NIAMS opportunities for New Investigators and Trainees

Mary Garcia- Cazarin, Deputy Division Director,

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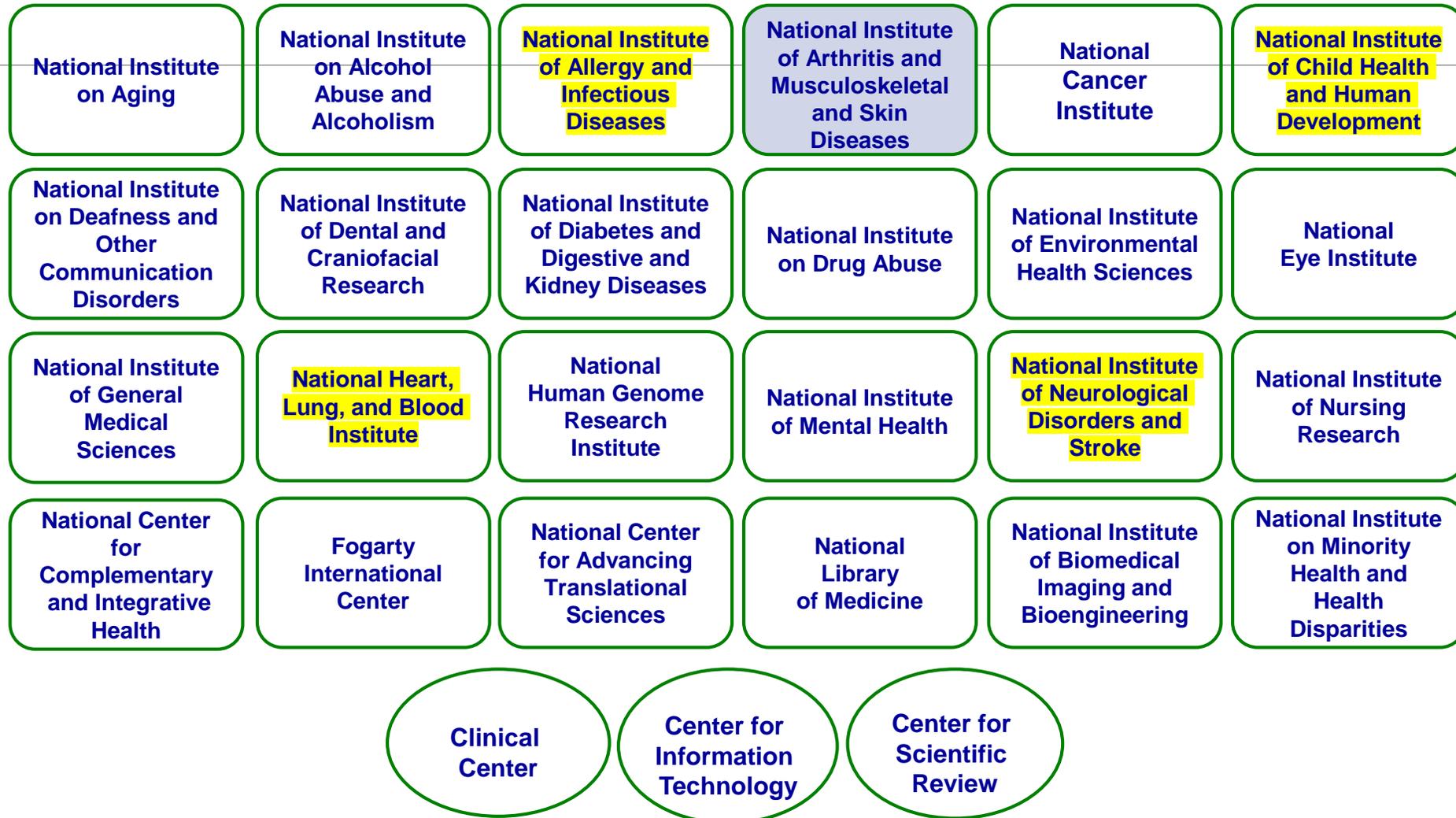
Division of Extramural Research,

National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)

National Institute of
Arthritis and Musculoskeletal
and Skin Diseases

Credit: Sarah Lipp, M.D./Ph.D. student at Purdue; and Sarah Calve, Ph.D., University of Colorado, Boulder.

National Institute of Arthritis, Musculoskeletal, and Skin Diseases

Support research into the causes, treatment, and prevention of arthritis and musculoskeletal and skin diseases;

- Autoinflammatory diseases
- Back pain
- Connective tissue diseases, such as Marfan syndrome
- Fibromyalgia
- Hair loss disorders, such as alopecia areata
- Lupus
- Muscular dystrophy

- Orthopaedic injuries and implants
- Osteoarthritis
- Osteoporosis
- Rheumatoid arthritis
- Scleroderma
- Skin diseases, such as psoriasis, eczema, and acne

NIH Research Training Website

https://researchtraining.nih.gov/

NIAMS Specific training website coming soon!

Intramural NIAMS

https://www.niams.nih.gov/labs/career-development-outreach

Also look at NIH's Office of Intramural Training and Education:

https://www.training.nih.gov/

Training and Career Development

We provide a genuine growth experience for our trainees that advances your independent research career, within and outside the NIH.

The NIAMS Intramural Research Program Career Development and Outreach Branch (CDOB), also known as the NIAMS Training Office, is responsible for managing and enriching the overall research training experience across all of our labs and services.

We assist in the application process — from identifying research laboratories with projects matching the interests of the candidate, arranging interviews with prospective preceptors, relocating and living in the Washington, DC area, and assisting with the transition into the Intramural Research Program. The Office develops educational curricula and training plans and assists fellows in a customized training program. Fellows seeking specialized sources of training are encouraged to contact office staff for assistance.

> Student Programs

> Postdoctoral Training

> Rheumatology Fellowship Training Program

> Scholars in Translational Research

> Tenure and Tenure Track Positions

InVTRO
A WINDOW INTO NIAMS
Summer Internship Program 2024
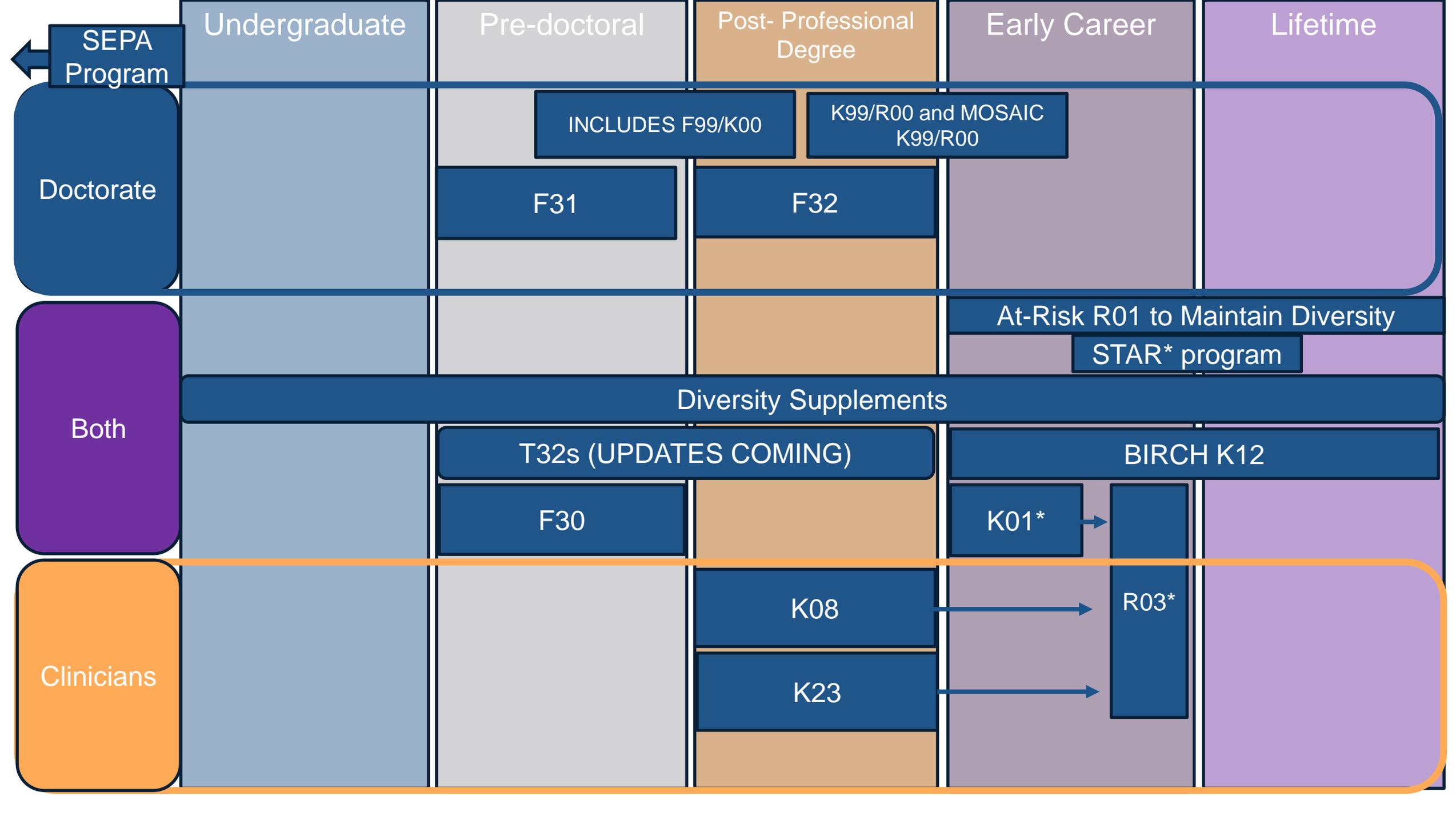
SEPA Program	Undergraduate	Pre-doctoral	Post-Professional Degree	Early Career	Lifetime
Doctorate		INCLUDES F99/K00		K99/R00 and MOSAIC K99/R00	
		F31	F32		
Both				At-Risk R01 to Maintain Diversity	
				STAR* program	
	Diversity Supplements				
		T32s (UPDATES COMING)		BIRCH K12	
		F30		K01* →	
Clinicians			K08	→	R03*
			K23	→	

Ruth L. Kirschstein National Research Service Awards (NRSA) Fellowships (F30, F31, F32, F99)

- Graduate through post graduate training years
- Applications can be submitted before entering the laboratory of mentor
- Must be a **citizen**, **non-citizen national**, or lawfully admitted for **permanent residence**.
- Opportunities in **basic** and **clinical** research.
  - **Does not allow** applicants to lead an independent clinical trial but **does allow** them to obtain clinical research experience in a trial led by a mentor or co-mentor

Individual **Ruth L. Kirschstein** NRSA: Fellowships

F30 Predoc	F31 Predoc	F32 Postdoc
• Support predocs during clinical & graduate training leading to a **combined** doctoral degree **(e.g., MD/PhD, DDS/PhD, DVM/PhD, AuD/PhD, DO/PhD)**	• **F31** supports **doctoral research candidates** who have identified a mentor & will be performing dissertation research	• Supports **mentored postdoctoral training** under the guidance of a faculty sponsor
• **At an institution that does not have an established MD/PhD program**	• All IC except NIGMS, NIBIB, Fogarty International Center (FIC) & NCATS support the F31.	• Fellows must have a research or clinical doctoral degree from an accredited US or foreign institution
• At least 50% of the award period must be devoted to full-time graduate research training leading to the research doctoral degree	• **Diversity F31**: supports individuals from diverse groups under-represented in the biomedical or behavioral sciences	• Integrated program of research & mentored training to enhance potential to develop into an independent researcher
• [Learn more](#)	• All IC except FIC & NCATS support the diversity F31	• All IC except NINDS, NLM, NCATS/ORIP & Fogarty support the parent F32.
	• Typical time to apply for an F31 is when a thesis proposal has been approved	• Currently limited to total of 3 years but extensions can be requested
	• [Learn more](#)	• [Learn more](#)

All fellowships require references –from individuals other than primary mentor(s)

National Institute of Arthritis and Musculoskeletal and Skin Diseases

Mentored Career Development awards "K-awards"

Please note that **not all ICs** participate in all K FOAs.
- Contact Program staff before beginning application

Goal is to prepare for independence

Training must be at a **domestic** institution.
- Must be a **citizen**, **non-citizen national**, or lawfully admitted for **permanent residence**.

Opportunities in **basic** and **clinical** research.
- Clinical Trials may be allowed

Provides support and "protected time" (3-5 years) for an intensive, supervised career development experience

Requires a minimum of **75% health-related research effort.**

Mentored Career Development Awards

Grants provide support for "protected time" (3-5 years) for an intensive, **mentored** career development experience to facilitate launch of independent research careers and enhance competitiveness for new research project grant (R01)

K01 Mentored Research Scientist Development Award
- For investigators in the biomedical, behavioral or clinical sciences to supports intensive research career development under the mentorship of an established researcher.

K08 Mentored Clinical Scientist Research Career Development Award
- for individuals with a clinical doctoral degree to support an intensive, mentored research career development experience in the fields of biomedical and behavioral research, including translational research.

K23 Mentored Patient-Oriented Research Career Development Award
- For investigators seeking to focus on Patient-Oriented research, i.e., "research conducted with human subjects (or on material of human origin including cognitive phenomena) for which an investigator directly interacts with human subjects."

K25 Mentored Quantitative Research Development Award
- For investigators from quantitative science and engineering research backgrounds seeking to to integrate their expertise with NIH-relevant research.

K24* Midcareer Investigator Award in Patient-Oriented Research: For mid-career clinician scientists who act as mentors to allow them more time to perform research away from their clinical duties. If you know a PI like that, let them know!

http://grants.nih.gov/training/careerdevelopmentawards.htm

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NIAMS Participation in Mentored K Career Development Awards (CDAs)

K01
- Independent Clinical Trial **Not Allowed**
- Independent Clinical Trial **Required**

K08
- Independent Clinical Trial **Not Allowed**

K23
- Independent Clinical Trial **Not Allowed**
- Independent Clinical Trial **Required**

K25
- Independent Clinical Trial **Not Allowed**

K99/R00
- Independent Clinical Trial **Not Allowed**
- Independent Clinical Trial **Required**
- Maximizing Opportunities for Scientific and Academic Independent Careers (MOSAIC) Clinical Trial **Not Allowed**
- HEAL Initiative: K99/R00

Pathway to Independence Award

> **K99/R00:** Goal to facilitate *transition* from a mentored postdoctoral research position to an independent research position with ***independent NIH research support*** at an earlier stage than the current norm

Supports protected time (75%) in 2 distinct phases:

K99 – Phase 1- 2 years

- Mentored: must be affiliated with an institution
- Within 4 years of attaining PhD or completing clinical training
- 2007 awardees: 94.7% transition to R00; 2014 awardees 87.6% transition to R00.

R00 – Phase 2 (3 years)

- Independent (tenure-track or equivalent),own lab limited teaching and/or clinical responsibilities to assist pathway to next independent award.
- 'Quality' of tenure-track offer administratively reviewed by NIH staff before R00 awarded

No U.S. citizenship requirement for applicants to the **parent K99 (**PA-20-188; PA-20-187; PA-20-189)

Maximizing Opportunities for Scientific and Academic Independent Careers (MOSAIC) **Postdoctoral Career Transition Award to Promote Diversity** *K99-R00* **requires** *citizenship or permanent residence;* (PAR-21-271, PAR-21-272, PAR-21-273); **Institutional UE5 Co-operative Agreement** (PAR-21-277) provides courses for skills development & mentoring.

National Institute of Arthritis and Musculoskeletal and Skin Diseases

Transition to Independence awards

Transition to Independence, K99/R00 and MOSAIC K99
- ◦ No more than 4 years of postdoctoral research
- ◦ Extension for eligibility are possible

Early Independence Award, DP5
- ◦ Extremely rare and very competitive
- ◦ Newly graduated doctoral level applicant

Specific ESI opportunities

Stephen I Katz Early Stage Investigator R01
- No preliminary data **allowed**
- Change of research direction mandatory
- ESI applicants only

NIH Director's New Innovator Award, DP2
- ESI applicants only
- **No preliminary data required**
- **exceptionally creative early career investigators**
- Innovative and high-impact projects
- Extremely competitive

These are not the only options
- Eligible for parent awards!

Early Career Support

Extensions to K99 Eligibility

- K99 and MOSAIC K99 Eligibility Extension for Submission

  - See: https://grants.nih.gov/grants/guide/notice-files/NOT-OD-20-011.html

  - Typically, K99 must have no more than 4 years of postdoctoral research experience at the time of the initial (new) or subsequent resubmission application. NIH considers requests for extension of the K99 eligibility window for various reasons, including medical concerns, disability, family care, extended periods of clinical training, natural disasters, and active duty military service. Each of these requests is reviewed on a case by case basis.

  - NIH will approve an extension of one year for childbirth within the 4 year K99 eligibility window.

  - must provide the child's date of birth in the extension request justification submitted to IC program officials and/or scientific/research contacts listed in the NOFO at **least 12 weeks before** submitting an application. Contact NIAMS_Training@nih.gov.

Early Career Support

ESI Extensions

- ESI status typically extends 10 years from the end of the terminal degree or required clinical training

- NIH considers requests for extensions of ESI eligibility from researchers who have lapses in their research or research training or have experienced periods of less than full-time effort.

- NIH will consider requests to extend the ESI status period for reasons that can include:
  - Childbirth
  - Medical Concerns
  - Disability
  - Family care responsibilities
  - Natural Disasters
  - Active duty military service

- Principal investigators can submit a request for an ESI extension via an ESI Extension Request link found in the Education section of the PI's Personal Profile in eRA Commons.

- THIS PROCESS IS SEPARATE FROM K99 ELIGIBILITY

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Early Career Support

Supplements

- **"Family Friendly" Supplement**

  - Supplement program is intended to ensure continuity of research among recipients of mentored career development (K) awards by providing supplemental research support to help sustain the investigator's research during critical life events.

  - The administrative supplement budget is limited to 1 year. The application budget cannot exceed a maximum direct cost of $50,000, applicable F & A (indirect) cost can also be requested.

  - https://grants.nih.gov/grants/guide/notice-files/not-od-20-054.html

- **Diversity Supplements and NIAMS Diversity Scholars Program**

  - This administrative supplement is designed to provide support for research experiences for individuals from diverse backgrounds throughout the continuum from high school to the faculty level. Continuation of this program in the future will depend on the evaluation of the career outcomes of the supported individuals as well as continuing assessments of the diversity of the scientific workforce.

  - Information found here: https://grants.nih.gov/grants/guide/pa-files/PA-20-222.html

  - NIAMS Diversity Supplement Awardees participate in our Diversity Scholars Program which helps enhance research training on top of this opportunity. See: https://www.niams.nih.gov/grants-funding/funding-opportunities/diversity-supplement

Early Career Support

Loan Repayment Program (LRP)

- NIH programs established by Congress and designed to recruit and retain highly qualified health professionals into biomedical or biobehavioral research careers.

- The LRPs counteract that financial pressure by repaying up to $50,000 annually of a researcher's qualified educational debt in return for a commitment to engage in NIH mission-relevant research.

- https://www.lrp.nih.gov/

- **Citizenship** - You must be a U.S. citizen, U.S national, or permanent resident of the U.S. by the LRP award start date.

- **Qualifying Degree (Extramural programs)**- Possess an M.D., Ph.D., Pharm.D., Psy.D., D.O., D.D.S., D.M.D., D.P.M., D.C., N.D., O.D., D.V.M., or equivalent doctoral degree from an accredited institution. **(NIH Intramural programs only)** -Possess an M.D., Ph.D., D.O., D.D.S., D.M.D., D.P.M., D.V.M., A.D.N., B.S.N., or equivalent doctoral degree from an accredited institution; or hold the position of Physician Assistant.

LRP Programs – Qualified Research

- Clinical Research
  - Interacting with human patients in an inpatient or outpatient setting

- Clinical Research for Individuals from Disadvantaged Backgrounds

- Health Disparities Research

- Pediatric Research
  - Research directly related to diseases, disorders or conditions in children

- Contraceptive and Infertility Research

- Research in Emerging Areas Critical to Human Health – REACH

NIAMS REACH LRP

- Will accept applications from LRP-eligible current or past recipients of:
  - a NIAMS Diversity Supplement Award (the scholar)
  - a Ruth L. Kirschstein National Research Service Award (NRSA) Individual Predoctoral Fellowship to Promote Diversity in Health-Related Research (Parent F31-Diversity) – (past recipient with a doctoral degree)
  - a MOSIAC Postdoctoral Career Transition Award to Promote Diversity (K99/R00), doing research in NIAMS mission areas

- In addition, will accept applications from all applicants in:
  - Basic research in the etiology of acute and chronic pain in musculoskeletal and autoimmune and skin disorders
  - Dissemination and Implementation research
  - Data Science research

Supplements and extensions and other

Family Friendly extensions
- https://grants.nih.gov/grants/policy/nih-family-friendly-initiative.htm

Childcare supplements
- https://grants.nih.gov/grants/guide/notice-files/NOT-OD-21-074.html

Extension to eligibility
- https://grants.nih.gov/grants/guide/notice-files/NOT-OD-21-106.html
- ERAcommons

Loan Repayment (REACH)
- https://www.lrp.nih.gov/

HEAL Initiative NOFOs

Career awards that are part of NIH's Helping to End Addiction Long-term (HEAL) Initiative: helping to ensure that a diverse pool of highly trained scientists is available to address the Nation's response to the ongoing opioid epidemic.

Postdoctoral-to-Independent Career Transition Award in PAIN and SUD Research
- K99/R00 (BESH, Clinical Trial, and Non-Clinical Trial NOFOS): https://grants.nih.gov/grants/guide/rfa-files/RFA-NS-22-022.html#
- Other institutes participate in the K01 and K23 Substance Used Disorders HEAL NOFOS
- More Ks on the way! Check in August

NIH INCLUDE F99/K00

NIH INCLUDE Down Syndrome Research Plan
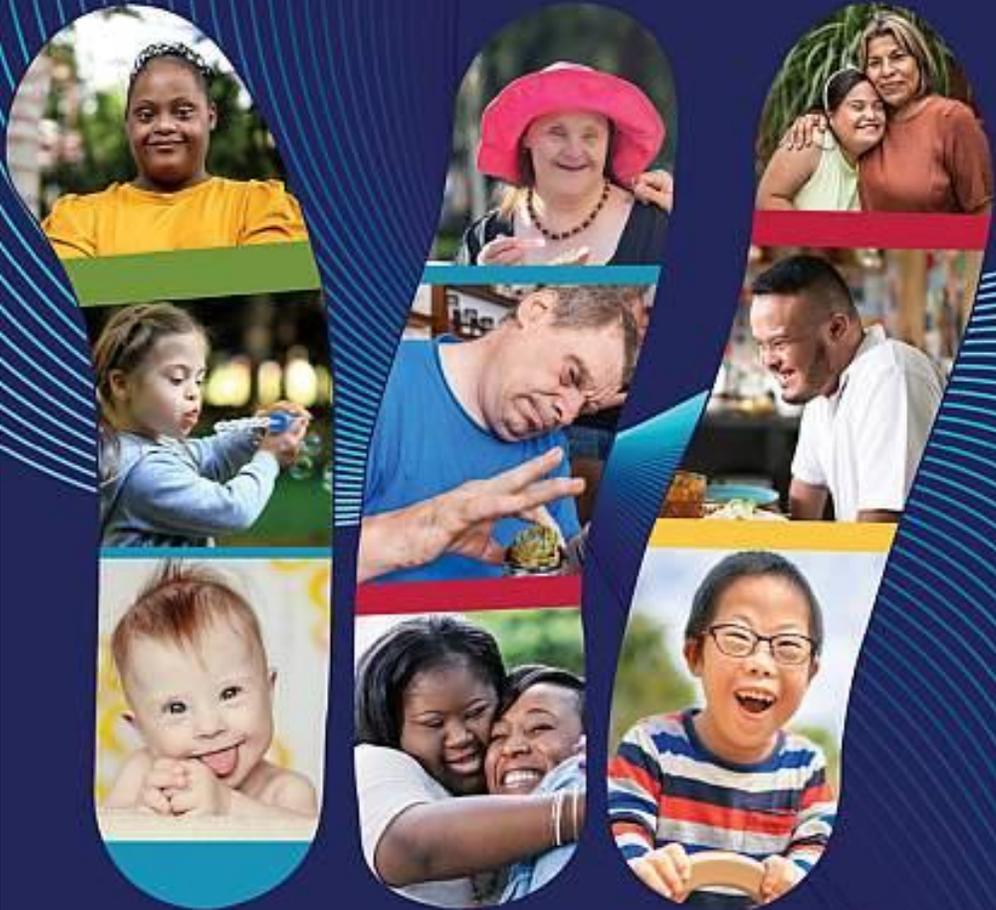
- The INCLUDE (INvestigation of Co-occurring conditions across the Lifespan to Understand Down syndromE) Project was launched in June 2018 in support of a Congressional directive in the fiscal year (FY) 2018

    - **Conduct targeted, high-risk, high-reward basic science studies on chromosome 21.**
    - **Assemble a large study population of individuals with Down syndrome.**
    - **Conduct clinical trials research inclusive of individuals with Down syndrome.**

- The INCLUDES F99/K00 is for the recruitment of graduate students from a broad variety of research fields to pursue postdoctoral training focused on DS related research.
    - Support last 1-2 years of Ph.D then 4 years of DS related post-doctoral research at a new institution (and you can still apply for things like K99/R00 in postdoc)

- See the INCLUDES research plan, information, and other participating ICs: https://www.nih.gov/include-project/include-project-down-syndrome-ds-research-plan

Who to Contact? When?
Pre-application - Application - Peer Review - Award - Post award

Pre-application – contact program officer or SRO at IC
- For help determining scientific 'fit' and some eligibility
- For help with application submission, technical eligibility, and application instructions

After Application but before summary statement – contact SRO
- Review at either CSR or IC (institute or Center) depending on arrangements
- Peer review by extramural researchers
- Summary Statement by SRO

After Summary Statement – Contact Program Officer

Award – contact Program and/or GMB at IC
- JIT – just in time

Post Award – contact Program and/or GMB at IC
- RPPR – progress report

Program officers

Scientific and/or technical aspects of your application...

Principal liaison between extramural investigators & NIH
- ◦ pre/post award

Help to determine
- ◦ mission relevance
- ◦ programmatic merit

Discuss summary statements

Develop initiatives

Scientific Review

Review of your application (applications = contracts with NIH)…

Scientific Review Officer

Legal responsibility:

◦ Manage peer review meeting - designated federal official

◦ Conduct an administrative review of each application to ensure compliance with NIH policies and practices

◦ Recruit reviewers and assign them to the applications

◦ Determine and manage reviewer conflicts of interest

◦ Prepare and issue summary statements

Scientific Peer Review

Panel of experts discuss applications
- ~50% are discussed at the meeting

Chairperson runs meeting
- Summarizes each discussion

3 main reviewers read each application

Overall priority scores are percentiled
- NOT an average of criterion scores

Criterion scores
- Significance
- Innovation
- Investigator
- Environment
- Approach

Grants Management

Fiscal and policy aspects of your application…

Grants Management Specialist (GMS)

Responsible for the business management aspects of grants

- Evaluate grant applications for administrative content and compliance with policy
- Negotiate grants
- Provide consultation and technical assistance to applicants and recipients
- Administer grants after award

Grants Management Officer (GMO)

- Responsible for the business management aspects of grants and cooperative agreements
  - Authorized to obligate NIH funds and permit changes to approved grant
  - Each NIH IC that awards grants has one or more GMOs

National Institute of Arthritis and Musculoskeletal and Skin Diseases

Program Staff and Contacts

Isaah Vincent, Training Program Director, Isaah.Vincent@nih.gov

- T32s
- K awards
- F awards
- Diversity Supplements

NIAMS training mailbox: NIAMS_training@nih.gov

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Questions?