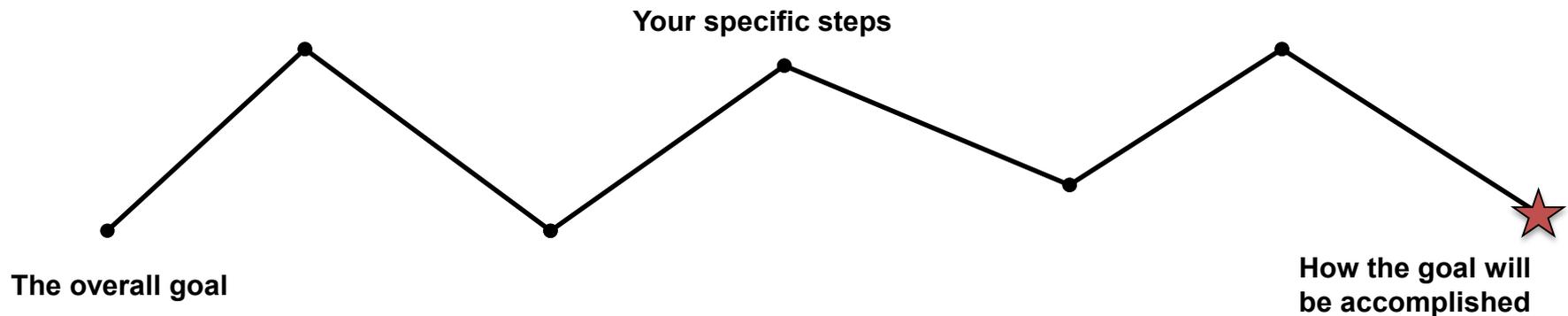
Only the review criteria described below will be considered in the review process. As part of the [NIH mission](#), all applications submitted to the NIH in support of biomedical and behavioral research are evaluated for scientific and technical merit through the NIH peer review system.

For this particular announcement, note the following:

- A fellowship application has a research project that is integrated with the training plan. The review will emphasize the applicant's potential for a productive career, the applicant's need for the proposed training, and the degree to which the research project and training plan, the sponsor(s), and the environment will satisfy those needs.

2) Connect the dots for reviewers

- Connect your ideas and every step relevant to your goals and objectives in the application
 - What is your overall goal? How can you break down that goal into reasonable objectives at this stage? What steps can you take *specifically* to meet those objectives and how do they accomplish the goal?
 - Logical and linear for reviewers to follow



3) Leverage your village/network

- People in your network (colleagues, actual/potential co-sponsors) can be helpful in providing feedback on your app
 - Improving narrative
 - Looking for inconsistency
 - Improving clarity
- Some may be willing to share copies of their grant applications (and summary statements) as well!



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National Institute of
Neurological Disorders
and Stroke

**Alberto
Lopez, PhD**
Postdoctoral
Fellow
Vanderbilt
University



Scientific path

Duke University; B.S. (2007-2011)

- Dr. Henry Yin

UNC at Chapel Hill; Lab technician (2011-2013)

- Dr. Thomas Kash

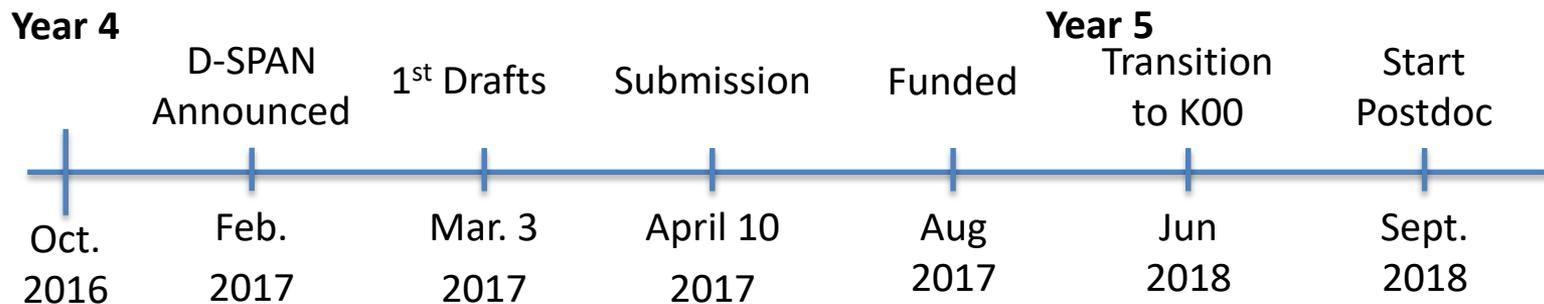
University of California, Irvine; Ph.D. (2013-2018)

- Dr. Marcelo Wood

Vanderbilt University; Post-doc (2018-Not Forever)

- Dr. Erin Calipari

D-SPAN Timeline (Cohort 1)



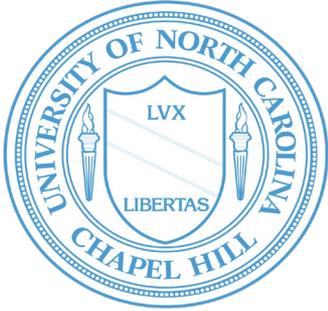
Preparing F99 – Specific Aim 1&2

Through all 3 Aims, development as a scientist and how you develop a project

Specific Aims 1&2:

- Not just the data, but emphasize the training and career development
- Specific Aim 2:
 - Be realistic in what you need to accomplish it in the timeline you propose
 - There will ALWAYS be one more question
 - What are the important questions in your dissertations left to answer?
 - What training do you have left?

Specific Aim 3: Identify Your Needs



- Basic behavioral assays
- Circuit manipulations (optogenetics, DREADDs)



- Addiction-specific behaviors (CPP, sensitization)
- Complex molecular assays (qPCR, FACS, ChIP, cloning)

Major research question:

Epigenetic mechanisms that control circuit function in substance use disorder

Needs in postdoctoral training:

Stronger behavioral models (self-administration)

In-vivo circuit monitoring (FSCV, fiber photometry)

Take home messages

- Use each aspect of application to demonstrate your development
 - Including reference letters
- Take a step back and evaluate career goals and best route to get there
- Give yourself time to write (and to take a break from writing)

Always be willing to reach out to D-SPAN fellows!

Q & A

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Michelle
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