LIBR
Laureate Institute for Brain Research

THE UNIVERSITY of TULSA

K Club, Week 6

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Today's Topics




- Co-Mentors
- Career Development/ Training Plan
- Affirmations
- Action Items

K Application Sections

Research

- **Specific Aims** (1 page)
- **Research Strategy** (6 pages: **Significance, Innovation, Approach**)
- **Training in Responsible Conduct of Research** (1 page)
- **Project Summary / Abstract** (30 lines of text)
- **Project Narrative** (3 sentences)
- **Protection of Human Subjects from Research Risk**
- **Inclusion of Women and Minorities**
- **Inclusion of Individuals Across the Lifespan**
- **Inclusion Enrollment Report**
- **Budget + Budget Justification**
- **Bibliography + References Cited**

Career

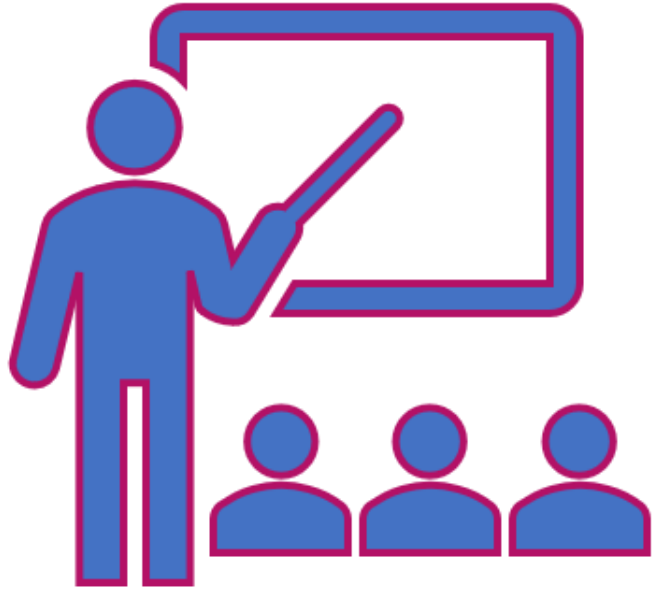
- **Candidate Information and Goals for Career Development** (6 pages: **Candidate Background, Career Goals/Objectives, Career Development/Training Plan**)
- **Plans and Statements of Mentor and Co-Mentors** (6 pages)
- **NIH Biosketches** for you, Mentor, Co-Mentors (max 5 pages each)
- **Three Letters of Reference**
- **Letters of Support from Collaborators, Contributors and Consultants** (6 pages max)
- **Cover Letter**

Setting

- **Facilities and Other Resources**
- **Equipment**
- **Environment and Institutional Commitment to Candidate**
- **Resource Sharing Plan**

Co-Mentors

- If you haven't already, now is a GREAT time to finalize, with your **Primary Mentor**'s input, who else you will ask to be on your K **Mentorship Team**
- Just a reminder that you want to find 2-3 **Co-Mentors** who:
  - Have success in getting grants and mentoring students
  - Do research on a topic or using a method that will help you gain independence from your **Primary Mentor**'s research that will help you transition to an Independent Investigator
- You want to send these people your **Specific Aims** page and your **NIH Biosketch** and ask them if they would be willing to serve as a K **Co-Mentor**
  - If they say yes, ask them for a copy of their current CV, which will help you write your **Career Development/Training Plan** section that we are discussing today



Candidate Information and Goals for Career Development
(6 pages total)

Candidate Background

Where did you come from and where do you want to go?

Career Goals and Objectives

Address new knowledge you will gain;
Address what skills in communication, leadership, lab management, grant-writing, research, and productivity you will learn

Career Development / Training Plan

Give details on what specific activities you will do and when to achieve your goals above;
Present a timeline for goal completion

Career Development/ Training Plan

- Old wedding mantra

- Old: What your past will contribute to the grant
- New: What you will learn
- Borrowed: What you will get from **Mentors**
- Blue: What creative/novel element you will add

Career Development/Training Plan

- Outline your four goals (K99 research, K99 training, R00 research, R00 training) and how you plan to meet these goals through:
  - Didactics and Mentorship
    - Didactics = instruction
  - Coursework (classes) – add class names and numbers
  - Present a detailed timeline of all activities you will complete in five years (Table 1)

- Mentors: Who are they, their experience in mentoring and getting grant funding, and how they will help you

- Evaluation of Progress: How will this happen? Who is in charge of this?

Career Development/Training Plan

- Outline your four goals (K99 research, K99 training, R00 research, R00 training) and how you plan to meet these goals through:
  - Didactics and Mentorship
  - Coursework (classes) – add class names and numbers
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- Evaluation of Progress: How will this happen? Who is in charge of this?

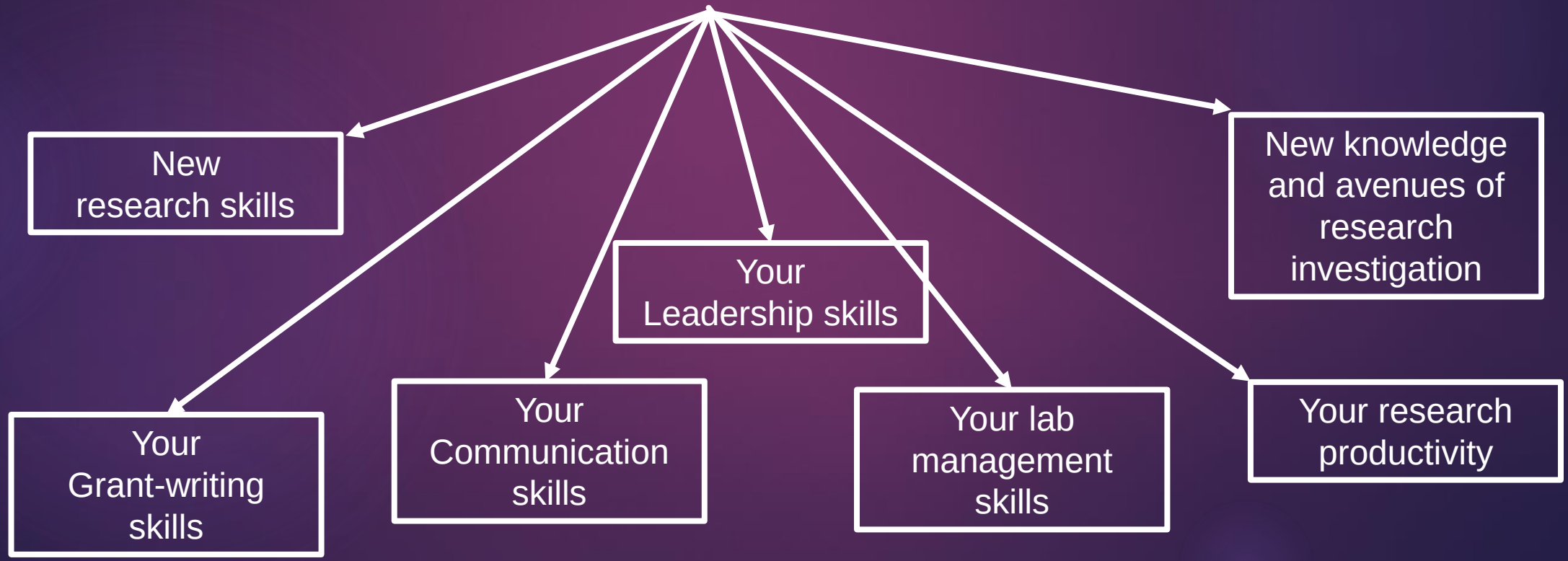
Career Development / Training Plan

Propose specific activities you will do in support of short-term K99/R00 goals

Think about the timing of these activities!

It might be helpful to brainstorm ideas for each box on a piece of paper!

How will these activities enhance:



EXAMPLE

Propose specific activities you will do in support of short-term K99/R00 goals

Goal 1, K99 research: Develop new knowledge
Goal 2, K99 training: Build communication and time-management skills, get Asst. Professor position
Goal 3, R00 research: Develop new knowledge and research skills, get pilot data and submit R01 appl.
Goal 4, R00 training: Build lab management/leadership skills, enhance grant-writing skills

New research skills

- EEG advanced data analysis workshops
- Setting up own EEG lab
- Developing IRB protocol for EEG study
- Attend EEG boot camp
- R Studio statistics tutorials

Your Communication skills

- Meetings with LIBR visiting scientists
- Meetings with Mentors
- Post-doc meeting
- Practice job talks
- SOBP mentor program and conference talk
- Teaching seminar

Your Grant-writing skills

- NIH R01 grant writing workshop
- Writing and submitting R01 application

Your research productivity

- Time management workshop

Your Leadership skills

Your lab management skills

- Diversity seminar
- Cultural competence training
- Developing RA training protocols for data collection, processing and analysis

New knowledge (and avenues of research investigation)

- Read lit on EEG/fMRI cannabis use disorder across the lifespan
- Courses on developmental psychology, aging, ethics, and advanced statistics
- Addiction seminar
- LIBR WKW, T1000, visiting scientist talks
- LPCH Grand Rounds

Then reorganize all this info into paragraphs!

- P1: Goal 1, K99 research: Develop new knowledge
  - Explain relevant activities to achieve goal = who, what, where, when
  - Two subheadings: (1) Didactics and Mentorship; (2) Coursework
- P2: Goal 2, K99 training: Build communication and time-management skills to obtain Asst. Professor Position
  - Explain relevant activities to achieve goal = who, what, where, when
  - Two subheadings: (1) Didactics and Mentorship; (2) Coursework
- P3: Goal 3, R00 research: Develop new knowledge and research skills, get pilot data for R01 and submit R01
  - Explain relevant activities to achieve goal = who, what, where, when
  - Two subheadings: (1) Didactics and Mentorship; (2) Coursework
- P4: Goal 4, R00 training: Build lab management/leadership skills, enhance grant-writing skills
  - Explain relevant activities to achieve goal = who, what, where, when
  - Two subheadings: (1) Didactics and Mentorship; (2) Coursework

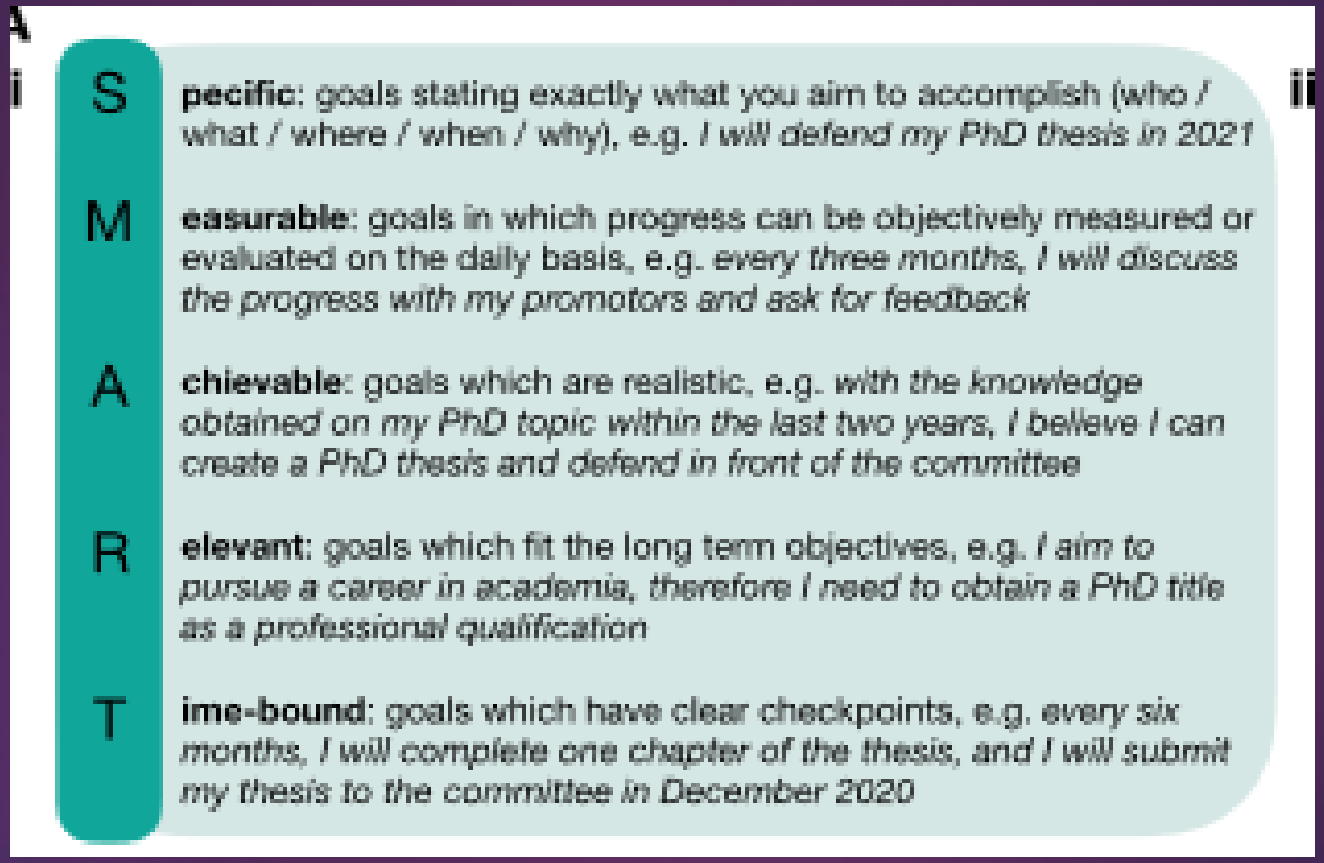
Activities:
Think Outside the Box!

- Search online for:
  - Conference/Organization mentorship programs
  - Statistics, Neuroscience, Teaching, Leadership, and Time-Management workshops
  - Potential classes you can audit from nearby universities, and write down their course #s
  - Potential online courses from other universities
  - Training boot camps you could attend
  - Ask other post-docs, colleagues, and Mentorship Team for ideas after you've looked around

Training Activities at LIBR

- Tulsa 1000 talks
- William K Warren (WKW) Neuroscience Lectures
- Brown Bag talks
- Visiting Scientist talks
- Our Post-Doc (Career Development) Meetings
- Meetings with Visiting Scientists/WKW Speakers
- R Studio statistics tutorials
- Psychiatric Hospital Grand Rounds
- Virtual ABCD meetings with other study sites
- K Club – you can help mentor post-docs taking this class next time
- AFNI Bootcamp

Be S-M-A-R-T about your Goals!



Next create a timeline (Table 1) with all the activities to set clear milestones for goal achievement!

Year 1 (K99)		Year 2 (K99)		Year 3 (R00)		Year 4 (R00)		Year 5 (R00)	
Jan-June	July-Dec								
fMRI project secondary data analysis; Enroll in SOBP mentee program	fMRI project manuscript writing; SOBP conference abstract submitted								
Psychology of aging class	Developmental psychology class								
Ethics class	Advanced statistics class								

Next create a timeline (Table 1) with all the activities to set clear milestones for goal achievement!

Year 1 (K99)		Year 2 (K99)		Year 3 (R00)		Year 4 (R00)		Year 5 (R00)	
Jan-June	July-Dec	Jan-June	July-Dec						
fMRI project secondary data analysis; Enroll in SOBP mentee program	fMRI project manuscript writing; SOBP conference abstract submitted	fMRI project manuscript submitted; SOBP conference talk	Practice job talk; Create job application materials; On job market for Assistant Professor positions						
Psychology of aging class	Developmental psychology class	Addictions seminar; Diversity seminar	Addictions Seminar; Cultural Competence training						
Ethics class	Advanced statistics class	Teaching seminar; Time management workshop	Advanced EEG data analysis workshop Pt1						

Next create a timeline (Table 1) with all the activities to set clear milestones for goal achievement!

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Jan-June	July-Dec	Jan-June	July-Dec	Jan-June	July-Dec				
fMRI project secondary data analysis; Enroll in SOBP mentee program	fMRI project manuscript writing; SOBP conference abstract submitted	fMRI project manuscript submitted; SOBP conference talk	Practice job talk; Create job application materials; On job market for Assistant Professor positions	Purchase/test EEG lab equipment; pilot test stress paradigms, assemble study materials	Start Assistant Professor position; Recruit and train RAs; Ensure IRB approval				
Psychology of aging class	Developmental psychology class	Addictions seminar; Diversity seminar	Addictions Seminar; Cultural Competence training	Develop EEG project protocol; Attend EEG Bootcamp	Begin EEG project, recruitment goal = 8 subjects/mo.				
Ethics class	Advanced statistics class	Teaching seminar; Time management workshop	Advanced EEG data analysis workshop Pt1	Advanced EEG data analysis workshop Pt2	Develop EEG data preprocessing pipeline				

Next create a timeline (Table 1) with all the activities to set clear milestones for goal achievement!

Year 1 (K99)		Year 2 (K99)		Year 3 (R00)		Year 4 (R00)		Year 5 (R00)	
Jan-June	July-Dec	Jan-June	July-Dec	Jan-June	July-Dec	Jan-June	July-Dec		
fMRI project secondary data analysis; Enroll in SOBP mentee program	fMRI project manuscript writing; SOBP conference abstract submitted	fMRI project manuscript submitted; SOBP conference talk	Practice job talk; Create job application materials; On job market for Assistant Professor positions	Purchase/test EEG lab equipment; pilot test stress paradigms, assemble study materials	Start Assistant Professor position; Recruit and train RAs; Ensure IRB approval	Continue EEG study, recruitment goal = 8 subjects/mo.	Complete EEG study, recruitment goal = 8 subjects/mo.		
Psychology of aging class	Developmental psychology class	Addictions seminar; Diversity seminar	Addictions Seminar; Cultural Competence training	Develop EEG project protocol; Attend EEG Bootcamp	Begin EEG project, recruitment goal = 8 subjects/mo.	Train RAs to implement EEG data preprocessing	EEG data preprocessing		
Ethics class	Advanced statistics class	Teaching seminar; Time management workshop	Advanced EEG data analysis workshop Pt1	Advanced EEG data analysis workshop Pt2	Develop EEG data preprocessing pipeline	Write EEG Introduction/ Methods section of manuscript	EEG/other data quality checks		

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Jan-June	July-Dec	Jan-June	July-Dec	Jan-June	July-Dec	Jan-June	July-Dec	Jan-June	July-Dec
fMRI project secondary data analysis; Enroll in SOBP mentee program	fMRI project manuscript writing; SOBP conference abstract submitted	fMRI project manuscript submitted; SOBP conference talk	Practice job talk; Create job application materials; On job market for Assistant Professor positions	Purchase/test EEG lab equipment; pilot test stress paradigms, assemble study materials	Start Assistant Professor position; Recruit and train RAs; Ensure IRB approval	Continue EEG study, recruitment goal = 8 subjects/mo.	Complete EEG study, recruitment goal = 8 subjects/mo.	EEG project data analysis; Write EEG Results/Discussion, submit manuscript	Revise and resubmit EEG manuscript to journal
Psychology of aging class	Developmental psychology class	Addictions seminar; Diversity seminar	Addictions Seminar; Cultural Competence training	Develop EEG project protocol; Attend EEG Bootcamp	Begin EEG project, recruitment goal = 8 subjects/mo.	Train RAs to implement EEG data preprocessing	EEG data preprocessing	NIH R01 grant writing workshop	Present conference talk on EEG results
Ethics class	Advanced statistics class	Teaching seminar; Time management workshop	Advanced EEG data analysis workshop Pt1	Advanced EEG data analysis workshop Pt2	Develop EEG data preprocessing pipeline	Write EEG Introduction/ Methods section of manuscript	EEG/other data quality checks	Use EEG results as pilot data for R01 grant; Submit R01 application	Revise and Resubmit R01 application

Other Ongoing Training Activities:

WKW Talks
LIBR Talks/Meetings with Visiting Scientists
Post-Doc Meetings
LIBR Brown Bag Talks
LIBR Tulsa 1000 Talks
R Studio Statistics Tutorials
LPCH Grand Rounds

Be as specific as possible with course #s and workshop titles etc.

You can break things up into Didactics, Course, and Other for each year if this works for you {example: Robin Aupperle}

Table 1. Timeline of Career Development Activities (bracketed numbers refer to training goals)

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
DIDACTICS	-Multilevel Analyses (Paulus; Abelson) [1] -Treatment for Affective Dimensions (Craske) [2]	-Multilevel Analyses (Paulus; Abelson) [1] -Treatment for Affective Dimensions (Craske) [2]	-Individual Prediction (Paulus) [1] -Treatment for Affective Dimensions (Craske) [2]	-Individual Prediction (Paulus) [1] -Simultaneous EEG/fMRI [3]	-Individual Prediction (Paulus) [1] -Simultaneous EEG/fMRI [3]
	Throughout the award, visit each of Drs. Craske and Abelson's labs annually Didactic "Behavioral Outcome Research" with Dr. Craske monthly Meet with statistician, Dr. Thompson, at LIBR six times/year William K. Warren Frontiers in Neuroscience lectures, monthly				
COURSES	-CS4643 Bioinformatics [1] -BIOM6662: Research Ethics [4]	-Latent Class Analysis [1] -Behavioral Clinical Trials [2]	-CS5863 Neuroinformatics [1] -NIMH grant writing workshop [4]	-EEGLAB [3] -Bayesian Methods [1]	-EEGLAB [3]
	OU School of Community Medicine Bioethics Roundtable [4] CITI Social and Behavioral Responsible Conduct of Research and for Biomedical Sciences [4]				
OTHER	-Archival analyses of Dr. Paulus's fMRI data [1; 2] -Publish review paper [2]	-Archival analyses of Dr. Craske's data [1; 2]	-NIH Early Career Reviewer Program [4]	-Archival analyses of EEG/fMRI data [3] --Analyses of data from K23 project [4] -submit R01 [4]	--Analyses of data from K23 project [4] -submit revised R01
	Throughout award, will be preparing and submitting publications based on archival analyses and previously collected data. Attend ADAA, ABCT, and ACNP, as relevant and meet with co-mentors [4] ADAA Mentoring Program Committee [4]				

Career Development/Training Plan

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  - Didactics and Mentorship
  - Coursework (classes) – add class names and numbers
  - Present a detailed timeline of all activities you will complete in five years (Table 1)

- Mentors: Who are they, **their experience in mentoring and getting grant funding,** and how they will help you

- Evaluation of Progress: How will this happen? Who is in charge of this?

Mentors Paragraph - Example

- "I have assembled a team of mentors who are **uniquely suited to my training goals** and who **have substantial experience in maintaining productive research careers**."
- Primary Mentor
  - Professor at X University, office on same floor
  - Internationally renowned expert in psychiatric neuroimaging, with >250 publications and 8 years of continuous NIH funding
  - Has a strong record of mentorship, serving as mentor for 5 career development awardees [say names and grant #s]
- Co-Mentor #1
  - Director of X University's Substance Use Disorders clinic (strong emphasis on cannabis)
  - >50 publications
  - Impressive record of mentorship
    - Mentor for six career development mentees [say names and grant #'s] and 20 pre- and post-doc mentees
    - Previously Director of Clinical Training for University X's Clinical Psychology PhD program
    - Earned CTSA Mentoring Award

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- Evaluation of Progress: How will this happen? Who is in charge of this?

Evaluation of Progress

- Who is in charge of the **Mentorship Team**?
- What are the overall benchmarks of success for my research and training activities?
- Who is responsible for checking off accomplishments, dates of progress, and helping you problem-solve any issues that arise?
- How often will your mentorship team meet with you all together to review progress?

Evaluation of Progress - Example

- “My Primary Mentor will help ensure that the mentorship team, while located in different institutions, is well integrated and informed, and working effectively to support my research and training.

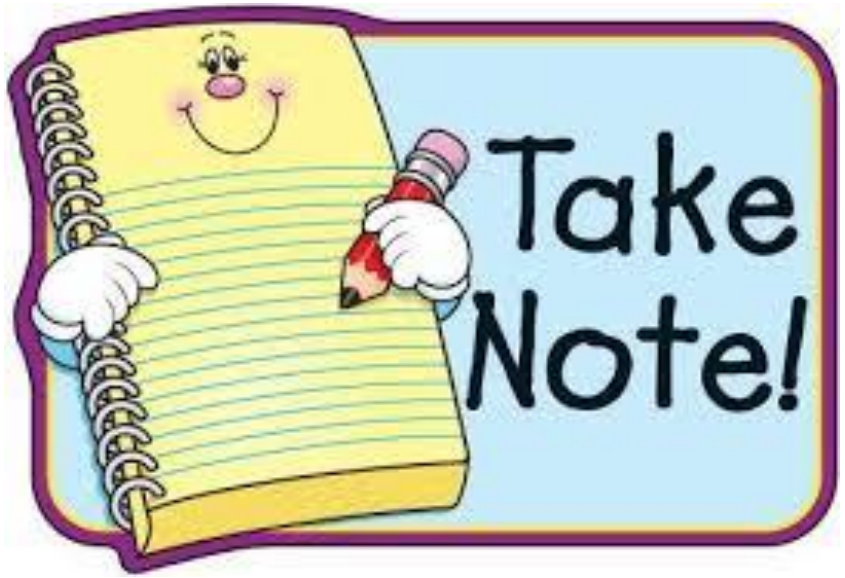
- I will work with my Primary Mentor and Co-Mentors to establish benchmarks of success for my research and training activities, which will include
  - (1) benchmarks for subject enrollment and completion (Years 1-5)
  - (2) expected completion dates of coursework and didactics (Years 1-5)
  - (3) progress in analysis and publication of archival fMRI data (Years 1-4)
  - (4) progress in analyses and publication of data from the proposed research (Years 4-5)
  - (5) progress in preparing and submitting an independent investigator (e.g., R01) award (Years 4-5).

- My Primary Mentor will be responsible for checking off accomplishments and date of progress and ensuring that I am receiving the help needed to solve problems and accomplish the goals of this application.

- The entire Mentorship Team will hold a videoconference every 3 months to discuss my progress and to provide solutions to difficulties that may arise.”

Important to Note

- The cost for classes, trainings, and conferences mentioned in your **Career Development/Training Plan** will need to be included in your **Budget**
- Whatever you say that your **Primary Mentor** and **Co-Mentors** will do to help you in your **Career Development/Training Plan** needs to match what is written in the **Plans and Statements of Mentor and Co-Mentors**
- We will tackle these sections next week!



Affirmations

- You got this!
- This K application process involves a lot of planning, flexibility, diligence, and patience
- Your frontal lobes will probably get worn out, so try to reward yourself for daily accomplishments and take breaks to avoid burnout!
- Submitting a K application is an important success in and of itself! It can be helpful to remind yourself how much you are learning from this process
- Your **Research Strategy** and **Candidate Information and Goals for Career Development** subsections will need to be revised multiple times, so get ready for that!
- Discuss with your **Primary Mentor** when to send these documents to **Co-Mentors**, and do not be afraid to ask **Co-Mentors** to provide feedback within a reasonable timeframe (e.g., 2 weeks)

Action Items

- Revise your **Candidate Background** and **Career Goals and Objectives** sections based on **Primary Mentor** feedback
- Write a draft of your **Career Development/Training Plan** and get feedback from your **Primary Mentor**