

# WORKSHOP ON TRAINING GRANT APPLICATIONS June 27, 2019

**Thomas A. Pearson, MD, MPH, PhD**  
**Director, MD-PhD Program**  
**University Term Professor of Epidemiology and**  
**Medicine**  
**University of Florida**



# OBJECTIVES

- 1. Consider the scope, size and goals of your proposed training programs.**
- 2. Understand the components and preparation of a competitive application for an institutional training grant.**
- 3. Identify and access various resources, tools and expertise to allow efficient completion of a training grant application.**

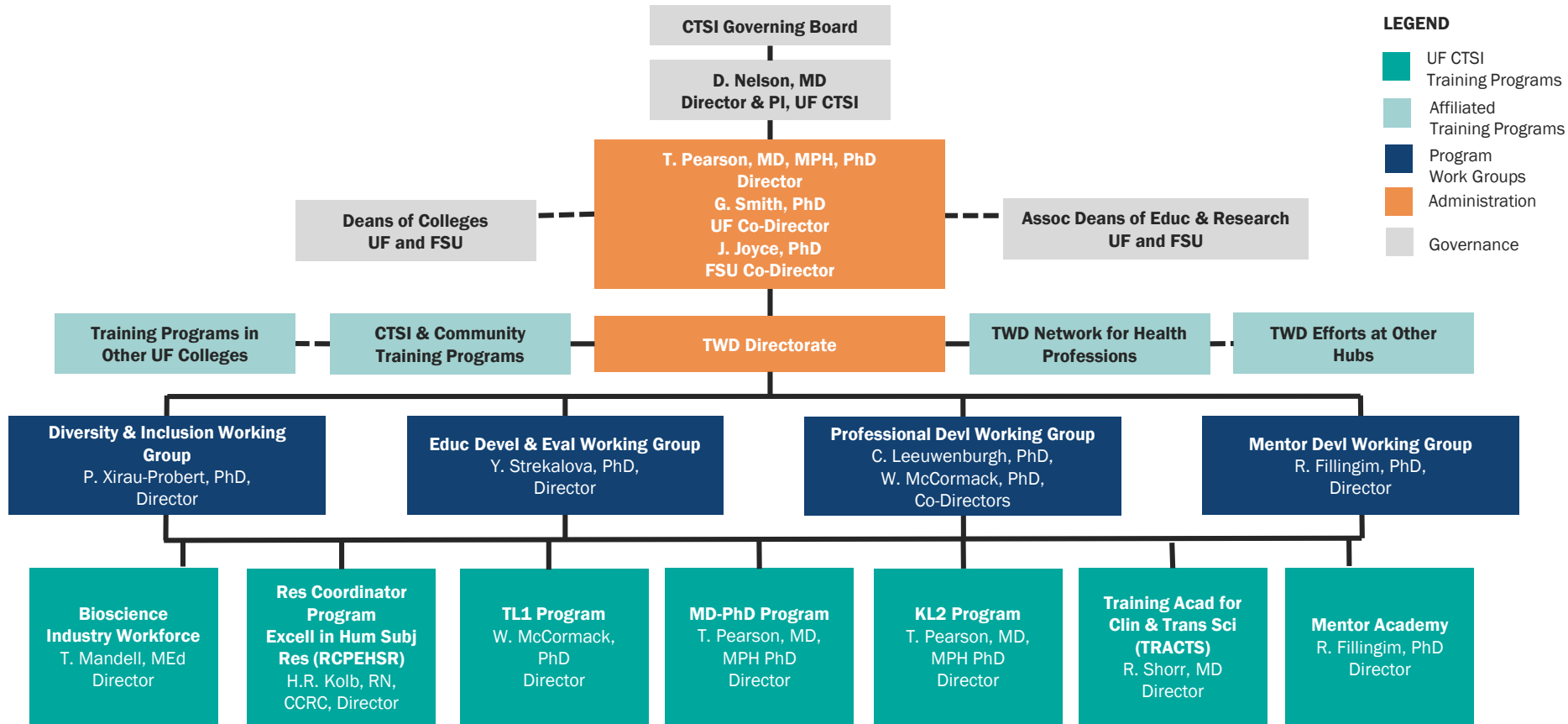
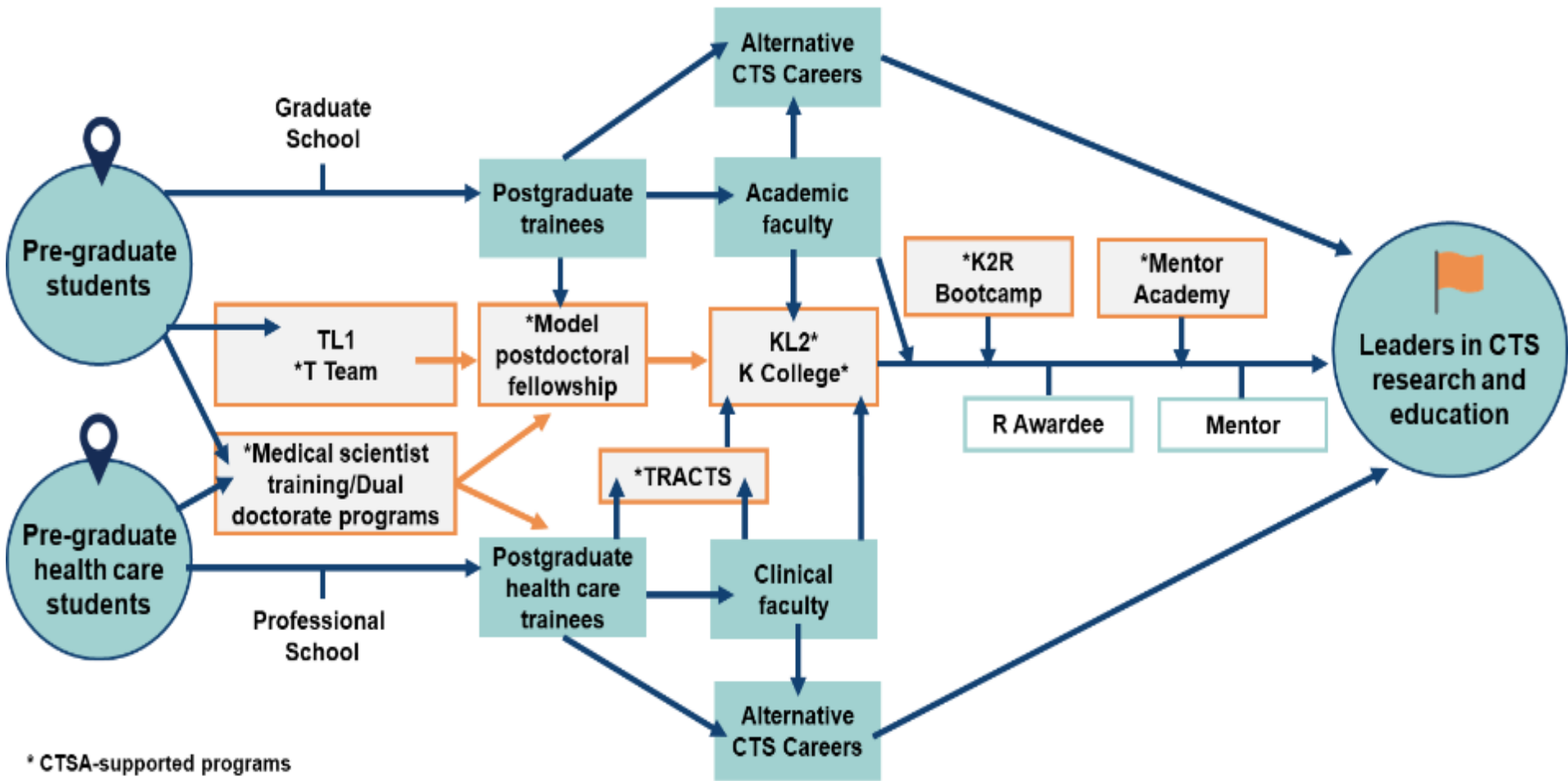


Figure 3 Translational workforce development governance, working groups and programs



# Training Grant Toolkit

<http://www.ctsi.ufl.edu/education/grant-workshops/>

- I. Training Grant Application Workshop
- II. National Research Service Award (PA-16-015)
- III. Current training grants at UF HSC
- IV. Library of T32 applications and critiques
- V. Training Grant Application Timeline
- VI. Identifying Mentors at UF HSC
- VII. Resources (Boiler Plate) (Updated 6/18)
  - CTSI Facilities and Resources (36)
  - UF Colleges (16)
  - Other Facilities and Resources Affiliated with UF (60)
- VIII. Certificate Programs

# Training Grant Toolkit (cont.)

<http://www.ctsi.ufl.edu/education/grant-workshops/>

- IX. Plan for Instruction in Responsible Conduct of Research**
- X. Marketing of UF Training Programs**
- XI. Recruitment and Retention Plan to Enhance Diversity**
- XII. Institutional Commitment Letter**
- XIII. Health Insurance Coverage**
- XIV. Assistance for Training Grant Administrators**
- XV. Stipends, Tuition/Fees, etc. (NOT-OD-19-036)**
- XVI. Data Tables Required for T32**
- XVII. Follow-up and Tracking of T32 Appointees**
- XVIII. Acknowledgement of CTSA grant support on papers and proposals**

# WHY APPLY FOR AN INSTITUTIONAL TRAINING GRANT?

- **Address the needs for the scientific workforce.**
- **Support graduate students and postdoctoral fellows to work in your research program.**
- **Organize “academic communities” around a topic of interest.**
- **Develop curricula, instructional materials, degree programs, and continuing educational sessions (e.g. seminars).**
- **Enact recruitment and retention strategies to assure enrollment of high quality, diverse trainees.**

# CHECKLIST: WHEN TO WRITE A T32 APPLICATION

- \_\_\_\_\_ **Unmet need for trainees or training in your subject area (including private sector)**
- \_\_\_\_\_ **Program Director with interest, NIH funding (usually), and track record of training**
- \_\_\_\_\_ **NIH-funded Mentors in subject area**
- \_\_\_\_\_ **Source of diverse trainee candidates**
- \_\_\_\_\_ **Facilities to support trainees**
- \_\_\_\_\_ **Department/College support for a Training Program**



# SOURCES OF TRAINING GRANTS

Federal government, NSF and NIH in particular, is the funding agency for most institutional training programs

- Foundations and Voluntary Health Agencies fund many individual scholarships and fellowships
- Limited number of nonfederal funders of training programs (e.g. HHMI)

NIH funds the Ruth L. Kirstein National Research Service Awards (NRSA) Institutional Training Grants with an Omnibus Program Announcement\* (Parent T32; PA-18-403)

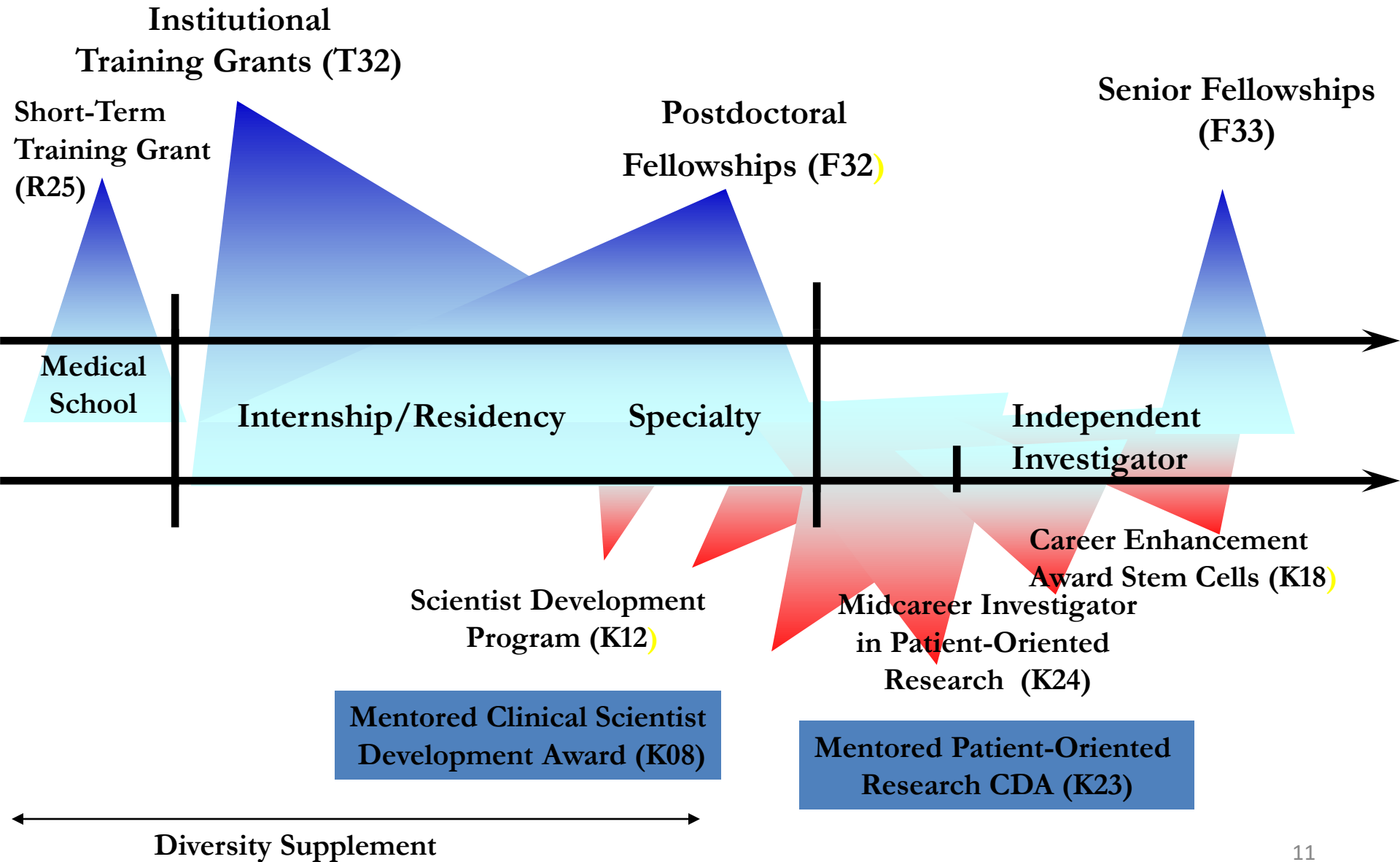
- Most NRSA's are reviewed by individual Institutes/Centers
- Requirements/Rules may vary by IC!
  - Number of submissions per year (often only one)
  - Receipt dates
  - Other T Awards= T34 (PA-19-219); T35 (PA-14-404); T90

\* See T Kiosk at [http://grants.nih.gov/training/T\\_Table.htm](http://grants.nih.gov/training/T_Table.htm)

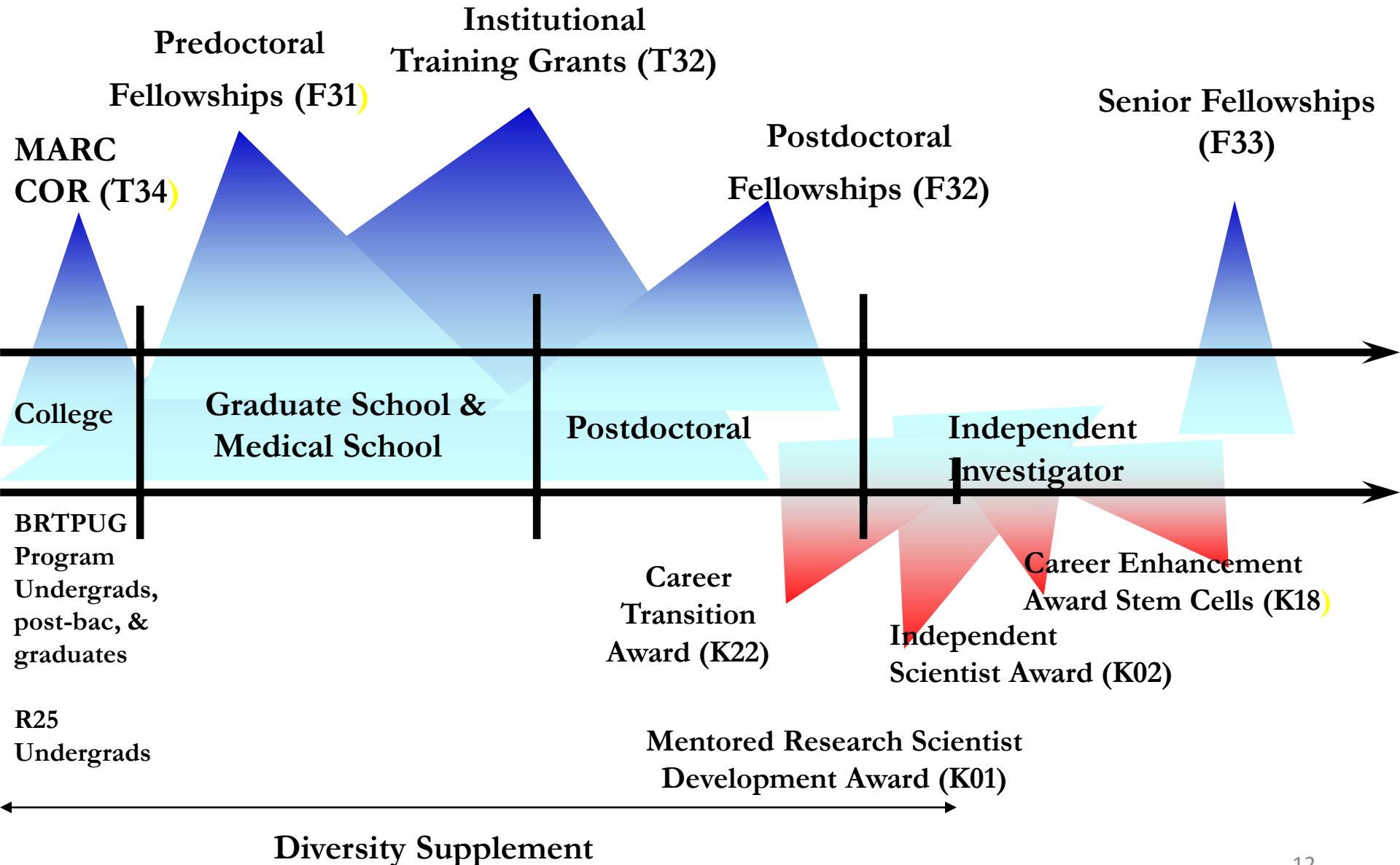
# TYPES OF INSTITUTIONAL RESEARCH TRAINING GRANTS

	<b>Example</b>
<b>Pre-college, undergraduate training (pipeline)</b>	<b>SEPA</b>
<b>Short-term research experiences</b>	<b>T35</b>
<b>Predoctoral training</b>	<b>T32</b>
<b>Postdoctoral training</b>	<b>T32</b>
<b>Interdisciplinary (undergrad, pre- and postdoc)</b>	<b>T90</b>
<b>MD-PhD programs</b>	<b>MSTP</b>
<b>Career Development programs</b>	<b>K12</b>

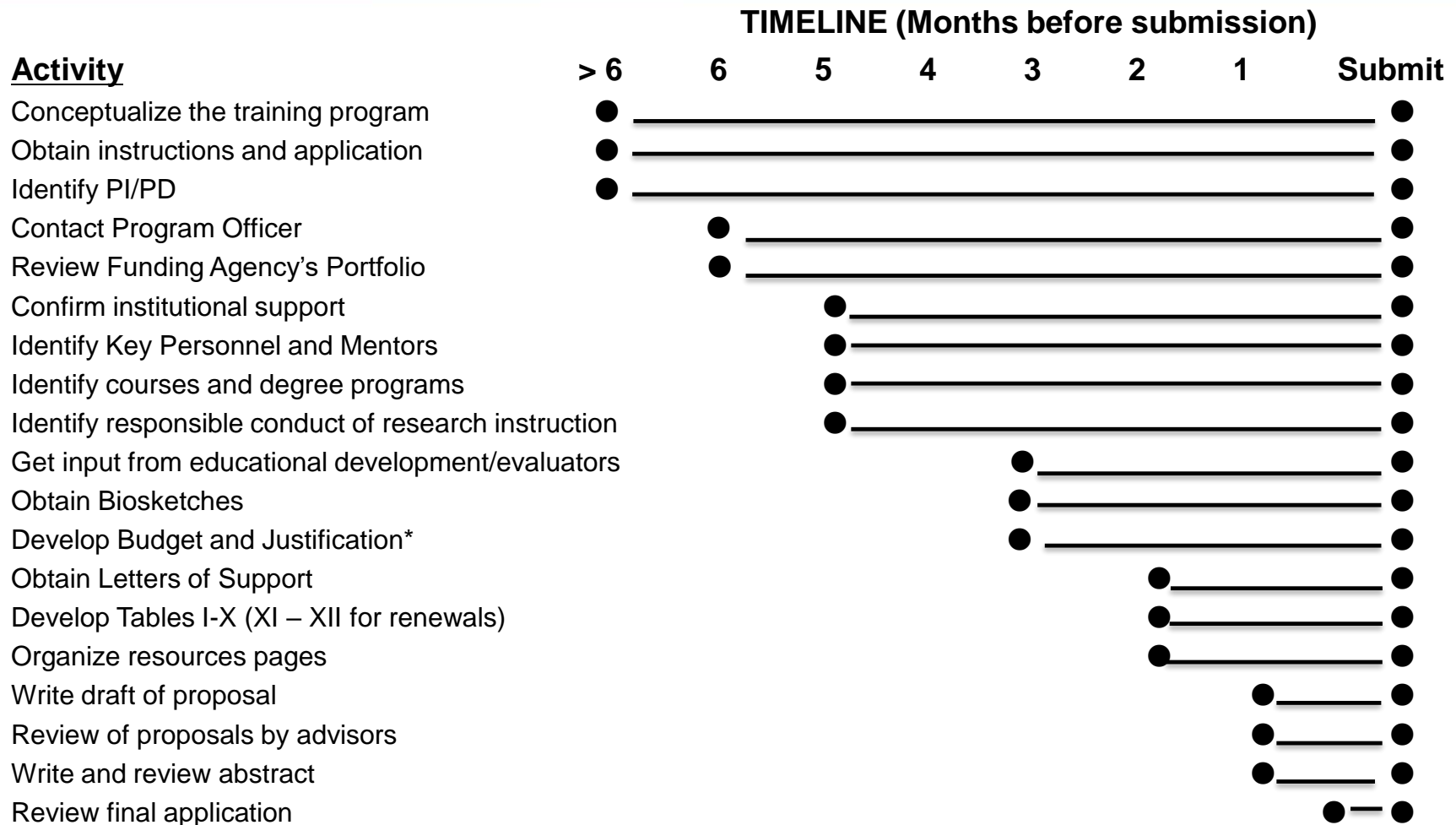
# Awards for Individuals with a Health-Professional Doctorate (e.g., MD)



# Awards for Individuals with a Research Doctorate (e.g., PhD)



# TRAINING GRANT TIMELINE



\*Identify >\$500K budget at >6 week phase

# Administrative Sections of Training Grant

- **All forms from SF424**
  - **Face Page**
  - **Abstract**
  - **Training Sites**
  - **Key Personnel**
  - **Table of Contents**
  - **Detailed Budgets**
    - **Initial Period**
    - **Entire Period (Calculate each year to verify <\$500K)**
- **Biographical Sketch of Program Director**
- **Resources**
- **Appendices (Training-related syllabi, teaching materials, etc.)**

**\* NOT-OD-11-008**

# Training Grant Budgets

- **Stipends (NOT-OD-19-036)**
  - Predoctoral (Per trainee per year by NIH up to 5 years of support)
  - Postdoctoral (Per trainee based on # of years since receipt of doctoral degree as set by NIH, up to 3 years of support), compliant with FLSA
- **Tuition and Fees (NOT-OD-10-073)**
  - Predoctoral: 60% of tuition and fees up to \$16K/year (\$21K for dual degree students)
  - Postdoctoral: 60% of requested tuition up to cap of \$4.5K/year or \$16K/year if enrolled in degree-granting program
- **Trainee Travel (Usually one trip per year)**
- **Training-related Expenses (NOT-OD-19-036)**
  - Supports training plan (health insurance, books, computers and software, consultants, data) (\$4,200 for predoc, \$10,850 for postdoc)
- **Indirect Costs (8%)**

# T32 Economics

- **Displacement of stipend and tuition from R01**
  - Predoctoral (\$40,000/yr/trainee)**
  - Postdoctoral (\$60,000/yr/trainee)**
- **Support for PI (Director 10% FTE) (Coordinator up to 20% FTE) from Department?**
- **Tuition for predoctoral fellows (\$16K/yr.)**
  - ? Degree programs for postdoctoral fellows**
- **Institutional support for shared services**
  - Educational Development and Evaluation**
  - Follow-up of trainees**
  - Grant application support (e.g. Tables)**



# Number of Positions To Request

- Pre- vs. Postdoctoral
- Preapproval (>6 weeks) required for budgets > \$500K per year for any one year of the grant.
- ? Too Many
  - Can you recruit high quality trainees?
  - Can the courses, mentors, etc. accommodate this number of trainees?
- ? Too Few
  - Is there a “critical mass” of trainees?
  - Is the number of trainees sufficient to have journal clubs, seminars, etc.?

# Biographical Sketch of Program Director/Principal Investigator

- **Personal Statement (summary of description in body of application)**
- **Role as PD/PI including % effort and leadership activities**
- **Track record in research**
- **Track record in administration**
- **Track record in training**
- **Honors and Offices: Training awards**
- **Publications: Related to topic of training grant**
- **Other support: Research and training support (e.g. prior training grants)**

# Resources

## (Updated June 2018)

### CTSI Facilities and Resources (N=36)

- Educational Programs

- Cores

### UF Colleges (N=16)

### Other Facilities (N=60)

- Animal Care Services

- Centers/Institutes

- Departments

- Information Systems

- Institutional Review Boards

- Health Science Center Library

- Research Administration

- Sid Martin Incubator

# Research Training Program Plan

- **Background/Introduction/Specific Aims\***
- **Program Plan**
  - **Program Administration\***
  - **Program Faculty\***
  - **Proposed Training\***
  - **Evaluation\***
  - **Trainee Candidates\***
  - **Institutional Environment and Commitment\***
- **Recruitment and Retention Plan to Enhance Diversity\***
- **Plan for Responsible Conduct of Research (3 page limit)**

**\*Part of 25 page limit on SF 424 form pages.**

# Instruction in Responsible Conduct of Research

- **Course: Responsible Conduct of Biomedical Research (GMS 7877)**
- **Human Subject Protection Program Certification**
- **Research with Vertebrate Animals (IACUC)**
- **Workshops**
  - **Recruitment and Retention of Research Subjects**
  - **Research Program Administration**
- **Continuing Education: Regular discussions**
- **Integration of ethics and integrity issues in didactic coursework (e.g. Grant Writing)**

# Instruction in Methods for Enhancing Reproducibility

- **T Team Advising Rigor Training Workgroup (McCormack, Rethlefsen, Marsiske, and T Team members)**
- **Didactic courses in the Graduate Curriculum**
  - **GMS 7877 “Responsible Conduct of Biomedical Research” (McCormack)**
  - **GMS 6848 “Ensuring Rigor and Reproducibility in Clinical and Translational Research” (M. Gurka)**
    - One credit online course offered in summer
- **Other modules in individual graduate and professional schools’ programs**
- **Module in T Writers’ Toolkit**

# Background

- **Overall Goals of the Program**
- **Specific Aims**
  - **Training Program**
    - **Didactic components**
    - **Career development opportunities**
    - **Mentored research experiences**
  - **Career Development Plan**
  - **Recruitment and Retention**
  - **Evaluation**
- **Rationale (Premises underpinning the training)**
- **Current Research Training at the Institution**
- **Research Training at Participating Organizations**
- **Relation of the Training Program to Other Training Activities**

# Objectives of NRSA Institutional Research Training Grants (PA-18-403)

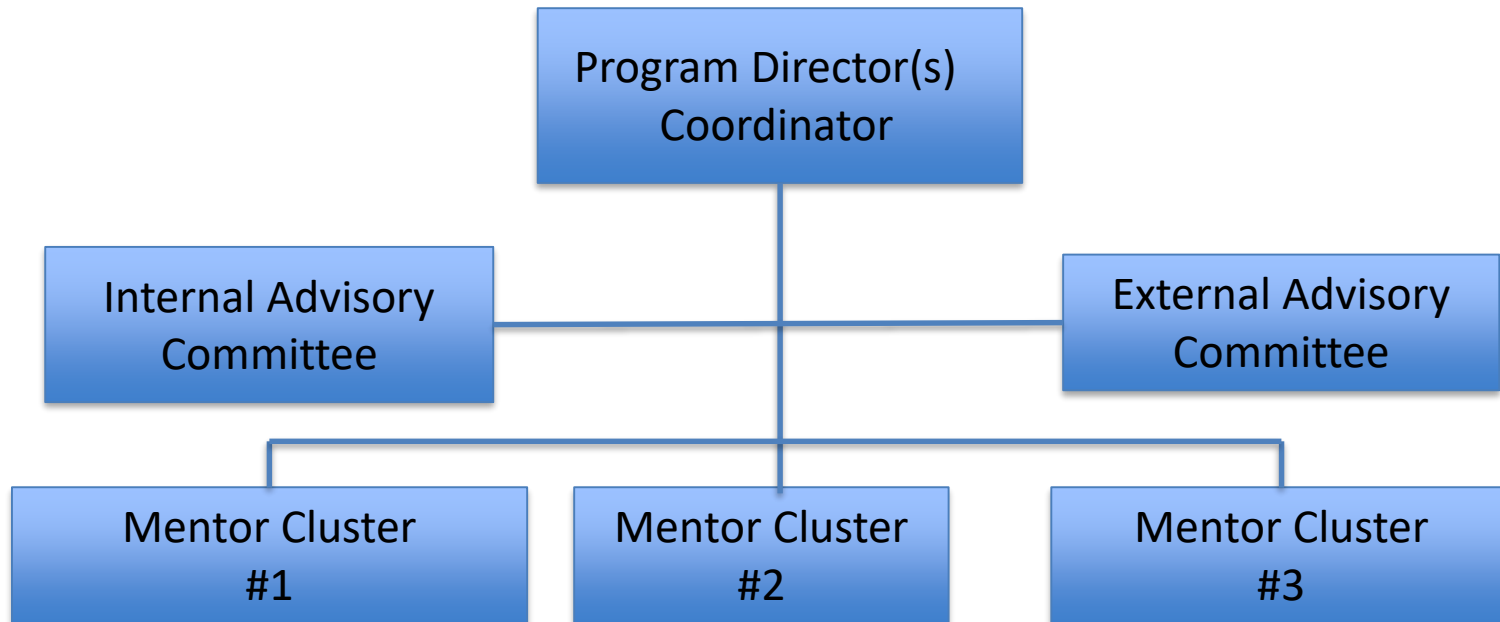
- 1. A strong foundation in research design, methods, and analytic techniques.**
- 2. Enhanced ability to conceptualize and think through research problems with increasing independence.**
- 3. Experience conducting research using state-of-the-art methods as well as presenting and publishing their research findings.**
- 4. Interaction with members of the scientific community at appropriate scientific meetings and workshops**
- 5. Enhancement of the trainee's understanding of the health-related sciences and the relationship of their research training to health and disease.**



# Organization and Administration of Training Programs

- **Principal Investigator/Program Director**
  - Research Experience
  - Training Experience
  - Administrative Experience
  - Multiple PIs
- **Internal Executive Committee**
- **External Advisory Committee**
- **Didactic Core**
- **Mentors**
- **Career Development Program**
- **Evaluation**

# TRAINING PROGRAM ORGANIZATIONAL CHART



# Training Program Faculty

- **Mentors versus Preceptors**
- **Organization by Disciplines:**  
**Research Clusters**
  - **Breadth: Number of disciplines involved in the training**
  - **Depth: Number of faculty in each discipline**
- **Biosketches**
  - **PI & Key Personnel to SF424 file**
  - **Non-key faculty and mentors**
    - **Research Training Program Plan Form (SF424)**
    - **Do not require personal statement**
- **Mentor information needed ~2+ months in advance to prepare Tables.**

# Training Grant Advisory Committees

- **Internal Executive Committee**
  - **Specific overview duties (e.g. Recruitment/ Selection, Mentor Review, Trainee Progress)**
  - **Meeting quarterly or for specific duties**
- **External Advisory Committee**
  - **Annual Overview**
  - **Opportunities for engagement of partnering institutions.**

# Institutional Commitment for Institutional Training Grants

- **Required, reviewers look for more than the minimum**
- **Signed letter on institutional letterhead from responsible official (Chair, Dean, Research Administrator)**
- **Description of applicant institution's commitment**
  - **PD/PI time, and salary to direct the program (usually 10% effort)**
  - **Program faculty and staff (e.g. coordinator, usually at least 20% effort)**
  - **Stipend, tuition support needed beyond that provided by training grant.**

# UF and UF Health Institutional Commitment to Institutional Training Grants

1. Funding of tuition required above that provided by the T32 Award.\*
2. PD/PI and coordinator time and effort.\*
3. Space for predoctoral and postdoctoral students.\*
4. Support for 5% effort faculty-level Educational Development specialists for curriculum development and evaluation plan.\*\*
5. Centralized office for follow-up of NIH-funded trainees.\*\*
6. Access to CTSI services, pilot studies, vouchers, etc.

\*Department/College

\*\*HSC and UF CTSA Program

# Mentored Research Experience

- **Definition of a mentor: faculty with >1 years of experience in training and current NIH funding of research (N>284 at UF HSC)**
- **Mentor Development: Mentors vs. preceptors**
- **Selection of a mentor/mentorship team**
- **Mentoring Plan: Frequency, duration, etc.**
- **Individual Development Plan (IDP)  
(NOT-OD-14-113)**
- **Oversight of mentoring and career development plans (e.g. PI/PD, Internal Executive Committee)**

# Didactic Curriculum

- **Driven by learning objectives and competencies to be acquired.**
- **Degree or certificate as recognized credentials.**
- **Full time vs. Part time.**
- **Criteria for successful completion.**
- **Identify instructors, synopsis.**
- **Perpetual conflict: lab time vs. class time.**
- **For postdocs, Certificate as alternative to MS degree.**



# Trainee Candidates

- **Description of applicant pool**
- **Qualification and criteria for acceptance**
  - **Disciplines/prior training**
  - **Transcripts**
  - **Letters of recommendation**
  - **Standardized test scores (GRE\*, MCAT)**
- **Process of review and selection**

**\*GRE under fire as legitimate qualification.**

# Recruitment and Retention Plan to Enhance Diversity

- **UF/UF HSC/CTSI Programs in Toolkit**
  - **Track Record**
    - **Underrepresented Racial and Ethnic Groups**
    - **Disability Groups**
  - **Pipeline Programs**
  - **Plan**
    - **Website**
    - **Advertisements**
    - **Personal efforts by Program Director/Faculty**
    - **Formal collaboration with minority institutions**
    - **Recruiting consultation service**
- \*Do not rely solely on institutional efforts**

# Progress Report

- **Accomplishments of the Program to date**
- **Use of training-related expenses**
- **Lack of completion of planned duration of training**
- **Synopsis of trainees' programs**
  - **Didactic coursework/degree program**
  - **Research project/Mentors**
  - **Publications (PubMed)**
  - **Current position (if graduated)**

# REVIEW OF T32 APPLICATIONS

## Presubmission

- Allow 2+ weeks prior to submission
- Identify faculty with T32 experience
  - Current PI/PD of T32
  - Recent T32 Reviewers

## Post review

- Communicate review scores and critiques to OBRCD
- If not funded, schedule discussion of revision, resubmission.

# **Institutional Training Grants at UF HSC**

- 1. Strategically important, large DC-carrying NIH grants**
- 2. Enhanced institutional support**
  - Tuition supplement, no RCM**
  - Website for resource boiler plate, biosketches, courses**
  - Doctoral - level – expertise in curricular design, educational evaluation**
  - Assistance with table development, ? Follow-up of trainees.**
- 3. Grant-writing help (course, application review)**