National Institute of General Medical Sciences

Division of Training & Workforce Development

National Institute of General Medical Sciences

December 5, 2024

Ruth L. Kirschstein National Research Service Award (NRSA) Institutional Research Training Grant (Parent T32)

2024 Technical Webinar

Webinar Presenters

- **Anissa J. Brown**, Branch Chief

PEWD Branch, Training & Workforce Development Division at NIGMS

anissa.brown@nih.gov

- **Xiaoli Zhao**, Program Director

Division of Pharmacology, Physiology and Biological Chemistry at NIGMS

xiaoli.zhao@ nih.gov

- **Greg Bissonette**, Chief

Scientific Review Branch at NIGMS

greg.bissonette@nih.gov

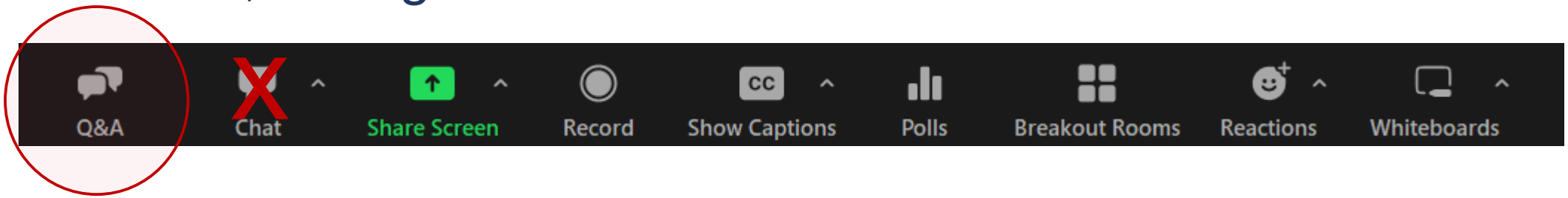
- **Christina (Tina) Fleming**, Grants Management Officer

Grants Administration Branch

fleminch@mail.nih.gov

Webinar Information

- This **webinar is being recorded** and will be available online.
- The **slides will be posted on the NIGMS T32 Postdoc webpage** (video will be posted in the coming weeks).
- Please **type your questions in the Q&A box**, instead of in the chat box, throughout the webinar.



- If time permits, there will be an open Q&A period at the end of the webinar.

PA-25-168

Note: NIGMS only accepts applications to the Parent T32 NOFO for **postdoctoral** training programs

Application Due Date:
January 25, 2025

Submit Early

T32 Technical Webinar Outline

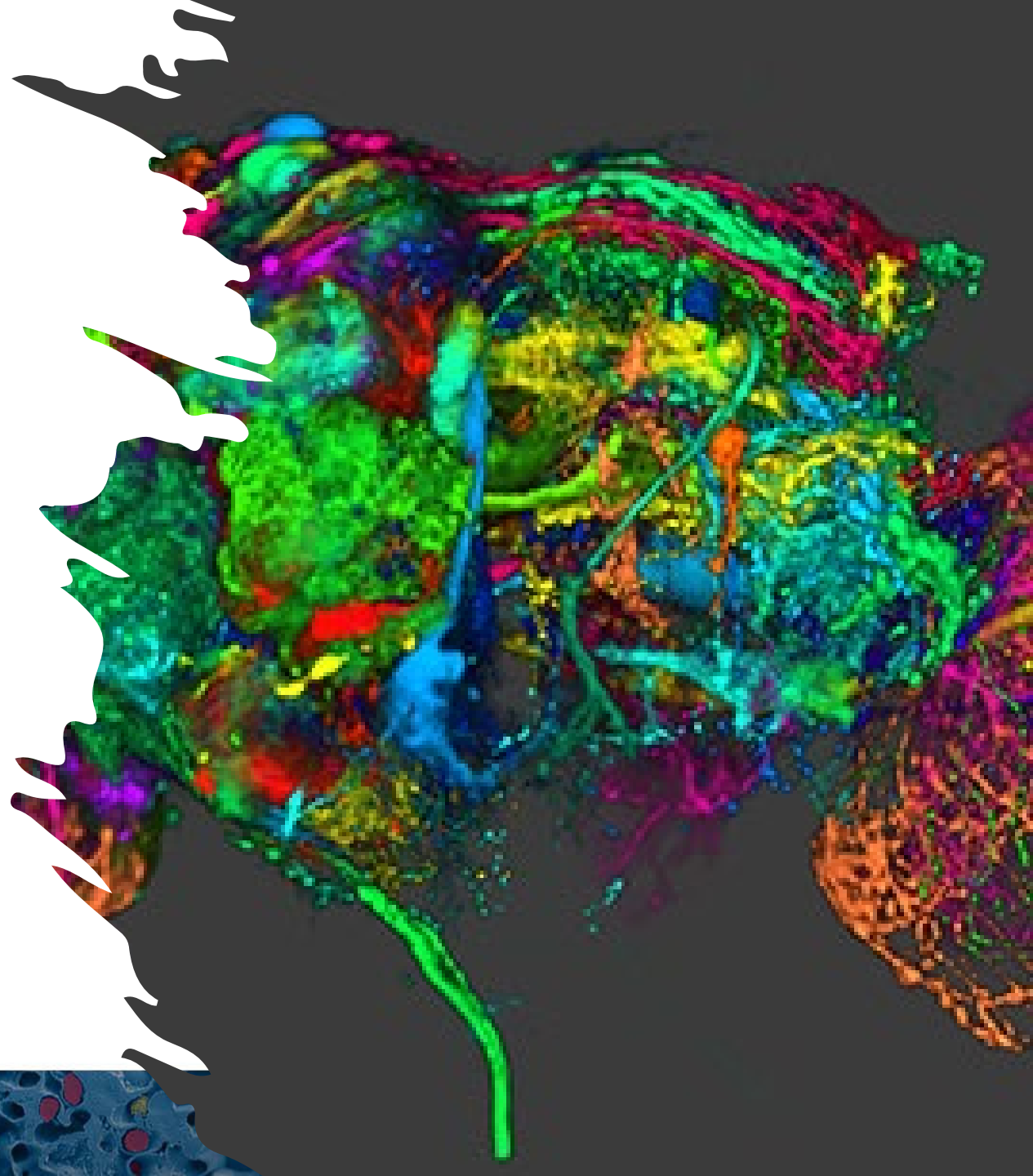
- Background and Program Considerations
- Overview of Updates to NIH Institutional Training Grant Applications
- Program Expectations
- Review Overview
- Budget Overview
- Key Reminders with Application Submission
- Resources
- Q/A

Disclaimer

This presentation and accompanying slides are for informational purposes only. They serve as an overview of the NIH NIGMS T32 postdoc program and are not meant to be comprehensive in coverage of all required components of an application.

Applicants are responsible for following the instructions detailed in the Notice of Funding Opportunity (NOFO), any Related Notices (included in the NOFOs Overview Information section), and the **SF424 Application Guide**.

Postdoc T32 Program Background and Considerations and Overview of Updates to NIH Institutional Training Grant Applications



NIH National Institute of General Medical Sciences

Program Goal

To help ensure that a highly trained workforce is available to meet the needs of the Nation's biomedical, behavioral, and clinical research agenda and support individuals' transition to independent research careers.

Program Purpose

To develop and/or enhance research training opportunities by offering **coursework**, **mentored research experiences** and **technical, operational** and **professional skills development** for clinician scientists interested in biomedical, behavioral or social sciences, and clinical research, or in any other discipline relevant to the NIH mission.

NIGMS NRSA Institutional Postdoctoral Training Grants (T32)

Program supports research training for **clinician-scientists** in four clinically relevant research areas within the mission of NIGMS:

- **Anesthesiology**
- **Clinical Pharmacology**
- **Medical Genetics**
- **Injury and Critical Illness**

- Rigorous selection process. Most selected trainees should hold **clinical degrees** (e.g., MD, PharmD, DO, etc.); any PhD trainees should study problems of clinical relevance.
- Trainees receive **2-3 years** of research training and engage in activities that promote research career development.
- Well-rounded **trainee-centric training activities** to prepare fellows for next steps in their research career paths.
- **Institutional infrastructure** in place to support the program, incl. strong core of faculty in research areas relevant to the programmatic priorities.

NIGMS T32 Postdoctoral Program Directors by Topic Area

Topic Area	Program Director	Program Director Contact
Anesthesiology	Moushumi Paul	moushumi.paul@nih.gov
Clinical Pharmacology	Moushumi Paul	moushumi.paul@nih.gov
Medical Genetics	Mohammed Aiyegbo and Lameese Akacem	mohammed.aiyegbo@nih.gov and lameese.akacem@nih.gov
Injury and Critical Illness	Amanda Alise Price	amanda.alise.price@nih.gov

Applicants interested in new postdoc T32 program are strongly encouraged to reach out to Program Directors to determine alignment with NIGMS Postdoctoral T32 Focus Areas.

Overall Goal of the Updates

1. Reduce applicant and reviewer burden.

2. Further support the development of a biomedical research workforce that will benefit from the full range skills and experiences needed to advance discovery.

3. Align SF424 with updates relevant to NIH training grant NOFOs and requirements.

Guide Notice
NOT-OD-24-129

Summary of T32 NOFO Upcoming Changes

- **Key application changes:**
  - Parent T32 NOFO – Define **mentor training** expectations.
  - Update **NRSA Data Tables** to reduce burden and promote consistent information collection across training programs.

- **Key changes to peer review:**
  - Move “Responsible Conduct of Research” to Additional Review Criteria so they contribute to the overall impact score.

Defining Mentor Training Expectations in Training Programs

SF424 instructions under Program Faculty now include mentor training activities. Programs should consider the following, in addition to other evidence-informed curricula, as potential mentor training components and are encouraged to **adapt** to program and trainee needs:

- Aligning expectations
- Maintaining effective communication
- Fostering independence
- Assessing understanding.
- Enhancing professional development
- Articulating one's mentoring philosophy and plan

Reviewers will assess the mentor training expectations included in the application.

Trainee Career Development

- Training PDs/PIs should make available appropriate **skills training** and **structured career development** so that trainees are prepared to apply for subsequent independent support for their training, career development, or research program.

Examples of skills training: individual fellowship award, mentored career development award, or research project grant

Examples of structured career development: workshops, individual development plans, informational interviews, shadowing, internships

Program Eligibility

- **Domestic Institution**. Note, applicant organizations may submit more than one application, provided that each application is in distinct training programs.
- **PD/PI** can be any individual(s) with the **skills, knowledge**, and **resources** necessary to carry out the proposed research training program.
- **PD/PI** should be an **established investigator** in the scientific area in which the application is targeted and capable of providing both **administrative** and **scientific leadership** to the development and implementation of the proposed program. Also responsible for **monitoring** and **assessing** the program and submitting all documents and reports.
- **Multiple PDs/PIs** can be considered as needed to achieve the training goals.

Program Faculty

- **Active researchers** in the biomedical sciences as demonstrated by recent publications and research support early-stage the proposed research training program.
- Programs are encouraged to recruit prospective preceptors/mentors and faculty with relevant experience and expertise to advance the program goals, including faculty at **different career stages** (for example, early-stage investigators as well as senior faculty).
- **Committed** to training, mentoring, and providing safe and supportive research training environments with the appropriate bandwidth.
- Have a **mentoring philosophy** tailored to the needs of potential trainees.

Program Trainees

- Must be a citizen or a noncitizen national of the United States or have been lawfully admitted for permanent residence **at the time of appointment.**
- Full time research training for **at least 2 years** and **no more than 3 years.**

Program Considerations

A. Safe and Supportive Research Training Environments that Promote Scientific Rigor
B. Mentor Training
C. Trainee Career Development
D. Considerations for Clinicians and Dual-degree Students
E. Other Considerations

NIH expects organizations to engage in outreach and recruitment activities to encourage individuals from diverse backgrounds, including individuals from underrepresented groups (see the Notice of NIH's Interest in Diversity (https://grants.nih.gov/grants/guide/notice-files/NOT-OD-20-031.html)) to participate in the program.

Program Considerations: **Safe and Supportive Research Training Environments that Promote Scientific Rigor**

- Environments **free from harassment, bullying and intimidation** (https://grants.nih.gov/grants/policy/harassment.htm), in which everyone participating is treated in a **respectful and supportive** manner.

- Laboratory and clinical settings where individuals exercise the **highest standards** of practice for chemical, biological and physical safety (for more information see examples of Laboratory Safety Training Guidelines).

- Practices at the **institutional leadership** and **research community levels** that demonstrate core values and behaviors to emphasize safety over competing goals.

Program Considerations: Considerations for Clinicians and Dual-degree Students

- **Clinician scientists** can devote up to 20% (~8 hours per week) to clinical duties.
- Training PDs/PIs should consider opportunities to interact with **basic science** departments and include trainees with research doctorates when this approach is consistent with the goals of the proposed training program.
- Program may not be used to support studies leading to the MD, DDS, or other clinical, health-professional degrees except when those studies are part of a formal combined research degree program, such as the MD/PhD.
- Clinicians can engage in NRSA-supported, full-time postdoctoral research training even when that experience is creditable toward certification by a clinical specialty or subspecialty board.

Updates to Data Tables

Institutional Training data tables have been updated to **reduce burden**, **focus on trainee outcomes**, and **promote consistent information** collection across training programs.

For T32 Postdoc Training Programs

New Postdoctoral Training

Table #	Title of Table	Comments
Table 1.	Census of Participating Departments or Interdepartmental Programs	Except last 2 columns. Programs that are focused solely on postdoctoral research training must complete Part II (Postdoctorates). Do not include Part I (Predoctorates).
Table 2.	Participating Faculty Members	
Table 3.	Federal Organizational Research Training Grants and Related Support Available to Participating Faculty Members	No Change
Table 4.	Active Research Support of Participating Faculty Members	No Change
Table 5B.	Publications of Trainees Supported by this Program: Postdoctoral	
Table 6B.	Training Program Candidates, Entrants, and their Characteristics for the Past Five Years: Postdoctoral	
Table 8B.	Program Outcomes: Postdoctoral	Part II Only

Renewal or Revision Postdoctoral Training

Table #	Title of Table	Comments
Table 1.	Census of Participating Departments or Interdepartmental Programs	last column only applies to T90/R90
Table 2.	Participating Faculty Members	
Table 3.	Federal Organizational Research Training Grants and Related Support Available to Participating Faculty Members	No Change
Table 4.	Active Research Support of Participating Faculty Members	No Change
Table 5B.	Publications of Trainees Supported by this Program: Postdoctoral	

Table #	Title of Table	Comments
Table 6B.	Training Program Candidates, Entrants, and Their Characteristics for the Past Five Years: Postdoctoral	
Table 7.	Appointments to the Training Grant for Each Year of the Current Project Period	
Table 8B.	Program Outcomes: Postdoctoral	Part I only

Table 1 – Census of Participating Departments or Interdepartmental Programs

- Updates
  - Only provide data on postdoctoral research training by completing Part II (Postdoctorates)

Part II. Postdoctorates

Participating Department or Program	Total Faculty	Participating Faculty	Total Postdoctorates	Total Postdoctorates Supported by any HHS Training Award	Total Postdoctorates with Participating Faculty	Eligible Postdoctorates with Participating Faculty	TGE Postdoctorates Supported by this Training Grant (Renewals/ Revisions)	Postdoctorates Supported by this Training Grant (R90 Only Renewals/ Revisions)
								[redacted]
							Renewals/ Revisions only	
Total								

Table 2 – Participating Faculty Members

- Updates
  - Only provide data for participating faculty members at applicant organization- Part I

Table 2. Participating Faculty Members

Part I. Participating Faculty Members at Applicant Organization

Name	Degree(s)	Rank	Primary Department or Program	Research Interest	Training Role	Pre-doctorates In Training	Pre-doctorates Graduated	Predoctorates Continued in Research or Related Careers	Post-doctorates In Training	Post-doctorates Completed Training	Postdoctorates Continued in Research or Related Careers
						[redacted]					

Table 5 – Publications of Those in Training

- **Updates**
  - **Re-align table to focus on trainee outcomes** (previously focused on the faculty); trainees listed match those in Table 8
  - Allow inclusion of **interim research products** (such as preprints) only when final publication not available (similar to what happens for R, F, and K applications).
  - Options to add co-mentors and denote former trainees (*)

Sample Table 5A. Publications of Trainees Supported by this Program: Predoctoral

Trainee Name	Faculty Member	Past or Current Trainee	Training Period	Publication (Authors, Year, Title, Journal, Volume, Inclusive Pages)
Pennix, Olufemi C.	Chu, Jeremy* K. Jordan, Angel C.	Past	2008-2016	**Pennix, O.C.**, Jordan A., and Chu, J., 2015 Sympathetic Noradrenergic Innervation of Drosophila, Genetics185: 1100-1190. Howard, C.G., **Pennix, O.C.**, Jordan A., and Chu, J., .2017, Repeated Sequences in Drosophila, J. Mol Biol, 242:503-510
Bar, Daniel	Collins, Francis S.	Past	2015-2020	**Bar DZ**, Atkatsh K, Tavarez U, Erdos MR, Gruenbaum Y, Collins FS., 2016, Biotinylation by antibody recognition- A novel method for proximity labeling. BioRxiv 069187 [**Preprint**].
Thompson, Patricia P.	Berg, Lawrence P.	Past	2016-2021	Miter, M.H., Owens, R., **Thompson, P.**, and Berg, L., 2021, Insulin Treatment of Diabetic Rats, J Comp Neurol, 373:350-378.
Samuels, Janine A.	Peters, Mark Q.	Current	2020-2022	No Publications: Left Program
Wand, Dennis R.	Layback, Sally G.	Current	2022-Present	No Publications: New Entrant

Table 6 - Applicants, Entrants, and their Characteristics for the Past Five Years

Update: Remove the following *detailed trainee characteristics* on anyone who applied to and entered the training program.

Postdoc: Mean number of publications (total and first author), prior institutions.

Sample Table 6B. Training Program Candidates, Entrants, and Their Characteristics for the Past Five Years: Postdoctoral

Counts and Characteristics

Most Recently Completed Year: 2022-2023	Total Training Program Candidates - Applied	Training Program Candidates – Eligible for Support	New Entrants to the Program	New Entrants Eligible for Support	New Appointees to this Grant (Renewal/Revision Applications Only)
PhDs	25	15	6	5	4
MDs	4	1	0	0	0
Dual-Degree Holders	3	3	2	2	2
Other Degree Holders	0	0	0	0	0
Total	**32**	**19**	**8**	**7**	**6**

Table 8B – Program Outcomes: Postdoctoral

Update: Remove "Part II. Those Clearly Associated with the Training Grant" – encourage to report in Program Plan Section or RPPR narrative.

Table 8B. Program Outcomes: Postdoctoral

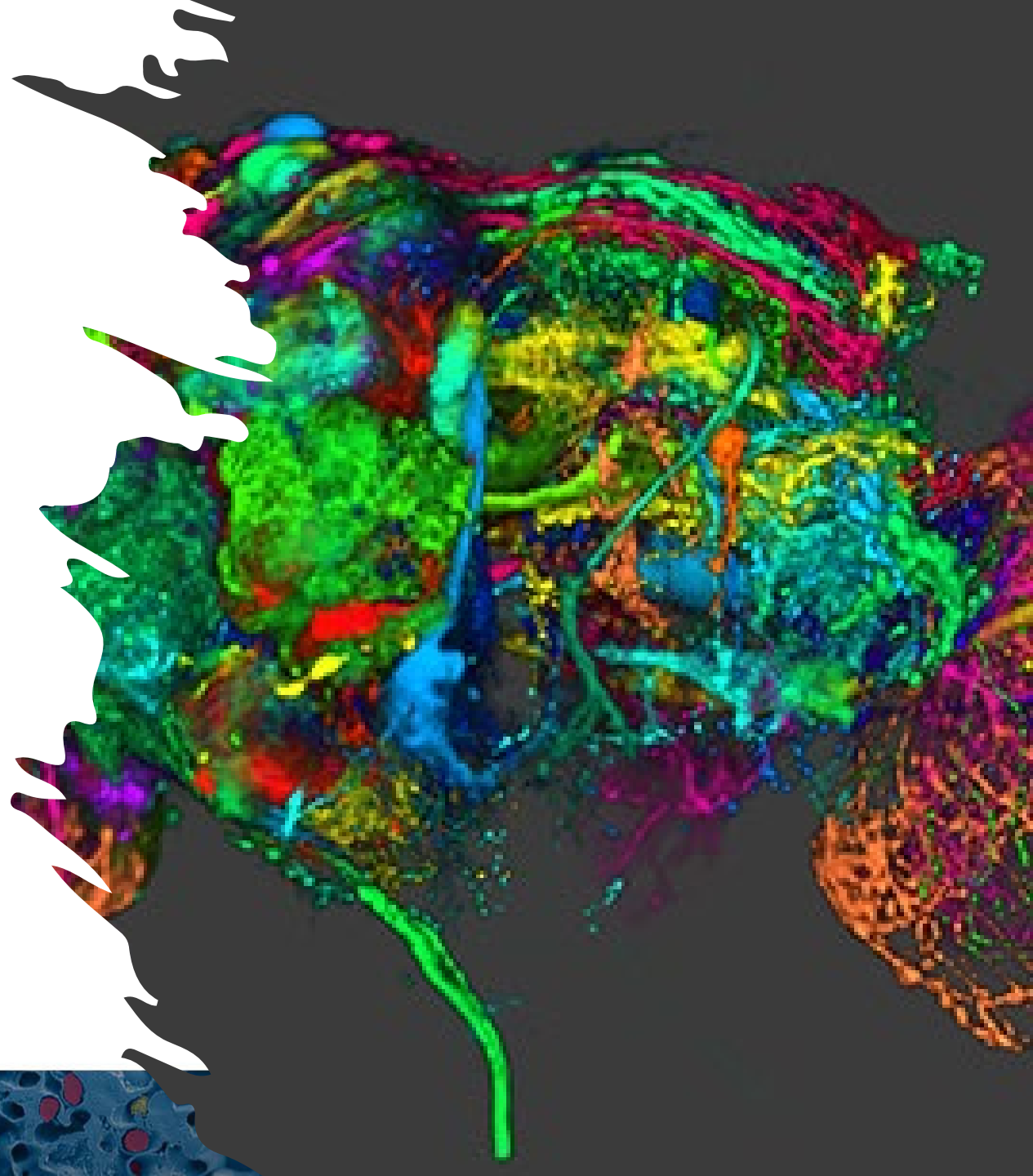
Part I. Those Appointed to the Training Grant

Trainee	Doctoral Degree(s) and Year(s)	Faculty Member	Start Date	Summary of Support During Training	Degree(s) Resulting from Postdoctoral Training and Year(s)	Topic of Research Project	Initial Position	Current Position	Subsequent Grant(s)/Role/ Year Awarded

Part II. Recent Graduates (Only For New Applications and Predoctoral Renewal/Revision Applications Requesting Postdoctoral Support)

Trainee	Doctoral Degree(s) and Year(s)	Faculty Member	Start Date	Summary of Support During Training	Degree(s) Resulting from Postdoctoral Training and Year(s)	Topic of Research Project	Initial Position	Current Position	Subsequent Grant(s)/Role/ Year Awarded

Postdoc T32 Program Expectations



Research Training Program Plan

- **Training Program**
  - Background
  - Program Plan
    - Program Faculty
      - Faculty Participants
      - Mentor Training and Oversight
    - Proposed Training
      - Career Development
    - Training Program Evaluation
    - Trainee Candidates and Retention Plans
    - Institutional Environment and Commitment to Training
    - Training Outcomes

Program Evaluation

Application should describe:

- How the proposed evaluation will assess the extent to which the overall program is effective in meeting its training goals and objectives, and whether the research training environment is supportive of trainee development.

- The program's procedures for responding to program evaluation findings.

Trainee Candidates and Retention Plans

- Provide a strong justification for the number of requested trainee positions.
- Describe a multifactorial candidate review process (i.e., a process that considers metrics beyond previous institution, GPA, and standardized test scores) that will allow research-oriented trainees who have taken advantage of the research opportunities available to them and are committed to contributing to the biomedical research enterprise the ability to participate in the training program.
- Describe efforts to sustain the scientific interests as well as monitor the academic and research progress of all trainees within the program (i.e., retention). Applicants are encouraged to use evidence-informed practices for retention with the recognition that the variety of trainee educational backgrounds and experiences may necessitate the need to tailor retention approaches. Describe the specific efforts to be undertaken by the training program and how these might coordinate with broader trainee retention efforts of the institution(s).

Research Training Program Plan

- **Training Program**
  - Background
  - Program Plan
    - Program Faculty
      - Faculty Participants
      - Mentor Training and Oversight
    - Proposed Training
      - Career Development
    - Training Program Evaluation
    - Trainee Candidates and Retention Plans
    - Institutional Environment and Commitment to Training
    - Training Outcomes

Institutional Environment and Commitment to Training

- Describe how the level of institutional and departmental commitment to research training will promote the success of the trainees and training program.
- Safe and supportive environment with procedures to ensure accountability and reporting of concerns.
- For institutions that have multiple NIH-funded training grants, the letter should also explain what distinguishes the proposed program from existing ones at the same training level, how the programs will synergize and share resources when appropriate, and how the training faculty, pool of potential trainees, and resources are sufficiently robust to support the proposed program in addition to existing ones.

Note: Letter of support should provide assurances of the institutional commitment

Training Outcomes

- Evidence that recent program graduates conducted rigorous research that advanced scientific knowledge and/or technologies, with increasing self-direction (e.g., peer-reviewed publications in Training Table 5, or other measures of scientific accomplishment appropriate to the field).

- The rate of program completion and length of training.

- The success of trainees transitioning to careers in the biomedical research workforce (Training Table 8).

If disparities are observed in trainee outcomes, describe approaches to identify the causes and, where warranted, the approaches to feasibly address the issues in the Program Plan.

Training Outcomes (Renewal applications)

- Provide details on the “Program Overview” section demonstrating that the program successfully trained a pool of individuals.
- Highlight how the training program has evolved in response to changes in relevant scientific and technical knowledge, educational practices, and evaluation of the training program.
- Describe successes and challenges with implementation of the programmatic elements.
- Provide justifications for failing to implement previously proposed programmatic elements.
- Include successful transitions to postdoc or careers in the biomedical research workforce and describe how the program made aggregate data on training and career outcomes publicly available

Research Training Program Plan cont.

- **Faculty, Trainees, and Training Record**
  - Participating Faculty Biosketches
  - Letters of Support
    - Institutional Support Letter
- **Other Training Program**
  - Appendix

For NIH Grant page limits, see [Page Limits | Grants & Funding]

Participating Faculty Biosketches

Program faculty are encouraged to provide a **personal statement** that describes their prior experience with:

- **Training**, **mentoring**, and **promoting** a supportive scientific environment.
- Providing training in **rigorous** and **unbiased** experimental design, methodology, analysis, interpretation, and reporting of results.
- Aiding and supporting trainees in **identifying** and **transitioning** into careers in the biomedical research workforce that are consistent with trainees' skills, interests, and values.

Research Training Program Plan (2)

- **Faculty, Trainees, and Training Record**
  - Participating Faculty Biosketches
  - Letters of Support
    - Institutional Support Letter
- **Other Training Program**
  - Appendix

For NIH Grant page limits, see [Page Limits | Grants & Funding]

Institutional Support Letter

- Signed letter on institutional letterhead from a President, Provost, Dean or key institutional leader.
- Describes the activities and resources provided by the institution that will ensure the success of the planned training program and the productivity of its trainees.
- Not to exceed 10 pages

Research Training Program Plan (3)

- **Faculty, Trainees, and Training Record**
  - Participating Faculty Biosketches
  - Letters of Support
    - Institutional Support Letter
- **Other Training Program**
  - Appendix

For NIH Grant page limits, see [Page Limits | Grants & Funding]

Appendix

- The only allowable appendix materials are:
- Blank data collection forms, blank survey forms, and blank questionnaire forms
- Simple lists of interview questions

Note: In your blank forms and lists

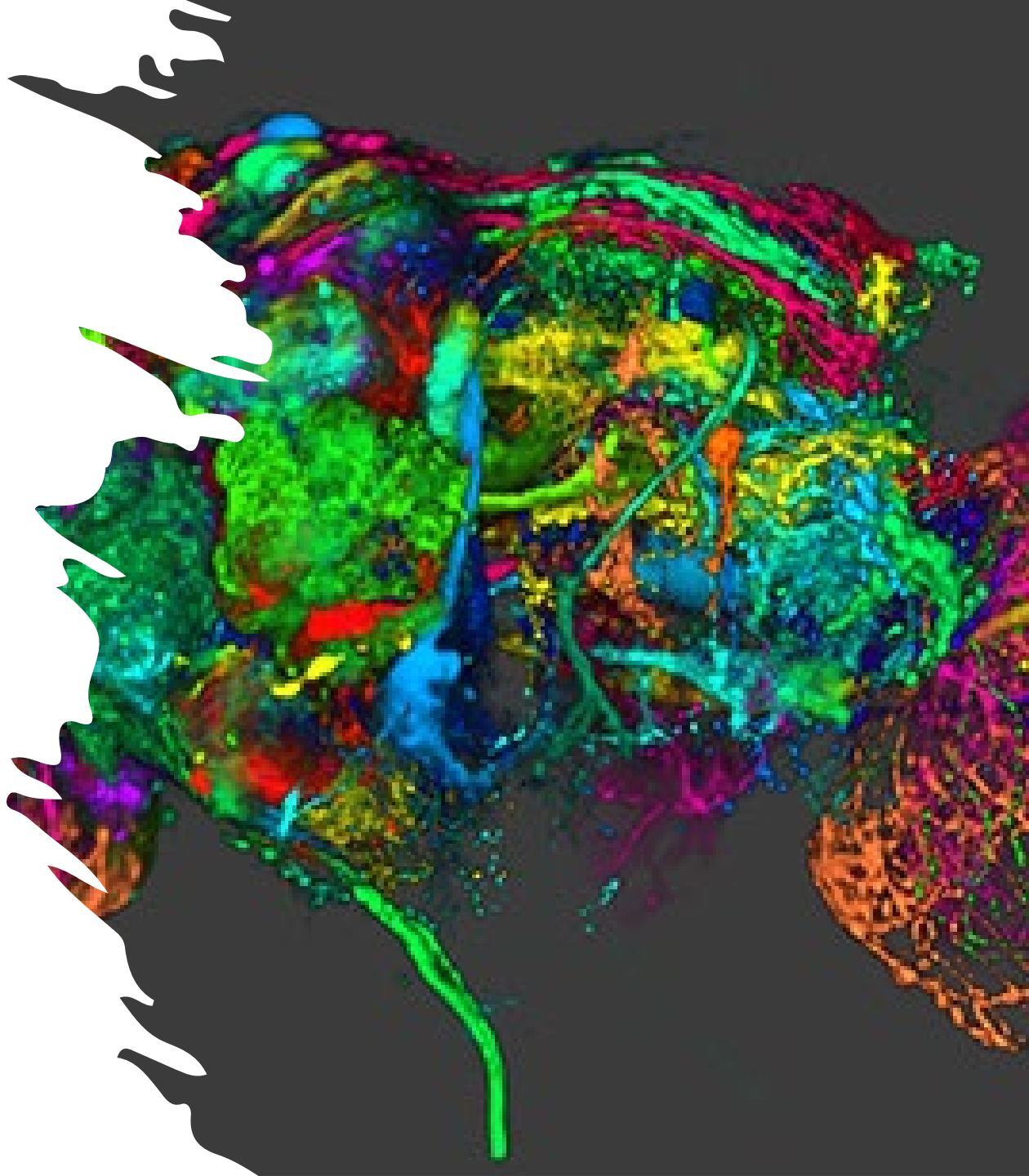
- Blank informed consent/assent forms
- Other items only if they are specified in the NOFO as allowable appendix material

Simply relocating disallowed materials to other parts of the application will result in a noncompliant application. Note: Applications will be withdrawn and not reviewed if they do not follow the appendix requirements in these instructions or in your NOFO.

Review Considerations

Greg Bissonette

Chief, Scientific Review Branch



Peer Review Updates

Training grants will retain the five scored criteria (*note: training grant application updates are **not** part of the simplified review framework or fellowship efforts*).

- **Verbiage Updates**:
  - Align questions with instruction changes:
    - **Breadth of backgrounds**
    - **Mentor training**
    - **Career outcomes** ("careers in the biomedical research workforce" as opposed to "research careers")
  - Adjectives
    - Focus, **in the context of the program goals,** on "adequate" "appropriate" trainee pool, mentor expertise, and available resources (previous focus on "record," "experience" or "state-of-the-art.")

Section V.1 - Criteria

Update:

- ***New template text* – *to remind reviewers demographic considerations of candidate pool, trainees or faculty are not to be used in review of training grants.***
- *We can evaluate experiences and plans in the context of program goals, but not demography.*

Only the review criteria described below will be considered in the review process.

Applications submitted to the NIH in support of the NIH mission are evaluated for scientific and technical merit through the NIH peer review system. **While any information in the application relevant to the program goals can be included as part of the review process, the race, ethnicity, or sex of trainee candidates, trainees, or faculty may not, in and of themselves, be used as factors in the evaluation of applications.**

Parent T32 – “For this particular NOFO”

- **For this particular NOFO, note the following**: Reviewers should evaluate the program’s potential to:
  - Produce a pool of trainees with the technical, operational, and professional skills necessary to conduct rigorous and reproducible research, and transition into **careers in the biomedical research workforce**. Reviewers should note that careers in the biomedical research workforce refers to the **breadth of careers that sustain the biomedical research enterprise** (which includes, but is not exclusive to, careers as independent NIH-funded investigators).
  - Enable **research-oriented individuals** the ability to participate and succeed in the research training program (for example, through recruitment and **mentor training activities**).

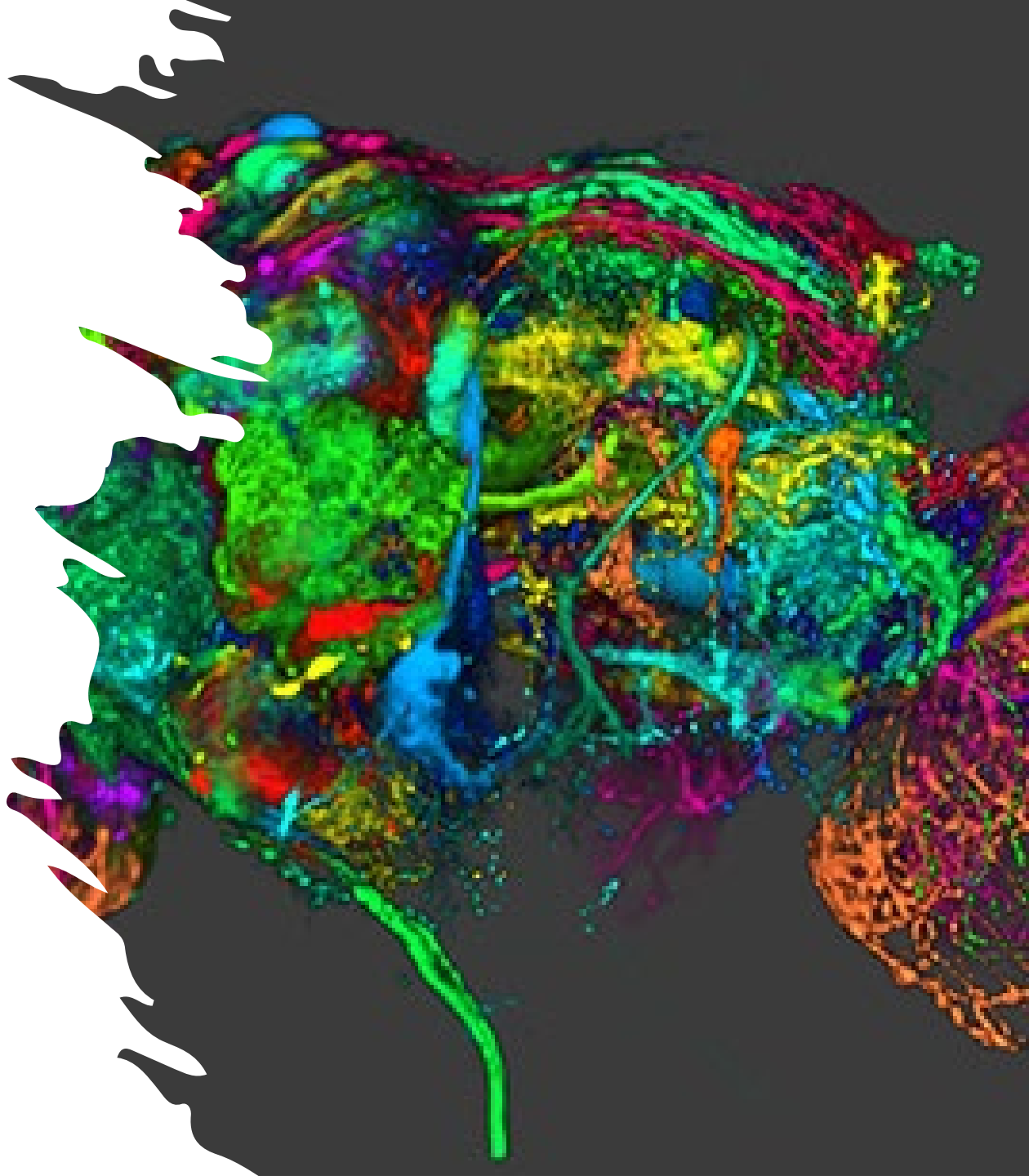
Additional Review Criteria

- Training and Responsible Conduct of Research (RCR)
- Training in Methods for Enhancing Reproducibility

Budget Considerations

Christina Fleming

Grants Management Officer



Stipends, Tuition and Fees

- Kirschstein-NRSA awards provide stipends as a subsistence allowance to help defray living expenses during the research training experience.
- NIH will contribute to the combined cost of tuition and fees at the rate in place at the time of award.
- Stipend levels, as well as funding amounts for tuition and fees and the institutional allowance are announced annually in the *NIH Guide for Grants and Contracts*, and are also posted on the Ruth L. Kirschstein National Research Service Award (NRSA) webpage.

Trainee Travel

- NIGMS will provide up to $500 per trainee per budget period for travel.
- Trainees must be appointed to the training grant at the time the actual travel for this to be an allowable cost.
- Plans for trainee travel should be well justified.

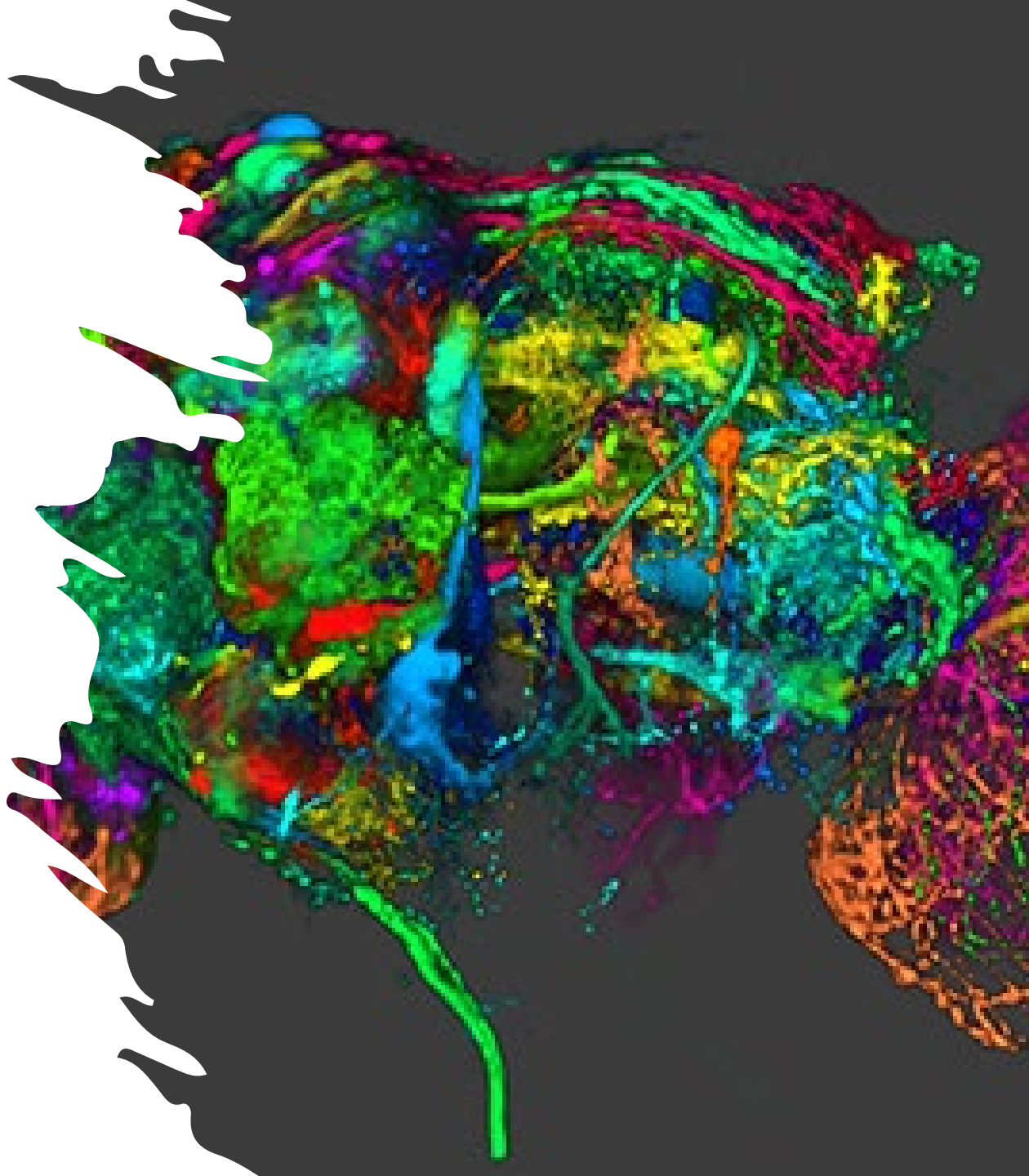
Training Related Expenses

- NIH will provide funds to help defray other research training expenses, such as health insurance, staff salaries, consultant costs, equipment, research supplies, and faculty/staff travel directly related to the research training program.
- The most recent levels of training related expenses are announced annually in the *NIH Guide for Grants and Contracts*, and are also posted on the Ruth L. Kirschstein National Research Service Award (NRSA) webpage.

Indirect Costs

- Indirect Costs (also known as Facilities & Administrative [F&A] Costs) are reimbursed at 8% of modified total direct costs (exclusive of tuition and fees, consortium costs in excess of $25,000, and expenditures for equipment), rather than on the basis of a negotiated rate agreement.

Final Thoughts



Don’t forget…

- NIGMS encourages all applicants for training grants to contact program staff before submitting an application.
- NIGMS does not accept applications requesting support for a combined predoctoral and postdoctoral training program.
- An institution may not have duplicate or highly overlapping applications in the same training area under review at the same time.
- NIGMS will support only one training program in each training area per institution normally identified by a Unique Entity Identifier (UEI) or Institution Profile File (IPF) number.
- Applicants should also note that NIGMS does not require T32 applicants requesting $500,000 or more in direct costs for any year to contact staff to obtain agreement that the IC will accept the application.
- **Read the NOFO and related Notices.**
- **Visit https://www.nigms.nih.gov/training/instpostdoc/pages/PostdocTrainingDescription.aspx#critical**
- **Submit early**

Resources

- Updates to NIH Institutional Training Grant Applications for Due Dates on or After January 25, 2025: NOT-OD-24-129
- Upcoming Changes to NIH Applications for NIGMS Postdoctoral Training Grants – NIGMS Feedback Loop Blog – National Institute of General Medical Sciences
- Updates to NIH Institutional Training Grant Applications | Grants & Funding
- NIH Training Tables
- NRSA Institutional Postdoctoral Training Grants (T32)

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    - loop.nigms.nih.gov (blog)
    - bit.ly/nigmstrainee (trainee list)
  - *Biomedical Beat*: biobeat.nigms.nih.gov
- NIGMS Media Coverage: go.nih.gov/mediacoverage
- Find NIGMS on Social Media

Thank you for your time and attention!

Questions