

Career Development Plans

Background:

- who you are
- why your interested in this research area

Overall goals

- short term
- long term
- help the review see you in 5-10 years

CAREER GOALS & OBJECTIVES: EXAMPLE 1

Career Goals and Objectives

I have pursued extensive clinical training in the biomedical approach to HIV and chronic pain. My K12 has focused on psychometrics and qualitative methods. However, I have insufficient training to become an independent investigator. My specific goals and objectives are:

1. My long-term goal is to become an independent investigator focusing on improving pain, physical, and emotional function in HIV-infected patients with chronic pain. *I will accomplish this by developing and testing behavioral interventions in this area, including conducting behavioral clinical trials.*
2. The focus of my K23 is to develop and test a behavioral intervention for HIV-infected patients with chronic pain. *Given this focus, I will develop expertise in health psychology/mental health and chronic pain behavioral intervention development and testing, including behavioral clinical trials, obtaining a Master of Science in Public Health (MSPH) in Health Behavior.*
3. *At the beginning of the 4th year of my K23, I will submit an R01 to assess the efficacy of the intervention in a national CNICS-wide randomized controlled trial (RCT).*

Here, I propose a comprehensive research and career development plan that directly addresses these goals and objectives. The support provided by a K23 and the opportunities for research and training it affords will prepare me to be an independent investigator and compete successfully for an R01.

Introduce the Mentorship team

Advisory panel if applicable

Didactics

- Formal (be specific)
- Informal (seminars coursework)

Leadership training

Local & National meetings

- committees
- Other experiences

Time commitments (make sure to do the math)

TABLE EXAMPLES: EXAMPLE 1

Table 1: Research and Career Development Timeline and Benchmarks

Activities by month	1-6	7-12	13-18	19-24	25-30	31-36	37-42	43-48
<i>Aim 1 (Development)</i>								
<i>Aim 2 (Pilot RCT)</i>								
<i>Apply for R01</i>								
<i>Manuscript submission</i>								
Mentorship Team, area of expertise, and meeting frequency	<ul style="list-style-type: none"> • Primary mentor, conduct of clinical trials in CNICS: Michael Saag MD; weekly • Health psychology/mental health: Mallory Johnson, PhD; monthly • Chronic pain behavioral Intervention development/testing: Robert Kerns, PhD; monthly (includes joint quarterly mentor team meetings) 							
Advisors, area of expertise, and meeting frequency	<ul style="list-style-type: none"> • Intervention mapping: Susan Davies PhD; monthly • SCAMP: Matthew Bair MD MSc; monthly • Substance use: Stefan Kertesz MD, MSc; monthly • Extending chronic pain expertise: Burel Goodin PhD; monthly (includes joint meetings with mentors as needed) 							
Coursework	HB 636, PY 740 GRD 717*	HB 624 PY 731 Hopkins**	HB 698	BST 625 PY 769 NIH**	PY 791	EPI 703		
Hands on training	<ul style="list-style-type: none"> • Review of difficult cases, clinical supervision, and shadowing with Dr. Goodin • Annual 2 week visits to PRIME (Integrated Pain Clinic, Pain Rehab School, Opioid Clinic, SCID) 							
Seminars	<ul style="list-style-type: none"> • HIV: Weekly 1917 Clinic Cohort and monthly CFAR seminars; weekly ID conferences • Chronic pain: Monthly Palliative Care Center Scholars meeting • Methods: COERE-monthly; CCTS (grant writing)-monthly 							
Conferences	HIV: IAPAC, CNICS Health Psychology/Mental Health: SBM, APS1 Pain: APS2 Substance Abuse: CPDD							

*Principles of Scientific Integrity; see Responsible Conduct of Research section. **Summer intensive courses, see below.

EXAMPLE 2

Name	Expertise	Role on Project	Regular Meetings
Monica Baskin, PhD	Psychology, recruitment /retention of minorities, health disparities, social determinants of health, team science	Primary Mentor	Bi-weekly
Upendar Manne, PhD	CRC, racial health disparities, pathology	Co-Mentor	Monthly
Elissa Epel, PhD	Psychology, social and psychobiological stress mechanisms	Contributing Team Member	Bi-annually
Casey Morrow, PhD	Microbiology, bio-specimen collection, microbiome analysis and interpretation	Collaborator; provide training opportunity (objective 2)	Monthly years 2-5
Elliot Lefkowitz, PhD	Bioinformatics and computational tools	Collaborator; provide training opportunity (objective 2)	Bi-weekly years 4-5
Jamie Cannon, MD	GI oncology	Collaborator; provide training opportunity (objective 1)	Monthly years 1-2 Quarterly years 4-5
Stephen Sodeke, PhD	Bioethics	Collaborator; provide training opportunity (objective 1)	Bi-annually
Gary Cutter, PhD	Biostatistics	Collaborator	Monthly years 4-5

EXAMPLE 2

Table 2: Timeline of complementary research and training objectives

Year	Activity	Q1 (July-Sept)	Q2 (Oct-Dec)	Q3 (Jan-Mar)	Q4 (Apr-June)
2015-2016 (Yr 1)	Research (60%)	Prepare for study start-up (e.g., IRB approval, establish protocols, hire staff, finalize logistics)		Begin recruiting participants (cases and controls), data collection and entry, bio-specimen analysis	
	Training (40%)	-Sodeke: bio-ethics -IRB: bio-ethics -Cannon: GI oncology -professional seminars	- Review bio-ethics materials from UAB/TU - AACR Cancer Health Disparities Conference -Cannon: GI oncology -professional seminars	- Georgetown University Bio-ethics -Sodeke: bio-ethics -Cannon: GI oncology -professional seminars	-Graduate Biomedical Sciences Bioethics core course -professional seminars
2016-2017 (Yr 2)	Research (60%)	Ongoing recruitment of participants (cases and controls), data collection and entry, bio-specimen analysis			
	Training (40%)	-EPI 713 -Sodeke: bio-ethics -professional seminars -Omics workshops/seminars -Cannon: GI oncology	-COALESCE course -AACR Disparities Conference -professional seminars -Omics workshops/seminars -Cannon: GI oncology	-BST 680 -GBS 746-VT -professional seminars -Society of Behavioral Medicine (SBM) Annual Meeting -Cannon: GI oncology	-BST 680 -GBS 746-VT -Sodeke: bio-ethics -professional seminars -Omics workshops/seminars -Cannon: GI oncology
2017-2018 (Yr 3)	Research (70%)	Ongoing recruitment of participants (cases and controls), data collection and entry, bio-specimen analysis			
	Training (30%)	-professional seminars -Omics workshops/seminars	-AACR Cancer Health Disparities Conference - Sodeke: bio-ethics -professional seminars- - Omics workshops/seminars	-Bioconductor course -professional seminars - Omics workshops/seminars	-Epel Lab visit -Sodeke: bio-ethics -Experimental Biology (EB) Annual Meeting -professional seminars
2018-2019 (Yr 4)	Research (70%)	Ongoing recruitment of participants (cases and controls), data collection and entry, bio-specimen analysis			
	Training (30%)	-Lefkowitz: bioinformatics -Cannon: GI oncology -professional seminars	-Lefkowitz: bioinformatics -Sodeke: bio-ethics -Cannon: GI oncology -professional seminars	-Lefkowitz: bioinformatics -Cannon: GI oncology -EB or SBM annual meeting -professional seminars	-Lefkowitz: bioinformatics -Sodeke bio-ethics -Cannon: GI oncology -professional seminars
2019-2020 (Yr 5)	Research (80%)	Analyze data, prepare and submit abstracts for meetings of professional societies, prepare and submit manuscripts for Specific Aims 1-3, prepare/submit grant application based on study finding			
	Training (20%)	-Hands-on training and analysis with Lefkowitz -Cannon: GI oncology -professional seminars	-Hands-on training and analysis with Lefkowitz -Cannon: GI oncology -AACR Disparities Conference -APHA annual meeting	-Hands-on training and analysis with Lefkowitz -Cannon: GI oncology -professional seminars	-Hands-on training and analysis with Lefkowitz -Cannon: GI oncology

EXAMPLE 3

Table 1. Comprehensive Training Plan for the Career Development Award Period.

Activity	Description	Location
1. Analysis of Next-Generation Sequencing Data		
Introduction to Scientific Computing (CB2-101)	This course lays the foundation for big data analysis, ensuring proficiency with Linux, Python, R, and Bioconductor. CB2-101 is a prerequisite for other bioinformatics and computational biology offerings included in this proposal: CB2-201 and GBS787.	UAB
Computational Genomics (GBS 787)	This course provides hands-on training in computational skills required to perform sequence analysis, with emphasis on high-throughput data.	UAB
Computational Biology and Bioinformatics (CB2-201)	This two-week 'immersive learning' opportunity offers hands-on training on a variety of computational tools (e.g. BLAST, IGV, RSEM, Samtools) in the next generation sequencing context.	UAB
Hands-on Training with Dr. Gonçalo Abecasis	I will spend 2 weeks working with Dr. Abecasis, who heads the Informatics Research Center for NHLBI-WGS-TOPMed, to master the specific challenges of analyzing TOPMed data.	University of Michigan
2. Lipid Metabolism in Cardiovascular Disease		
Advanced Special Topics Course in Metabolomics (GBSC 724)	Applying the -omics framework to lipids and other metabolites, this course covers biological and statistical approaches to small molecule phenotypes.	UAB
Lipid Lovers Journal Club	This is a monthly forum for discussion of noteworthy scientific reports related to lipids in biology and disease.	UAB
3. Statistical and Bioinformatic Methods for Integrating -Omics Layers		
Introduction to Integrative -Omics	This is a unique week-long course on best practices for integrating -omics layers and the capstone of my proposed training. Upon completion, I will be able to apply cutting-edge approaches to big data synthesis, analysis, and visualization.	European Bioinformatics Institute*
Genomic Epidemiology Analysis Group Meetings	This group, including Drs. Hemant Tiwari (statistical genetics), Dr. Degui Zhu (bioinformatics), and Dr. Donna Arnett (genetic epidemiology) meets biweekly to discuss ongoing analyses of multiple -omics layers available in GOLDN.	UAB; Dr. Arnett attends by Skype
Journal Clubs: 1) Section on Statistical Genetics and 2) Computational Biology and Bioinformatics	These seminars offer methods-focused lectures, discussions, and hands-on tutorial sessions on a wide range of analytic topics, including integrative -omics analysis.	UAB

*If a similar course with an integrative -omics curriculum becomes available within United States during the award period, I will choose it instead of this offering.

EXAMPLE 3

Table 2. Timeline for Training and Research Activities (Excluding Regular Meetings and Seminars).

Year	July-Sept	Oct-Dec	Jan-Mar	Apr-Jun
1 2017-2018	South East Lipid Research Conference Hands-on training with Dr. Abecasis Aim 1 data acquisition and discovery analysis	ASHG meeting CB2-101 Aim 1 discovery analysis Write and submit review article/book chapter	CB2-201 TOPMed meeting Start Aim 3 bisulfite sequencing Aim 1 discovery analysis Revise and resubmit review article/book chapter	GBS 787 Aim 1 replication analysis
2 2018-2019	South East Lipid Research Conference Aim 1 prepare abstract and manuscript Aim 2 data analysis	ASHG meeting Aim 1 finalize manuscript Aim 2 data analysis Write and submit review article/book chapter	GBSC 724 TOPMed meeting Aim 2 data analysis Aim 1 submit manuscript Revise and resubmit review article/book chapter	Integrative –Omics Course Aim 1 revise & resubmit manuscript Aims 2 data analysis
3 2019-2020 (Also in year 3: <i>K awardee meeting</i>)	South East Lipid Research Conference Aim 2 prepare abstract and manuscript Complete Aim 3 bisulfite sequencing Aim 3 data analysis	ASHG meeting Aim 3 data analysis Aim 2 finalize manuscript Write and submit review article/book chapter	TOPMed meeting Aim 2 submit manuscript Aim 3 finalize manuscript Revise and resubmit review article/book chapter	Aim 2 revise & resubmit manuscript Aim 3 submit manuscript Identify preliminary data for Ro1 application
4 2020-2021	South East Lipid Research Conference Aim 3 revise & resubmit manuscript Grant writing retreat Develop Ro1 application	ASHG meeting Submit Ro1 application	TOPMed meeting Identify alternative funding and prepare applications Receive Ro1 score Write and submit review article/book chapter	Develop Ro1 resubmission if necessary Revise and resubmit review article/book chapter

EXAMPLE 4

Table 4. Integrated timeline for career development plan and research activities

Year	Career development activities	Research activities
1 st	<ul style="list-style-type: none"> - Coursework in epidemiology, fundamentals of clinical research, advanced statistical analysis, and responsible conduct of research - Attend weekly didactic research conferences: Nephrology Research and Training Center Seminars, Free Radical Biology Seminars, and Vascular Biology and Hypertension Seminars - Weekly meeting with Dr. Calhoun, monthly meetings with Drs. Allon and Patel, quarterly meetings with Drs. Agarwal and Cutter 	<ul style="list-style-type: none"> - Participant recruitment and data collection, including performing vascular function testing, for Aims 1 and 2. - Frommeyer Fellowship Manuscript submission
2 nd	<ul style="list-style-type: none"> - Attend weekly didactic research conferences: Nephrology Research and Training Center Seminars, Free Radical Biology Seminars, and Vascular Biology and Hypertension Seminars - Continue weekly meeting with primary mentor, monthly meetings with co-mentor, and quarterly meetings with collaborators. 	<ul style="list-style-type: none"> - Participant recruitment and data collection, including performing vascular function testing for all 3 Aims.
3 rd	<ul style="list-style-type: none"> - Attend weekly didactic research conferences: Nephrology Research and Training Center Seminars, Free Radical Biology Seminars, and Vascular Biology and Hypertension Seminars - Continue weekly meeting with primary mentor, monthly meetings with co-mentor, and quarterly meetings with collaborators - Presentation at UAB's Vascular Biology and Hypertension Seminars 	<ul style="list-style-type: none"> - Continued participant recruitment for all 3 Aims. - Preliminary data analysis - Abstracts submitted to national conferences
4 th	<ul style="list-style-type: none"> - Continue weekly meeting with primary mentor, monthly meetings with co-mentor, and quarterly meetings with collaborators - Attendance and presentation at ASN Kidney Week - Attendance and presentation at AHA Scientific Sessions - Attend weekly didactic research conferences: Nephrology Research and Training Center Seminars, Free Radical Biology Seminars, and Vascular Biology and Hypertension Seminars 	<ul style="list-style-type: none"> - Study completion of Aims 1 & 2. - Manuscript(s) for Aims 1 & 2 prepared - grant submission to the ASN – Carl Gottschalk award - Preparation and submission of an R01 Award
5 th	<ul style="list-style-type: none"> - Attendance and presentation at ASN Kidney Week - Attendance and presentation at AHA Scientific Sessions - Continue weekly meeting with primary mentor, monthly meetings with co-mentor, and quarterly meetings with collaborators 	<ul style="list-style-type: none"> - Study completion of Aim 3. - Manuscript for Aim 3 prepared -Revision and resubmission of R01 Award

EXAMPLE 5

Table 3 Career Goals & Activities

Career Development Plan					
Career Dev.	Year 1	Year 2	Year 3	Year 4	Year 5
Coursework & Didactics	<ul style="list-style-type: none"> ▪ Summer Institute on Behavioral RCTs* ▪ mHealth Training Institute* ▪ PROMISED Program ▪ MICHR Faculty Workshops 	<ul style="list-style-type: none"> ▪ Optimization of Behavioral & Biobehavioral Intervention* ▪ SI 724 ▪ MICHR Faculty Workshops 	<ul style="list-style-type: none"> ▪ Training Institute for Dissemination & Implementation Research in Health* ▪ LHS 621 ▪ MICHR Faculty Workshops 	<ul style="list-style-type: none"> ▪ MICHR Faculty Workshops <p>*NIH Sponsored</p>	<ul style="list-style-type: none"> ▪ MICHR Faculty Workshops
	UM Seminars: Cardiology GR (weekly), Vascular GR (weekly), Mixed-methods workshops (bimonthly), PIE Lab (monthly), MICHR Faculty Workshops, National Meeting for Implementation Research (annual)				
Research	-----Aim 1-----				
		-----Aim 2 -----			
			-----Aim 3-----		
				SMART Trial R01 Proposal	
Professional Development	National Meeting: ACC (annual), AHA (annual), SBM (annual), mHealth meetings 1/year (mHealth CTS, HIMSS, Medicine 2.0)				
	Advisors/Collaborators meetings frequency: Dr. Piette (monthly), Dr. Almirall (monthly), Dr. Sales (monthly), Dr. Clauw (monthly), Drs. Sen and Grossman (monthly)				
Mentees	2-3 primary mentees		2-3 primary mentees		1-2 primary mentees
Abbreviation Legend					
SI 724: Qualitative Methods LHS 621: Implementation Science in Health PROMISED: Professional Mentoring Skills Enhancing Diversity Program HIMSS=HealthCare Management Information Systems Society MICHR= Michigan Institute for Clinical & Health Research			UM=University of Michigan GR=Grand Rounds ACC=American College of Cardiology AHA=American Heart Association SBM=Society of Behavioral Medicine CTS=Clinical Trials Summit		

Critical components

Mentors experience in mentoring others

- Specific numbers and success of mentees

Research experience

- NIH funding
- Matches your needs

Personalized to you the candidate

Addresses your gaps

- Training gaps
- Publication gaps

Will commit the TIME to YOU