The First (F) award?
No, F does not mean first but Fellowship

PJ Simpson-Haidaris, PhD
Director, PhD Program in Translational Biomedical Science
University of Rochester, NY
pj_simpsonhaidaris@urmc.rochester.edu

PJ has no conflicts of interest or financial conflicts to disclose
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Source Material

- PA-14-148: Ruth L. Kirschstein National Research Service Award Individual Predoctoral Fellowship to Promote Diversity in Health-Related Research (Parent F31 - Diversity).
- oppPA-14-148-cidFORMS-C.pdf (SF424 specific for PA-14-149).
- SF424 (R&R) Individual Fellowship Application Guide for NIH and AHRQ (Updated Dec 20, 2013).
- Fellowship Applicant Biosketch sample from NIH
- NIH websites as screen shots
- Section Templates constructed by PJ and students

Thank you Mayo Clinic Center for Clinical and Translational Science for use of TL1 compass
Ruth L. Kirschstein NRSA Individual Fellowship Funding Opportunity Announcements (FOA)

- Role in development of safe and effective polio vaccine
- First woman director of major institute at the NIH (NIGMS)
- Champion of basic biomedical research and training programs for all talented students, and particularly underrepresented minorities.

http://www.nih.gov/about/kirschstein/
Four critical take home messages about F awards

1. Prepare a *proper* NIH Fellowship Biosketch.

2. Build an *exceptional* Research and Career Development Mentoring TEAM.

3. Recruit outside Referees who can write the *STRONGEST* possible letters attesting to your potential to launch an independent career.

4. Prepare a *Research and Career-Individual Development Plan* (RC-IDP) to define gaps in training and design metrics to meet career goals.
Getting Started

F Kiosk is your Friend

Always check for most recent Funding Opportunity Announcement
## Types of F awards listed at F Kiosk

<table>
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<th>Mechanism</th>
<th>Program Description</th>
</tr>
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<tr>
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<td>NRSA Policy Issues</td>
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| F31 | NIH: Ruth L. Kirschstein National Research Service Award (NRSA) Individual Predoctoral Fellowship to Promote Diversity in Health-Related Research (Parent F31 - Diversity) (PA-14-148)  
NINR: NINR Ruth L. Kirschstein National Research Service Awards for Individual Predoctoral Fellows in Nursing Research (F31) (PAR-11-117)  
NINDS: NINDS Ruth L. Kirschstein National Research Service Awards for Individual Predoctoral Fellows in MD-PhD Programs (F31) (PAR-13-127)  
NIGMS: Ruth L. Kirschstein National Research Service Awards (NRSA) for Individual Predoctoral Fellows in PharmD/PhD Programs (F31) (PA-11-129) |
| F32 | NIH: Ruth L. Kirschstein National Research Service Award (NRSA) Individual Postdoctoral Fellowship (Parent F32) (PA-14-149)  
NIAMS: Ruth L. Kirschstein National Research Service Awards for Individual Postdoctoral Fellowships in Muscular Dystrophy Research (F32) (PA-11-075) |
| F33 | NIH: Ruth L. Kirschstein National Research Service Awards (NRSA) for Individual Senior Fellowship (Parent F33) (PA-14-151) |
The sections (grant body parts) described in this workshop are the same for F30, F31 and F32 funding mechanisms. PA-14-148 used as model.

<table>
<thead>
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<th>Funding Opportunity Title</th>
<th>Ruth L. Kirschstein National Research Service Award Individual Predoctoral Fellowship to Promote Diversity in Health-Related Research (Parent F31 - Diversity)</th>
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<tr>
<td>Activity Code</td>
<td>F31 Predoctoral Individual National Research Service Grant Award</td>
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<tr>
<td>Announcement Type</td>
<td>Reissue of PA-11-112</td>
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<td>Related Notices</td>
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<tr>
<td>Funding Opportunity Announcement (FOA) Number</td>
<td>PA-14-148</td>
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<tr>
<td>Companion Funding Opportunity</td>
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<td>Number of Applications</td>
<td>See Section III. 3. Additional Information on Eligibility.</td>
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<td>Catalog of Federal Domestic Assistance (CFDA) Number(s)</td>
<td>93.853; 93.351; 93.846; 93.839; 93.838; 93.837; 93.233; 93.866; 93.361; 93.307; 93.121; 93.172; 93.273; 93.859; 93.878; 93.867; 93.847; 93.856; 93.855; 93.398; 93.286; 93.865; 93.173; 93.865; 93.213; 93.242; 93.113; 93.279</td>
</tr>
<tr>
<td>Funding Opportunity Purpose</td>
<td>The purpose of this Kirschstein-NRSA predoctoral fellowship (F31) award is to enhance the diversity of the health-related research workforce by supporting the research training of predoctoral students from population groups that have been shown to be underrepresented in the biomedical, behavioral, or clinical research workforce. Such individuals include those from underrepresented racial and ethnic groups, those with disabilities, and those from disadvantaged backgrounds. Through this award program, promising predoctoral students will obtain individualized, mentored research training from outstanding faculty sponsors while conducting well-defined research projects in scientific health-related fields relevant to the missions of the participating NIH Institutes and Centers. The proposed mentored research training is expected to clearly enhance the individual’s potential to develop into a productive, independent research scientist.</td>
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Not all Institutes and Centers (IC) Participate

<table>
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<th>National Institutes of Health (NIH)</th>
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<td>National Cancer Institute (NCI)</td>
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<td>National Eye Institute (NEI)</td>
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<td>National Heart, Lung, and Blood Institute (NHLBI)</td>
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<td>National Human Genome Research Institute (NHGRI)</td>
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<td>National Institute on Aging (NIA)</td>
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<td>National Institute on Alcohol Abuse and Alcoholism (NIAAA)</td>
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<td>National Institute of Allergy and Infectious Diseases (NIAID)</td>
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<tr>
<td>National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)</td>
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<tr>
<td>National Institute of Biomedical Imaging and Bioengineering (NIBIB)</td>
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<tr>
<td>Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)</td>
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<td>National Institute on deafness and Other Communication Disorders (NIDCD)</td>
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<tr>
<td>National Institute of Dental and Craniofacial Research (NIDCR)</td>
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<tr>
<td>National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)</td>
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<td>National Institute on Drug Abuse (NIDA)</td>
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<td>National Institute of Environmental Health Sciences (NIEHS)</td>
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<td>National Institute of General Medical Sciences (NIGMS)</td>
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<td>National Institute of Mental Health (NIMH)</td>
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<td>National Institute of Neurological Disorders and Stroke (NINDS)</td>
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<td>National Institute of Nursing Research (NINR)</td>
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<td>National Institute on Minority Health and Health Disparities (NIMHD)</td>
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<td>National Library of Medicine (NLM)</td>
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<tr>
<td>National Center for Complementary and Alternative Medicine (NCCAM)</td>
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<tr>
<td>Division of Program Coordination, Planning and Strategic Initiatives, Office of Research Infrastructure Programs (ORIP)</td>
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Special Note: Because of the differences in individual Institute and Center (IC) program requirements for this FOA, prospective applicants are **strongly encouraged to consult the Table of IC-Specific Information, Requirements and Staff Contacts**, to make sure that their application is responsive to the requirements of one of the participating NIH ICs. See [Fellowship FAQs](https://fellowshipfaqs.nih.gov).
PA-14-148 Diversity F31 IC-specific info and contacts

How do you obtain the electronic application?

Look for the teenie weenie “Apply for Grant Electronically” button in program announcement and click on it.
Make sure to download the Fellowship Instruction Guide

SF424 (R&R)
Individual Fellowship Application Guide for NIH and AHRQ

A guide developed and maintained by NIH for preparing and submitting individual fellowship applications via Grants.gov to NIH and AHRQ using the SF424 (R&R)

Forms Version C application packages

Updated December 20, 2013
FOA
PA-14-148
Diversity F31
(Parent)
specific
SF424
FORMS-C
Verify name of FOA and opening and closing dates

<table>
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<tr>
<th>Opportunity Title:</th>
<th>Ruth L. Kirschstein National Research Service Award (NR)</th>
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<tr>
<td>Offering Agency:</td>
<td>National Institutes of Health</td>
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<td>CFDA Number:</td>
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<td>CFDA Description:</td>
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<td>Opportunity Number:</td>
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<td>Opportunity Open Date:</td>
<td>03/08/2014</td>
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<tr>
<td>Opportunity Close Date:</td>
<td>01/07/2017</td>
</tr>
<tr>
<td>Agency Contact:</td>
<td>eRA Commons Help Desk</td>
</tr>
<tr>
<td></td>
<td>Monday to Friday 7 am to 8 pm ET</td>
</tr>
<tr>
<td></td>
<td>E-mail: <a href="mailto:helpdesk@od.nih.gov">helpdesk@od.nih.gov</a></td>
</tr>
<tr>
<td></td>
<td>Phone: 1-866-504-9552</td>
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Create name for application—include Institute, your last name and brief subject identifiers.
If using human subjects, select optional forms too

<table>
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<td>SF424 (R &amp; R)</td>
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<td>PHS Fellowship Supplemental Form</td>
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<td>Research and Related Senior/Key Person Profile (Expanded)</td>
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<tr>
<td>Research And Related Other Project Information</td>
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<tr>
<td>Project/Performance Site Location(s)</td>
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<tr>
<td><strong>Optional</strong></td>
</tr>
<tr>
<td>☑ Planned Enrollment Report</td>
</tr>
<tr>
<td>☑ PHS 398 Cumulative Inclusion Enrollment Report</td>
</tr>
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</table>

**Instructions**

*Show Instructions >>*
PJ uses SF424 Form upload fields as the Checklist by attaching most recent completed documents

Note: all fields highlighted in yellow are required BUT Not all fields required are highlighted!
Four critical take home messages about F awards

1. Prepare a **proper** NIH Fellowship Biosketch.
2. Build an **exceptional** Research and Career Development Mentoring TEAM.
3. Recruit outside Referees who can write the **STRONGEST** possible letters attesting to your potential to launch an independent career.
4. Prepare a *Research and Career-Individual Development Plan* (RC-IDP) to define gaps in training and design metrics to meet career goals.
Knee joint connected to the leg bone…Training-Specific Sections

Goals

Dissertation Research

Activities
RC-IDP

Selection of Sponsor & Institution

Additional Educational Information

Responsible Conduct of Research

Sponsors Training Plan, Mentoring History and Resources ($$)

Certification Letter

Respective Contributions

If these two sections are missing from application, it will NOT get reviewed.
Some Sections Depend on Type of Research Conducted
no page limits

- Human Subjects?
- Risks Benefits
  - Enrollment Women Children Minorities DSMP/DSMB
- Resource Sharing Plan
- Select Agents?
- Stem Cell Research?
- Facilities, Other Resources & Equipment
- Vertebrate Animal Research?
- Care & Use
  - Types of animals
  - Justify # animals
  - Vet Care
  - Alleviate Pain
  - Euthanasia
Don’t Forget the Research Grant!

Summary/Abstract

Narrative/Public Health Significance

Introduction, if resubmission

Cover Letter

Specific Aims

Research Strategy

Bibliography

Biosketches
- PD/PI Sponsor
- Co-sponsor
- Advisory Committee
- Members
- Consultants + letters

3 Letters of Recommendation
Key Personnel: PD/PI is automatically populated

RESEARCH & RELATED Senior/Key Person Profile (Expanded)

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<th>Value</th>
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<td>Prefix</td>
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<tr>
<td>* First Name</td>
<td>Stellar</td>
</tr>
<tr>
<td>Middle Name</td>
<td></td>
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<tr>
<td>* Last Name</td>
<td>Student</td>
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<td>Suffix</td>
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<td>Position/Title</td>
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<tr>
<td>Department</td>
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<td>Organization Name</td>
<td>University of Yours</td>
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<tr>
<td>* Street1</td>
<td>2000 CTSI Blvd</td>
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<tr>
<td>Street2</td>
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<tr>
<td>* City</td>
<td>Your Town</td>
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<td>* State</td>
<td>NY: New York</td>
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<td>Province</td>
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<td>* Country</td>
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<tr>
<td>* Zip/Postal Code</td>
<td>146420001</td>
</tr>
<tr>
<td>* Phone Number</td>
<td>555-555-5555</td>
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<tr>
<td>* Fax Number</td>
<td>111-111-1111</td>
</tr>
<tr>
<td>E-Mail</td>
<td><a href="mailto:Stellar_Student@UniversityOfYours.edu">Stellar_Student@UniversityOfYours.edu</a></td>
</tr>
<tr>
<td>Credential, e.g., agency login</td>
<td>StellarStudent (this is your eComms user ID)</td>
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<td>* Project Role</td>
<td>PD/PI</td>
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<td>most recent degree</td>
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<td>Degree Year</td>
<td>year</td>
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- **PD/PI must include Commons ID**
Who are Key Personnel?

- Principal Investigator/Program Director (MPIs)
- Mentors/Sponsor
- Co-Mentors/Co-Sponsors
- Co-Investigators
- Consultants/Collaborators
First critical take home message about F awards

1. Prepare *proper* NIH Fellowship Biosketch.

- Use NIH legal font typeface and size
  - Arial
  - Helvetica
  - Palatino Linotype or
  - Georgia

- **Black font color; 11 points or larger**
  - Smaller font sizes can be used in figure legends and tables, but no smaller then **8 pt**

- **Arial 11 pt** most frequently used font
List positions/jobs, education, honors, experiences, memberships, AND publications from oldest to newest (i.e., chronological order)

Include Post-doc, Residency and Fellowship training in Education table (also include in Positions section)

Include publication PMCID numbers (PMID numbers if no PMCID numbers assigned)—per NIH Public Access Policy.

https://publicaccess.nih.gov
NIH Fellowship Biosketch
eRA Commons User Name

FELLOWSHIP APPLICANT BIOGRAPHICAL SKETCH (SAMPLE)
USE ONLY FOR INDIVIDUAL PREDOCTORAL and POSTDOCTORAL FELLOWSHIPS. DO NOT EXCEED FOUR PAGES.

NAME OF FELLOWSHIP APPLICANT
Leilani Robertson-Chang

POSITION TITLE
Postdoctoral researcher

eRA COMMONS USER NAME (credential, e.g., agency login)
RobertsonL

EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)

<table>
<thead>
<tr>
<th>INSTITUTION AND LOCATION</th>
<th>DEGREE (if applicable)</th>
<th>YEAR(s)</th>
<th>FIELD OF STUDY</th>
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<tr>
<td>Swarthmore College</td>
<td>B.S.</td>
<td>05/1999</td>
<td>Engineering</td>
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<tr>
<td>UC San Diego</td>
<td>Ph.D.</td>
<td>09/2007</td>
<td>Molecular biology</td>
</tr>
<tr>
<td>Michigan State University (postdoc)</td>
<td>n/a</td>
<td>n/a</td>
<td>Bioinformatics</td>
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</table>

Please refer to the application instructions in order to complete sections A, B, C, and D of the Biographical Sketch.

NOTE: The Biographical Sketch may not exceed four pages. Follow the formats and instructions on the attached sample.

Be sure to get your Commons ID and have you listed in Commons as PD/PI

Education/Training Format same for all NIH Biosketches for R, K and F awards
A. Personal Statement for the NIH Biosketch Research (R), Career Development (K) or Training (F) Grant Application

– Purpose of Personal Statement:
  • To “briefly describe why your experience and qualifications make you particularly well-suited for your role (e.g., PD/PI, mentor, participating faculty, fellow, trainee) in the project that is the subject of the application.”

Note to Trainees: Make sure your mentors and consultants/collaborators edit their personal statement on their NIH Biosketches to describe their specific role on YOUR grant not some unrelated grant!
• **B. Positions and Honors**
  • List all job experiences,
    • include postdoc, residency and fellowships
  • List all honors, awards, and professional contributions.

• **C. Peer-reviewed publications**
  • List 5 most relevant to THIS proposal and 10 of your best relevant to fields of research of THIS grant.
  • Put in chronological order—oldest first!

• **D. Research Support**
  • Ongoing
  • Completed
  • NO pending

**Format for Biosketch for R and K award applications and Mentors (Sponsors) and Collaborators Bios.** Mentors, please update your Bios correctly, including personal statements!
In Personal Statement, describe Training Potential (F-predoc) or Launch of Independence (F-postdoc and Ks)

– Describe how new training plan will provide you with the skills to launch next career stage.

– Outline set of career development activities, didactic coursework, workshops, seminar series, etc. that will enhance your abilities to become an independent investigator.

– Explain how your primary mentor and mentoring team members will foster your career goals and why institution is perfect place for training.
Personal Issues in Personal Statement

- NIH recognizes that personal factors affect career advancement and productivity.
  - Taking care of a terminally ill relative
  - A complicated pregnancy requiring bed-rest
  - A natural disaster that wiped out a valuable resource
  - Death of a mentor (PJ has reviewed grants when this has happened after submission of the grant)

- Optional, but best to explain if big gaps in training, job history or publications occur!

Source—Modification of the Biographical Sketch in NIH Grant Application Forms. Notice Number: NOT-OD-11-045
A. Personal Statement

My long term research interests involve the development of a comprehensive understanding of key developmental pathways and how alterations in gene expression contribute to human disease. My academic training and research experience have provided me with an excellent background in multiple biological disciplines including molecular biology, microbiology, biochemistry, and genetics. As an undergraduate, I was able to conduct research with Dr. Xavier Factor on the mechanisms of action of a new class of antibiotics. As a predoctoral student with Dr. Tanti Auguri, my research focused on the regulation of transcription in yeast, and I gained expertise in the isolation and biochemical characterization of transcription complexes. I developed a novel protocol for the purification for components of large transcription complexes. I was first author of the initial description of the Most Novel Complex. A subsequent first author publication challenged a key paradigm of transcription elongation and was a featured article in a major journal. During my undergraduate and graduate careers, I received several academic and teaching awards. For my postdoctoral training, I will continue to build on my previous training in transcriptional controls by moving into a mammalian system that will allow me to address additional questions regarding the regulation of differentiation and development. My sponsor Dr. I.M. Creative is an internationally recognized leader in the transcription/chromatin field and has an extensive record for training postdoctoral fellows. The proposed research will provide me with new conceptual and technical training in developmental biology and whole genome analysis. In addition, the proposed training plan outlines a set of career development activities and workshops – e.g. grant writing, public speaking, lab management, and mentoring students – designed to enhance my ability to be an independent investigator. My choice of sponsor, research project, and training will give me a solid foundation to reach my goal of studying developmental diseases in man. During my second postdoctoral year in Dr. I.M.’s lab my father had a severe stroke that eventually ended his life. I was out of the lab for six months dealing with my father’s incapacitating illness and end-of-life issues. This hiatus in training reduced my scientific productivity.

If you experienced personal issues affecting productivity, be sure to mention here.
### NIH Fellowship Biosketch

#### B. Positions in Table Form

**B. Positions and Honors.** List in chronological order all non-degree training, including postdoctoral research training, all employment after college, and any military service. Clinicians should include information on internship, residency and specialty board certification (actual and anticipated with dates) in addition to other information requested. State the Activity/Occupation and include beginning/end dates, field, name of institution/company, and the name of your supervisor/employer.

<table>
<thead>
<tr>
<th>ACTIVITY/OCCUPATION</th>
<th>BEGINNING DATE (mm/yy)</th>
<th>ENDING DATE (mm/yy)</th>
<th>FIELD</th>
<th>INSTITUTION/COMPANY</th>
<th>SUPERVISOR/EMPLOYER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineer</td>
<td>08/99</td>
<td>06/01</td>
<td>Structural engineering</td>
<td>The IBeam Group</td>
<td>Sandip Mehta</td>
</tr>
<tr>
<td>Postdoc</td>
<td>10/07</td>
<td>12/07</td>
<td>Molecular biology</td>
<td>UC San Diego</td>
<td>G. Chadwick Murray</td>
</tr>
<tr>
<td>Postdoc</td>
<td>01/08</td>
<td>present</td>
<td>Bioinformatics</td>
<td>Michigan State University</td>
<td>I.M. Creative</td>
</tr>
</tbody>
</table>
B. Academic and Professional Honors

Academic and Professional Honors. List any academic and professional honors. Include all scholarships, traineeships, fellowships, and development awards other than Kirschstein-NRSA. Indicates sources of awards, dates, and grant or award numbers. List current memberships in professional societies, if applicable.

Daughters of Hawaii Scholarship, 1995-1997
National Merit Scholarship, 1995-1999
Paula F. Laufenberg award for best senior project in the Department of Engineering, Swarthmore College, 1999
B.S. awarded with high honors, Swarthmore College, 1999
STAR award for public service in engineering, The IBeam Group, 2001
Ford Foundation Predoctoral Fellowship for Minorities, 2002-2005

Memberships in professional societies:

Sigma Xi
Association for Women in Science
National Society for Bioinformatics and Biotechnology

Remember to List Oldest First
C. Publications (in chronological order). List your entire bibliography, separating research papers, abstracts, book chapters and reviews. Within each subsection the list should be chronological. Manuscripts “submitted for publication” or “in preparation” should be included and identified. For publicly available citations, URLs or PMC submission identification numbers may accompany the full reference: copies of publicly available publications are not accepted as appendix material.

**Research papers:**


**Abstracts:**


*Put your name in **BOLD** font so reviewers can quickly identify your first-authored papers, a measure of productivity.*

*List submitted and in preparation manuscripts ONLY on NIH Fellowship Biosketch; OK to List Abstracts Too.*
### NIH Fellowship Biosketch

#### D. Scholastic Achievement

- **Predoctoral** applicants provide Graduate Record Examination (GRE) scores and percentiles.
- **MD/PhD** applicants should provide MCAT scores.
- Describe Grading Scale if not based on 4.0

<table>
<thead>
<tr>
<th>YEAR</th>
<th>SCIENCE COURSE TITLE</th>
<th>GRADE</th>
<th>YEAR</th>
<th>OTHER COURSE TITLE</th>
<th>GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>Introduction to Molecular Biology</td>
<td>A</td>
<td>1995</td>
<td>Introduction to Engineering</td>
<td>A</td>
</tr>
<tr>
<td>1996</td>
<td>Introductory Chemistry I</td>
<td>B</td>
<td>1995</td>
<td>Calculus I</td>
<td>A</td>
</tr>
<tr>
<td>1996</td>
<td>Physics for Engineers</td>
<td>A</td>
<td>1996</td>
<td>Calculus II</td>
<td>B</td>
</tr>
<tr>
<td>1997</td>
<td>Introductory Chemistry II</td>
<td>C</td>
<td>1996</td>
<td>Structures and Design</td>
<td>A</td>
</tr>
<tr>
<td>1997</td>
<td>Organic Chemistry I</td>
<td>A</td>
<td>1996</td>
<td>Linear Algebra</td>
<td>B</td>
</tr>
<tr>
<td>1998</td>
<td>Biochemistry</td>
<td>A</td>
<td>1997</td>
<td>Structural Materials Laboratory</td>
<td>A</td>
</tr>
<tr>
<td>1999</td>
<td>Cell Biology</td>
<td>A</td>
<td>1997</td>
<td>Numerical Computation &amp; Graphics Tools</td>
<td>A</td>
</tr>
</tbody>
</table>
University Authorized Representative submits grant on your behalf
April 11, 2014

To Whom It May Concern:

I am writing to submit my application, titled “The most import research ever done” for consideration under the PA-14-148 Ruth L. Kirschstein National Research Service Award Individual Predoctoral Fellowship to Promote Diversity in Health-Related Research funding announcement.

Please consider routing this application for review by the National Institute of [insert appropriate Institute Name]. If you have spoken ahead of time with a Program Officer, include that person’s name and indicate that the PO recommended the Institute you selected.

Please consider dual assignment in the National Institute of [insert appropriate alternate institute where research addresses Institute’s mission].

Research areas contained in this application include [insert four to five keywords that will help CSR to route you application to most appropriate study section]

My Referees are:

1. Elmer Fudd, PhD, [insert position/department/University or Institution]
2. Bart Simpson, MD, PhD, [insert position/department/University or Institution]
3. Nobel Laureate, PhD, [insert position/department/University or Institution]

I have attached any required agency approval documentation for the current application.

Sincerely,

e-signature

Stellar Student
PhD Candidate
University of Yours

Communicate with Program Officer before submitting grant to make sure grant focus matches expectations of Institute’s Fellowship Training Mission.
**PD/PI field populated from front page information**

RESEARCH & RELATED Senior/Key Person Profile (Expanded)

<table>
<thead>
<tr>
<th>PROFILE - Project Director/Principal Investigator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prefix:</td>
</tr>
<tr>
<td>* Last Name: Student</td>
</tr>
<tr>
<td>Position/Title: PhD candidate</td>
</tr>
<tr>
<td>Organization Name: University of Yours</td>
</tr>
<tr>
<td>*Street1:</td>
</tr>
<tr>
<td>Street2:</td>
</tr>
<tr>
<td>*City:</td>
</tr>
<tr>
<td>*State:</td>
</tr>
<tr>
<td>*Country:</td>
</tr>
<tr>
<td>*Phone Number:</td>
</tr>
<tr>
<td>E-Mail:</td>
</tr>
<tr>
<td>Credential, e.g., agency login: StellarStudent (this is your eCommons user ID)</td>
</tr>
<tr>
<td>*Project Role:</td>
</tr>
<tr>
<td>Degree Type:</td>
</tr>
<tr>
<td>Degree Year:</td>
</tr>
<tr>
<td>*Attach Biographical Sketch</td>
</tr>
<tr>
<td>Attach Current &amp; Pending Support</td>
</tr>
</tbody>
</table>
Second critical take home message about F awards

2. Build an exceptional Research and Career Development Mentoring TEAM.

- Chose sponsors with complementary expertise in scientific disciplines who will serve as role models for career advancement and leadership skills.

Make sure your mentoring team includes expertise in all disciplines of science you state in career goals for CURRENT training activities and FUTURE career goals.

- Add consultants and research content mentors (sponsors) for training in highly unique skills.

- Pick mentors with substantial research support ($$) and experience mentoring.
  - If primary mentor/sponsor has expertise but “in between” NIH grants, recruit a co-mentor with substantial funding who commits to support research.
After PD/PI, enter Sponsor and Co-sponsor, then rest of mentors alphabetically.
Sponsor and any Co-Sponsor(s) Information is limited to 6 pages.
Create a heading at the top of the first page titled “Section II—Sponsor and Co-Sponsor Information.”

Complete these items as comprehensively as possible so that a meaningful evaluation of the training environment can be made by the reviewers.

a. Research Support Available
In a table, list all current and pending research and research training support specifically available to the applicant for this particular training experience.

Include funding source, complete identifying number, title of the research or training program, and name of the principal investigator, dates, and amount of the award.

Include this information for any co-sponsor as well.

b. Research Support Available (Co-sponsor). Dr. Simpson-Haidaris is a tenured Associate Professor of Medicine, Microbiology & Immunology and Pathology at the University of Rochester Medical Center (URMC).

Table a.2. Current and Pending Support Co-sponsor, PJ Simpson-Haidaris, PhD.

<table>
<thead>
<tr>
<th>Grant Title (Role on Project)</th>
<th>Funding Source and Grant ID</th>
<th>Project Period</th>
<th>Current Year (or Total Period) Direct Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The University of Rochester's Clinical and Translational Science Institute (Director, Translational Biomedical Science PhD Program; Member, Education, Training and Career Development Key Function; Member, Mentor Core Development Key Function) (PI/PD: K. Kebbutz)</td>
<td>NINHIGMS</td>
<td>09/01/14-08/30/19</td>
<td>($3,881,535 TDC)</td>
</tr>
<tr>
<td>Novel Endogenous Peptide Inhibitor of Breast Cancer Angiogenesis and Metastasis (PI)</td>
<td>DoD WB1XMO12-1-0001</td>
<td>08/01/12-07/31/15</td>
<td>($500,000 TDC)</td>
</tr>
<tr>
<td>Intracellular Invasion by Streptococcus mutans: Significance in Disease (Co-Investigator: MPI: Abranches-Lemos)</td>
<td>NINHIGMS</td>
<td>05/01/13-03/31/18</td>
<td>$250,000</td>
</tr>
<tr>
<td>Rochester Bridges to the Doctorate for Deaf and Hard of Hearing Student (Science Director: MPI: Bennet/Huusar)</td>
<td>NINHIGMS</td>
<td>09/01/13-03/30/16</td>
<td>$203,297</td>
</tr>
</tbody>
</table>

Pending

Rochester Partnership to Advance Research and Academic Careers in Deaf Scholars - RACCA (Program Coordinator: MPI: Dauwurst/Rollbite)

<table>
<thead>
<tr>
<th>Grant Title (Role on Project)</th>
<th>Funding Source and Grant ID</th>
<th>Project Period</th>
<th>Current Year (or Total Period) Direct Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dr. Simpson-Haidaris’ research focus is on the role of fibrinogen and fibrin in inflammation, wound repair, vascular wall biology and cancer metastasis. She is particularly interested in how fibrinogen, as an extracellular matrix protein, affects inflammatory disease progression and resolution. Dr. Simpson-Haidaris’ lab was the first to show that the blood clotting protein, fibrinogen, is expressed in epithelial cells of extralobar origin, including lung, prostate, and breast. Her research focus has been on preclinical translational studies to determine if this molecule can be used as a competitive inhibitor of angiogenesis. In 2010, she received a Breast Cancer Idea Award from the American Association for Cancer Research. This award is based on the impact on curing breast cancer and/or improving lymph node metastasis. Key to this research is the development of animal models with faculty members in the Departments of Microbiology, Immunology, and Environmental Medicine, the Institute at URMC, and in Biology on the UR River Campus. The research support will continue to allow the PI, Ms. Student to perform her dissertation research as described in this proposal.

Sponsors Training Plan, Mentoring History and Resources ($$)
b. Sponsor’s/Co-Sponsor’s Previous Fellows/Trainees

- Give the total number of predoctoral and postdoctoral individuals previously sponsored.
- Select up to five that are representative and, for those five, provide their present employing organizations and position titles or occupations.
- Include this information for any co-sponsor as well.

b.1. Sponsor’s Previous Fellows/Trainees. Table b.1 lists representative PhD and postdoctoral students trained by Primary Sponsor...

b.2. Co-Sponsor’s Previous Fellows/Trainees. Dr. Simpson-Haidaris’ major academic commitment is to serve as mentor to predoctoral, postdoctoral, medical and resident fellows wishing to pursue academic or other agency/institution research with the goal of fostering their desires to contribute to the scholarship and knowledge of the biomedical basic and translational research disciplines and health professions. She has teaching and/or thesis committee membership commitments in Pathology, Microbiology & Immunology, Translational Biomedical Sciences (TBS) and Public Health Sciences at the graduate student and fellow level at URMC. Furthermore, her commitment to mentored-training is evidenced by service as a reviewer on NHLBI Special Emphasis panels for mentored training awards including the K01, K08, K18, K23, K25 and K99/R00 award mechanisms, and as a Scientist Reviewer for Department of Defense and Komen Foundation predoctoral and postdoctoral training grant awards.

Table b.2. Selected Predoctoral Trainees1 of Co-Sponsor, PJ Simpson-Haidaris, PhD.

<table>
<thead>
<tr>
<th>Trainee</th>
<th>Starting Credentials</th>
<th>Training Program &amp; Degree</th>
<th>Project Title</th>
<th>Funding Support</th>
<th>Current Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terry W. Wright, PhD</td>
<td>RIT BS Biotechnology</td>
<td>URMC Microbiol &amp; Immunol PhD</td>
<td>The Molecular Biology of Pneumocystis carinii Surface Glycoproteins (gpa3)</td>
<td>NIH RO1 HL65815 (1P50-H, PI): Pathogenesis T32 Training Grant (B. Iglesias, PI)</td>
<td>Associate Professor of Pediatrics with tenure at URMC</td>
</tr>
<tr>
<td>Brian J. Rybarczyk, PhD</td>
<td>BS Molecular Genetics, UR</td>
<td>URMC Pathology PhD</td>
<td>Fibronectin and the Extracellular Matrix: Biological Implications in Breast Cancer</td>
<td>NIH PO1 HL30816, Project 2 (1P50-H, PI)</td>
<td>Director, Academic &amp; Professional Development; Program Coordinator, SPIRE Postdoc Fellowship Program, UNC Chapel Hill.</td>
</tr>
<tr>
<td>Menia T. Afriat, PhD</td>
<td>BS Biomedical Engineering, URMC</td>
<td>URMC Microbiol &amp; Immunol PhD</td>
<td>Dengue Viral Infection of Endothelial Cells and Dengue Hemorrhagic Fever</td>
<td>DoD-BC052255 and AHA-0655877 (1P50-H, PI): Caid Foundation (L. Pi and co-advisor), Immunology T32 Training Grant (L. Pi)</td>
<td>Postdoc Research Associate, Texas Tech University Health Sciences Center</td>
</tr>
<tr>
<td>Carolyn Glass, MD PhD (PhD anticipated, June 11, 2014)</td>
<td>MO University of Texas Medical Branch</td>
<td>URMC TBS PhD and T32 Post-doctoral fellow</td>
<td>Identifying a Potential Therapeutic Target for MLL-ALL Leukemia</td>
<td>Research Training in Preventive Cardiology (T32 HL057937; L. Pi and co-advisor), Immunology T32 Training Grant (L. Pi)</td>
<td>Accepted into Residency in Pathology at Harvard, Brigham and Women’s Hospital; start July 1, 2014</td>
</tr>
</tbody>
</table>

1 Prior training experience: Selected from 10 pre-doctoral and 5 post-doctoral or junior faculty trainees; P50-H has served as a member or chair on over 50 Ph.D. defense committees; served as research mentor for 17 PhD students rotating in her lab; mentored undergraduate and medical students on summer research programs; is a theme faculty in three PhD Programs at URMC (Microbiology & Immunology, Pathology and TBS).

2 Abbreviations: RIT, Rochester Institute of Technology; URMC, University of Rochester (UR) Medical Center; UNC, University of North Carolina (DoD); Department of Defense; CDMRP, Congressionally Directed Medical Research Program.

In 2011, she became the Director of the PhD program in TBS that is funded in part by a CTSA (Dr. Karl Kieburitz, PI) and located in the Clinical and Translational Research Institute at the UR. In 2013, she became the Science Director at the UR in partnership with Rochester Institute of Technology (RIT) and the National Technical Institute for the Deaf on the R25 "Rochester Bridges to the Doctorate for Deaf and Hard of Hearing"
Additional Sections of Sponsors’ Information

c. Training Plan, Environment, Research Facilities
   - Describe the research training plan that you have developed specifically for the Fellowship applicant.
   - Include items such as classes, seminars, and opportunities for interaction with other groups and scientists.
   - Describe the research environment and available research facilities and equipment. Indicate the relationship of the proposed research training to the applicant’s career goals.
   - Describe the skills and techniques that the applicant will learn.
   - Relate these to the applicant’s career goals.

d. Number of Fellows/Trainees to be Supervised During the Fellowship
   - Indicate whether pre- or postdoctoral.
   - Include this information for any co-sponsor as well.

e. Applicant’s Qualifications and Potential for a Research Career
   - Describe how the Fellowship applicant is suited for this research training opportunity based on his/her academic record and research experience level.
   - Describe how the research training plan, and your own expertise as the sponsor will assist in producing an independent researcher.

Sponsor’s training plan must mesh with PI’s goals and activities planned to accomplish goals.
Third critical take home message about F awards

3. Recruit outside Referees who can write the STRONGEST possible letters attesting to your potential to launch an independent research career.

There is a new format for outside referees to follow when submitting letters:


Three Letters of Recommendation Submitted Separately from Application
Information PI provides to outside referees

- PI (Fellowship applicant) Commons user name
- PI first and last name as they appear on the PI’s Commons account
- Funding Opportunity Announcement (FOA) under which the applicant is applying (in our example, PA-14-148)
Outside Referees should comment on PI’s:

- Research ability and potential to become an independent researcher
- Adequacy of scientific and technical background
- Written and verbal communication skills including ability to organize scientific data
- Quality of research experiences and/or publications
- Perseverance in pursuing goals
- Evidence of originality
- Need for further research experience and training
- Familiarity with research literature
Training Plan Sections

3. Degree Sought During Proposed Award:
   Degree: ____________________________
   If "other", please indicate degree type: ____________________________
   Expected Completion Date (month/year): ____________________________

4. * Field of Training for Current Proposal: ____________________________

5. * Current Or Prior Kirschstein-NRSA Support?
   Yes [ ] No [ ]
   If yes, please identify current and prior Kirschstein-NRSA support below:

   * Level ____________________________
   * Type ____________________________
   Start Date (if known) ____________________________
   End Date (if known) ____________________________
   Grant Number (if known) ____________________________

6. * Applications for Concurrent Support?
   Yes [ ] No [ ]
   If yes, please describe in an attached file:

7. * Goals for Fellowship Training and Career:

8. * Activities Planned Under This Award:

9. Doctoral Dissertation and Other Research Experience:

10. * Citizenship:
    U.S. Citizen or noncitizen national [ ]
    Permanent Resident of U.S. Pending [ ]
    Permanent Resident of U.S. (If a permanent resident of the U.S., a notarized statement must be provided by the time of award) [ ]
    Non-U.S. Citizen with temporary U.S. visa [ ]
Fourth critical take home message about F awards

4. Prepare a *Research and Career-Individual Development Plan* (RC-IDP) to define gaps in training and design metrics to meet career goals.
Research and Career-Individual Development Plan

- Sponsor works with PI to develop a research and career-individual development plan (RC-IDP/aka IDP).

- All training grant mechanisms for NIH request that IDPs be included and described in annual reporting to agency.


- IDP is a “living document” where you define goals, describe activities to meet goals, define benchmarks and timelines to complete goals, define mentoring team meetings to monitor progress in achieving goals and plans to remedy situation if goals change.

  - F31 Goals, Respective Contributions and Activities Under this Award are all derived from your RC-IDP if it is done correctly!
Goals for Fellowship Training and Career

• Discuss how the proposed research project and career development activities relate to career goals and enhance the PD/PI’s development as a productive, independent research scientist.

• Perform Gap Analysis of what skills you have and what are missing to achieve goals.

• Discuss how proposed research training plan will enhance PD/PI’s knowledge as well as technical and professional skills.

• Discuss how proposed research and career development training plans facilitate transition to next career stage.
Activities Planned Under This Award

• Training plan activities should be individually tailored and well integrated with PD/PI’s research project.
  – Remember to mention training activities to enhance research skills in appropriate section of Research Strategy

• PJ recommends three areas of development:
  – Didactic Coursework and Seminars
  – Mentored Research Activities
  – Career Development Activities

• Provide Timeline of Activities & Benchmarks for Success
• Provide %-time devoted to training activities
## Example of Activities Planned Under This Award

<table>
<thead>
<tr>
<th>Coursework (10% effort)</th>
<th>Pre-Funding Period</th>
<th>Year-01</th>
<th>Year-02</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biostatistics/Advanced Programing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grant Writing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seminar Series in Discipline of Science</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Seminars</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discipline-specific courses to fill gaps</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mentored research activities (65% effort)</th>
<th>Pre-Funding Period</th>
<th>Year-01</th>
<th>Year-02</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research techniques to be learned; how learn and mentors involved</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short Course on Specialized Techniques</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Travel to Collaborators Lab for Specialized Techniques</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab Meetings, Research in Progress</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Career development activities (25% effort)</th>
<th>Pre-Funding Period</th>
<th>Year-01</th>
<th>Year-02</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career skills workshop How to Negotiate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Present at National Meetings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teach Class or Two in Research Discipline</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Submit Grant Application</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Benchmarks</th>
<th>Pre-Funding Period</th>
<th>Year-01</th>
<th>Year-02</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 first-authored papers high impact journals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Write and Defend PhD Thesis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secure Postdoc Position and others…specific to YOU</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Suggest start section with three paragraphs corresponding to 3 major areas of Research and Career Development:

A. Didactic Coursework and Seminars.
B. Mentored Research Activities.
C. Career Development Activities.

Briefly explain where you are to date in training activities in each category and describe new activities to meet your goals. Include specifics on didactic course work (# credit hours, course ID and Name and how this will accomplish you training objective). Indicate time needed to accomplish and percent of time on each major area.
Doctoral Dissertation and Research Experience

• Summarize research experience in chronological order.

• Include narrative of doctoral dissertation (may be preliminary); Do not list academic courses.

• Postdoctoral applicants should include areas studied and conclusions drawn.

• Postdoctoral applicants should specify which areas of research were part of thesis and which, if any, were part of a previous postdoctoral project.

This item is limited to two pages.
Respective Contributions

- **This item is limited to one page.**
- Describe the collaborative process between you and your sponsor/co-sponsor in the development, review, and editing of this research training plan.
- Discuss the respective roles in accomplishing the proposed research.
Respective Contributions

1st paragraph: brief description of project and how much input you had in developing hypothesis, specific aims and experimental approach. Example text: My proposed research project is based on the novel observation that I made while establishing an *in vivo* model to investigate the role of Dr. I.M. Creative, PhD (sponsor). My interests in studying the role of ABC in XYZ disease began while completing my graduate independent study at the Most Prestigious Undergraduate University where we found ... lots of cool and groovy stuff [insert your exciting data that demonstrate feasibility for the direction of your research project]. Brief description of goal of research. Brief description of model systems of study. Brief statement of impact/public health relevance of research project.

2nd paragraph: describe how much you as PI contributed to design of the project, writing the grant and editing as well as the contributions of your sponsor, co-sponsor (if any) and advisory team mentors. Example text: I independently generated the hypothesis and the aims for this study, and for the study design I consulted with my sponsor and advisors to develop appropriate experimental approaches. I discussed the structure of the specific aims and research strategy with my sponsor to ensure that the proposed study will be completed in the [insert number or years of support requested] X-year time frame of the award.

3rd paragraph: describe your future responsibilities/contributions to complete the career development activities and research as well as the responsibilities/contributions of your sponsor, cosponsor and advisory committee members. Example: As the PI, I will complete each of the proposed research aims in their entirety, and my sponsors and advisory committee will provide guidance on experimental implementation as well as data analysis for each part of the project. Specifically, Dr. "D" will provide feedback and assist with host integrative analysis related parts of the project – provide guidance regarding research design, data interpretation and analysis. Dr. "L" will assist with areas of difficulty related to gene expression assay experimental design. Dr. "M" will assist with messenger RNA RNA-Seq data analysis and interpretation. I will meet with Dr. "H" on a monthly basis to discuss career development activities leading to the PhD in TBS and provide guidance on career advancement activities for a future postdoctoral awardee application. Dr. Z is an expert on ABC at TopNotch University and collaborator of my Sponsor, Dr. "IM Creative". Dr. "Z" will provide important ABC-related experimental advice and career networking. To receive feedback on my progress for career development and research activities, I will meet with my sponsor, co-sponsor (if have one), and advisory committee to obtain feedback related to my development as an independent investigator. Finally, I will work with my mentors to obtain feedback to write manuscripts and abstracts for meeting presentations, and I will also present my results at national meetings (oral or poster formats) as described in Activities Planned Under this Award section.

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Role</th>
<th>Contribution to grant application and PI's training</th>
<th>Scheduled mentorship meetings with PI</th>
<th>Milestones/Benchmarks for Accomplishment</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.M. Creative, PhD</td>
<td>Sponsor (primary mentor)</td>
<td>Oversight of proposed research project; feedback of study hypothesis and methods</td>
<td>Weekly lab meetings to present data and discuss relevant journal articles; weekly one-on-one meetings to discuss progress and any relevant issues related to progress. Daily lab interactions to guide ongoing studies in real-time</td>
<td>Prepare abstracts for submission to meetings; Prepare and submit manuscripts. In addition to regular meetings, formally meet with advisor twice per year to review individual research and career development plan (meet one time per year with TBS PhD Program Director and advisor)</td>
</tr>
<tr>
<td>S.D. PhD</td>
<td>Advisory Committee</td>
<td>Mentorship on CD4+ T-cells study analysis and research design</td>
<td>Monthly meetings to discuss interpretation of data and trouble-shooting; b-annual advisory committee meetings</td>
<td>Submit prepared data figures and analysis on T-cell response in close to final format for review before finalizing manuscripts</td>
</tr>
<tr>
<td>C.L. MD</td>
<td>Advisory Committee</td>
<td>Mentorship on design and methods of gene expression profiles and microRNA</td>
<td>Monthly meetings to discuss data analysis. Weekly journal club interactions; b-annual advisory committee meetings</td>
<td>Submit prepared data figures and analysis on mRNA studies in close to final format for review before finalizing manuscripts</td>
</tr>
<tr>
<td>J.M. PhD</td>
<td>Advisory Committee</td>
<td>Mentorship on the design and implementation of genetic based studies</td>
<td>Monthly meetings to discuss RNA-Seq data analysis and cell based studies; b-annual advisory committee meetings</td>
<td>Submit prepared data figures and analysis on cell studies (e.g., in close to final format for review before finalizing manuscripts)</td>
</tr>
<tr>
<td>P.H. PhD</td>
<td>Advisory Committee</td>
<td>Provide guidance about PhD program requirements career development advice</td>
<td>Monthly meetings to discuss PhD training plan and career development; twice yearly meetings to review individual research and career development plan</td>
<td>Submit formal progress report to PhD program and Dean of Graduate Studies Office; resolve problems and update individual research and career development plan with mentor input</td>
</tr>
<tr>
<td>F.Z. MD</td>
<td>Collaborator/Consultant</td>
<td>ABC specific training and career development</td>
<td>Bi-monthly phone or Skype conference calls as discussions as they arise; annually meet with entire committee via Skype</td>
<td>Obtain written feedback on abstract and manuscript drafts and final versions for submission</td>
</tr>
</tbody>
</table>

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1 All members of the advisory committee will meet with the PI twice per year. The PI will present a formal presentation of progress, and the committee will provide written feedback to the PI and the TBS PhD Program Director. The outside consultant will join these meetings once per year via Skype.
Selection of Sponsor and Institution

This item is limited to one page.

- Describe the rationale/justification for the selection of the sponsor and institution to accomplish research training goals.

Postdoctoral fellows only:

- Training is expected to broaden a fellow's perspective, thus postdoc applicants requesting training at either their doctorate institution or at the institution where they have been training for more than a year must explain why further training at that institution would be valuable.
Resource Sharing Plan
Example

This item is limited to one page.

RESOURCE SHARING PLAN:

We do not anticipate creating unique resources.

Unanticipated “Other Research Resources” generated with funds from this grant (example, RNAi constructs, etc.) will be freely distributed upon request to qualified academic investigators for non-commercial research.

My institution and I will adhere to the NIH Grants Policy on Sharing of Unique Research Resources including the “Sharing of Biomedical Research Resources: Principles and Guidelines for Recipients of NIH Grants and Contracts” issued December 1999, http://ott.od.nih.gov/NewPages/Rtguide_final.html. Should any intellectual property arise which requires a patent, we would ensure that the technology remains widely available to the research community in accordance with the NIH Principles and Guidelines document.

If generate new knockout mice, antibodies, other reagents or GWAS data, must include resource sharing plan to indicate how will distribute.
This item is limited to one page.

—Cover the five REQUIRED items:

1. Format with substantial face-to-face contact (all online training not acceptable)
2. Content/Subject Matter
3. Participating Faculty (name specific faculty involved)
4. Duration of training (contact hours)
5. Frequency—at least once per career stage or every four years, whichever is shorter time period
Responsible Conduct of Research

The PI [insert name of PI] will receive instruction regarding responsible conduct of research in both formal classroom settings (Ethics and didactic course work such as grant writing and scientific communications) as well as informal instruction by meeting with mentors.

Completed Training

The University of [insert institution] course: Ethics and Professional Integrity in Research (course ID number) was completed in [insert data completed]. The eight-week course consisted of a one-hour lecture followed by a one-hour small group discussion each week to assess various examples of ethical issues in biomedical research. Lecture topics covered in the course included: plagiarism, publications, and stem cell science, and lectures were led by senior faculty including RD, PhD, Course Co-Director, RH, MD, MPH, Course Co-Director, SD, PhD, Chair of Important Department, EL, PhD, Senior Associate Dean for Graduate Education, MT, MD, Dean, School of Medicine, JP, MD, PhD, Professor of Pediatrics, Jeffrey Wyatt, DVM, Professor of Lab Animal Medicine, TP, MD, MPH, PhD, Senior Associate Dean for Clinical Research and Director of the CTSI, EP, PhD, Senior Associate Dean for Basic Research.

Course Meeting Time: Tuesdays, 4:00pm – 6:00pm
Course Location: Big Auditorium
Course Discussion Topics:
1. Introduction to Ethical Issues of Biomedical Research
2. Human/Clinical Data and Conflict of Interest
3. Plagiarism
4. Animal Research
5. Team Science and Collaboration
6. Publication Process
7. Stem Cell Research
8. Mentor-mentee Relationship

Ongoing Responsible Conduct of Research Training

I. Monthly Meeting with Primary Sponsor and Co-Sponsor

The PI will have monthly face-to-face meetings with his/her sponsors [insert name of sponsors] to discuss ethical issues related to project-relevant topics and the biomedical research community and public perceptions at large. The meetings will total at least 24 [specify # contact hours] contact hours over the funding period.

II. HIPPA Training

The PI will complete HIPPA training modules to maintain HIPPA certification, which consists of three online videos. The online module will cover topics such as: use and disclosure, professional judgment, and access to records. The PI also maintains certification for human subjects protection as required and vertebrate animal use and care (as required).

III. Courses: Topics such as authorship, plagiarism, and conflict of interest in publication and peer-review processes were covered in the Workshop on Scientific Communications course (taught by Dr. H), which the PI completed in Spring 2013. Ethics in grant writing and reviewing are covered in the course [insert course number] Grant Writing [co-taught by—insert faculty names] that the PI is currently taking Spring 2014. Include courses specific to your training plan where such issues were or will be covered.

IV. CTSI Seminar Series (course ID number) (personalize based on your institutions continuing RCR training opportunities)

At least two seminars per semester are devoted to topics regarding ethical issues such as human subjects use, diversity, and professionalism in the academic research environment. The PI attends this seminar series as part of her TBS PhD curriculum. Renewal of training in the responsible conduct of research through didactic lecture courses will occur during every training stage or every 4 years, whichever is shorter, as mandated by NIH.
Four critical take home messages about F awards

1. Prepare a *proper* NIH Fellowship Biosketch.

2. Build an *exceptional* Research and Career Development Mentoring TEAM.

3. Recruit outside Referees who can write the *STRONGEST* possible letters attesting to your potential to launch an independent career.

4. Prepare a *Research and Career-Individual Development Plan* (RC-IDP) to define gaps in training and design metrics to meet career goals.
Don’t Forget the Research Grant!

Summary/Abstract

Narrative/Public Health Significance

Introduction, if resubmission

Cover Letter

Specific Aims

Research Strategy

Bibliography

Biosketches
PD/PI Sponsor
Co-sponsor Advisory Committee Members Consultants + their letters
Other important sections of F-award applications

7. Project Summary/Abstract
8. Project Narrative
9. Bibliography & References Cited
10. Facilities & Other Resources
11. Equipment
12. Other Attachments

Summary/Abstract
Bibliography
Equipment
Facilities, Other Resources

Other Attachments
1) PhD program description “Additional_Educational_Information.pdf”
2) Diversity eligibility Certification_Letter.pdf
• State the application’s broad, long-term objectives and specific aims, making reference to the health relatedness of the project (i.e., relevance to the mission of the funding agency).

• Describe concisely the research training program design and methods for achieving stated goals.

• Avoid describing past accomplishments and the use of the first person.

• Do not include proprietary, confidential information or trade secrets.
Project Narrative
Public Health Relevance

- Describe the relevance of this research to public health.
- Be succinct and use plain language that can be understood by a general, lay audience.
- Use no more than two or three sentences.
Bibliography & References Cited

• Each reference must include names of all authors, the title, volume number, page numbers, and year of publication.
• Include only bibliographic citations.
• Applicants should follow scholarly practices in providing citations for source materials used in any section of application.
• Provide PMCID number for articles that fall under NIH Public Access Policy.
Facilities & Other Resources (no page limit)

- **Identify only facilities used for this** project and PI’s training activities (Laboratory, Animal, Computer, Office, Clinical and Other such as Core Facilities).

- **Describe how scientific environment contributes to probability of success** (e.g., institutional support, physical resources, and intellectual rapport/environment)
  - Any Nobel Laureates, National Academy or Institute of Medicine members, etc., with whom you interact or are invited to your institution to give seminars, lectures or workshops?

- **Discuss ways proposed studies will benefit from unique features** of scientific environment, subject populations or collaborative, multidisciplinary arrangements.

- **Include resources from Clinical and Translational Science Institutes** at your University.
• List major items of equipment already available for this project and, if appropriate identify location and pertinent capabilities.

• List major equipment that will be used by PI in co-sponsors’ and collaborators’ labs as well.

• Note, core facilities to be used by this project are usually described in Facilities & Other Resources section.
Additional Educational Information

Other Project Information Form
All instructions in the SF424 (R&R) Individual Fellowship Application Guide must be followed, with the following additional instructions:

Please name this attachment “Additional Educational Information.”

• Describe the graduate or dual-degree program in which the applicant is enrolled, e.g., the structure of the program, required milestones and their usual timing (e.g., number of courses, any teaching and clinical requirements, and qualifying exams), and the average time to degree over the past 10 years.

• For dual-degree applicants, the sequencing of the applicant’s graduate and medical (or other health professional) school years should also be described.

• Describe the progress/status of the applicant in relation to the program’s time line, indicating when the applicant matriculated into the program and, if applicable, when the applicant is likely to transition to clinical years of the dual-degree program.

• Describe the frequency and method by which the program formally monitors and evaluates a student’s progress.

• This information is typically provided by the director of the graduate program or the department chair.

• The name of the individual providing the information should be included at the end of the attachment, i.e., PhD or MD-PhD Program Director or Postdoc’s Mentor.

• Note that scores for standardized exams (e.g., MCAT, GRE) as well as a listing of the applicant’s courses and grades must be included in the Fellowship Applicant Biographical Sketch, and NOT in this attachment.

• Provided by PhD (F31), MD/PhD (F30) Program Director or Post-doc (F32) Mentor

• Include how PI (trainee) evaluated for progress (milestones) and current status of PI in program

• Information differs slightly for F30, F31 and F32 parent FOAs
F32 Postdoc Fellowship (PA-14-149) Additional Educational Information differs!

**SF424 (R&R) Other Project Information**

All instructions in the SF424 (R&R) Individual Fellowship Application Guide must be followed, with the following additional instructions:

**Other Attachments**

*The following additional educational information is required and should be attached under Other Attachments:*

- A description of the resources available to the applicant including the availability of such resources as might be associated with an Office of Postdoctoral Affairs. This information may be provided by the mentor or department chair. Include the name of the individual providing this information at the end of the description.

- Note that a listing of the applicant’s courses and grades must be included in the Fellowship Applicant Biographical Sketch, and NOT in this attachment.
- Please name this attachment “Additional Educational Information.”

*The filename provided for each “Other Attachment” will be the name used for the bookmark in the electronic application in eRA Commons.*
A **certification letter is required and should be attached under Other Attachments:**

Please name this attachment “Certification Letter.”

- Applicants are required to attach a letter from the institution certifying eligibility of the Fellowship applicant for this program.

- The certification letter must be on institutional letterhead and scanned so that an institutional official signature is visible.

- See instructions in the SF424 (R&R) Individual Fellowship Application Guide.

*The filename provided for each “Other Attachment” will be the name used for the bookmark in the electronic application in eRA Commons.*
Specific Aims and Research Strategy

PHS Fellowship Supplemental Form

A. Application Type:
From SF424 (R&R) Cover Page. The response provided on that page, regarding the type of application being submitted, is repeated here for your reference as you provide the responses that are appropriate for this Fellowship application.

- [ ] New
- [ ] Resubmission
- [ ] Renewal
- [ ] Continuation
- [ ] Revision

B. Research Training Plan

1. Introduction to Application (for RESUBMISSION applications only)
2. * Specific Aims
3. * Research Strategy
4. Progress Report Publication List (for RENEWAL applications only)

Specific Aims

Research Strategy
Why is Specific Aims page so important?

- Specific Aims are limited to 1 page.
- It is a concise summary of your proposal.
- List broad, long-term objective and what the proposed research is intended to accomplish.
- List Specific Aims (2-3) to attain the project’s objectives and goals.
- State Hypotheses to be tested.
- Convey vision of how proposal will advance research on topic.
- Provides an outline for: 1) Significance (gaps in field, important problem and impact of research—how your work will advance the field); 2) Innovation (new paradigm, challenge old dogma, shift research or clinical practice); and 3) Approach (well-reasoned, feasible, directly address specific aims, alternatives and benchmarks for success) sections of application.
- Allows clear communication of hypotheses driving the research.
- Grant reviewers obtain synopsis of entire proposal from Specific Aims page (and likely form opinion on grant overall).

- Only 3 of 20 or so reviewers on study section panel read entire grant.
- Rest of review panel members have equal votes.
- Specific Aims page may be only part of grant they can read.
- Needs to clearly convey entire grant to 17 other reviewers.
Specific Aims Language

The long-term goal of the proposed research is to........

The immediate goals of this proposal are to [answer the gap in knowledge] by [research strategy/clinical trial]. The rationale supporting this line of research [clinical investigation] is: 1) ...; 2) ...; and 3... [Even if some of the rationale is placed with each specific aim, you need the global rationale to establish why addressing the gap (by testing your overarching hypothesis) in the field is significant—i.e., why it NEEDS to be done as you propose in this grant application!].

In this proposal, we will test the overarching hypothesis that...[state hypothesis] by the following specific aims:

Aim 1. first sub-hypothesis then approach.
Aim 2. second sub-hypothesis then approach.
Aim 3. third sub-hypothesis then approach.

Variation on theme: some PIs provide rationale and expected outcomes with each aim rather than in opening and ending paragraphs, respectively.

The expected outcomes are....

The significance of this research to the field is...

The innovation of this proposal [research/clinical study] is...

Note: There is no innovation section in F-awards
Save space on specific aims page to briefly describe training plan.

If your application is a career development or fellowship: may add brief paragraph about the training potential and launch of PI’s career to independence (or next level of training).

The Career Development and Research Training Plans will provide the PI with XYZ training that will allow completion of the proposed studies. Together with the mentoring research team’s expertise (a, b, c, and biostatistics), the research and educational training environment at LMNOP University is optimal for this mentored training in QRST field [= statement specific to why this institution and mentors appropriate]. Moreover, unconditional institutional support is provided for the promotion of the PI to an independent career as a research/clinician-scientist.

This last sentence is more appropriate for K award than F award, but describe specific details of your training plan.

The SO WHAT question (of why your research should be funded) needs to be clearly answered on the specific aims page.
Research Strategy
Limited to 6 pages

Innovation, Approach. Cite published experimental details in the Research Strategy section and provide the full reference in the Bibliography and References Cited section (Part I Section 4.4.9).

Follow the page limits for the Research Strategy in the table of page limits (Table 2.6-1), unless specified otherwise in the FOA. Note that the page limit for this attachment will be validated as a single file.

(a) Significance

- Explain the importance of the problem or critical barrier to progress in the field that the proposed project addresses.
- Explain how the proposed project will improve scientific knowledge, technical capability, and/or clinical practice in one or more broad fields.
- Describe how the concepts, methods, technologies, treatments, services, or preventative interventions that drive this field will be changed if the proposed aims are achieved.

(b) Innovation

- Fellowship applications should not include an Innovation section unless specified in the FOA.

Note: There is no separate innovation section in F-awards.
Scientific Approach

• Overall strategy, methods, analyses (statistics); how data collected, interpreted, and shared.

• Expected results; potential problems and alternative approaches; benchmarks for success; how results relate to “Big Picture.”

• Feasibility, i.e., Preliminary Data

• If Biohazardous Procedures, Stem Cell Research performed—discuss how handled.
# Human Subjects Sections

![Human Subjects Form](http://grants.nih.gov/grants/funding/424/SupplementalInstructions.pdf#4_1_protection_of_human_subject)

**Are Human Subjects Involved?**

- [X] Yes
- [ ] No

- **Human Subjects?**
- **Risks**
- **Benefits**
- **Enrollment**
- **Women**
- **Children**
- **Minorities**
- **DSMP/DSMB**

**Human Subjects Involvement Indefinite?**

- [ ] Yes
- [X] No

**Clinical Trial?**

- [ ] Yes
- [X] No

**Agency-Defined Phase III Clinical Trial?**

- [ ] Yes
- [ ] No

**Protection of Human Subjects**

- [Add Attachment]

**Inclusion of Women and Minorities**

- [Add Attachment]

**Inclusion of Children**

- [Add Attachment]
Vertebrate Animal Use

Vertebrate Animals Use
See Part III, Section 2.2 of this pdf:
http://grants.nih.gov/grants/funding/424/
SupplementalInstructions.pdf#2_2_vertebrate_animals

Vertebrate Animal Research?

- Types of animals
- Justify # animals
- Vet Care
- Alleviate Pain
- Euthanasia
Four critical take home messages about F awards

1. Prepare a **proper** NIH Fellowship Biosketch.

2. Build an **exceptional** Research and Career Development Mentoring TEAM.

3. Recruit outside Referees who can write the **STRONGEST** possible letters attesting to your potential to launch an independent career.

4. Prepare a **Research and Career-Individual Development Plan** (RC-IDP) to define gaps in training and design metrics to meet career goals.
What will immediately cause an application to go un-reviewed (because you did NOT READ the FOA)

• Missing information specifically requested for F awards
  – Additional Educational Information.pdf, a description of PhD or MD-PhD program and your progress in the program or Resources available to Postdoc (see details slide 66)
  – Certification_Letter.pdf, which certifies your eligibility for the F31 Diversity Award

• Instructions about this are only found in the parent FOAs
  • PA-14-147 – F31, Predoc (Parent)
  • PA-14-148 – F31, Diversity Predoc (Parent)
  • PA-14-149 – F32, Predoc (Parent)
  • PA-14-150 – F30, MD-PhD Predoc (Parent)
Where are the instructions for the Additional Educational Information and Certification Letter Found? in Section IV!

Required Application Instructions

It is critical that applicants follow the instructions in the Individual Fellowship SF424 (R&R) Application Guide EXCEPT where instructed to do otherwise (in this FOA or in a Notice [NOT] from the NIH Guide for Grants and Contracts). Conformance to all requirements (both in the Application Guide and the FOA) is required and strictly enforced. Applicants must read and follow all application instructions in the Application Guide as well as any program-specific instructions noted in Section IV [of F-award parent FOA]. When the program-specific instructions [i.e., NRSA F-fellowship program] deviate from those in the Application Guide, follow the program-specific instructions. Applications that do not comply with these instructions may be delayed or NOT accepted for review.

Verbatim instructions from PA-14-148

See Notices of Clarification: NOT-OD-14-090; NOT-OD-14-094; NOT-OD-14-095; and NOT-OD-14-096
# Description of UR Translational Biomedical Science PhD Program

## Background
**Program Objectives are to:**
- Prepare individuals in fundamentals of basic disease pathophysiology.
- Provide in-depth mentoring to assure productive research training.
- Educate for transition of scientists and clinicians for independent careers in translational research.
- Teach theory and knowledge in systems biology, drug design, biostatistics, epidemiology, laboratory methods and analytical procedures essential to clinical research.
- Provide a critical environment fostering inquiry, integrity, teaching skills, high productivity and working in multidisciplinary teams.

## Funding Sources
Our PhD Program in Translational Biomedical Science (TBS) is supported in part by a Clinical & Translational Science Award (CTSA) (TL1TR000096) from the National Center for Advancing Translational Sciences (NCATS) and, unlike other CTSA predoctoral programs requiring students to have advanced professional degrees, our program is open to predoctoral candidates with bachelors, masters or medical degrees.

Additional funding sources for support of predoctoral candidates include: institutional T32s; NIH-MSTP for MD-PhD; Individual NIH-NRSA; Foundation Predoctoral Awards; HHMI Med-into-Grad; DoD Predoctoral Fellowships; Mentor’s R01-type grants.

## Areas of Research Emphasis

**Translational Spectrum:**
- Preclinical Research for Promising Therapeutics
- Human Experimental Therapeutics
- Patient-Oriented and Health Disparities Research
- Comparative Effectiveness Research
- Implementation Science
- Community-Based Participatory Research

**Human Disease Models:**
- Cardiovascular Disease (CVD)
- Neurosciences and Stem Cells
- Musculoskeletal Disorders
- Cancer and Stem Cell Therapeutics
- Infectious Diseases
- Virology & Vaccine Biology

## Core Curriculum
- Introduction to Clinical Research
- Molecular Basis of Disease
- Introduction to Biostatistics
- TBS Journal Club and Student Seminar
- 1 of Epidemiology / Advanced Biochemistry / Cell Biology / Social & Behavioral Medicine
- 1 of Experimental Therapeutics / Qualitative Research / Design of Clinical Trials / Mol Biol & Genetics / Signal Transduction / Eukaryotic Gene Regulation
- 1 of Recruitment and Retention of Human Subjects / Immunology / Cell & Mol Physiology
- Practical Skills in Grant Writing & Scientific Communications
- Mentored Research and Electives
- Ethics, Responsible Conduct of Research, Human Subjects Protection, HIPAA, Disparities & Conflict of Interest Training

## Electives from Other Programs
- Various Topics Courses in Human Diseases
- Advanced Epidemiology, Biostatistics, Health Services Research & Policy
- Medical Informatics
- Neurosciences and Anatomy
- Bioengineering, Biochemistry and Biophysics
- Pathology, Cell Biology, Molecular Biology
- Cancer Biology and Stem Cell Therapy
- Genomics of Human and Infectious Diseases
- Pharmacology & Physiology
- Toxicology
- Vascular Biology and CVD
- Microbiology, Virology and Immunology
- Drug Design and High Throughput Screening

## Mentoring Faculty
Because we are an institute-based (CTSI) program and not a department-based PhD program, we are able to include faculty from all basic, clinical, and health sciences PhD programs at the University of Rochester Medical School (URMC) to serve as mentors for our predoctoral candidates.

To serve as primary mentor, faculty must have extramural grant support, publications in the discipline of the thesis research project, and experience mentoring a predoctoral candidate in one of the URMC PhD Programs.

**Multidisciplinary mentoring teams** involving basic scientists, clinicians and health care professionals from academic institutions, public health resources or private sector endeavors are assembled in the Translational Biomedical Science PhD Program to prepare predoctoral trainees to implement innovative ideas from “the bench” to become life-saving therapies at “the bedside”.

## Mentoring Model
- First year PhD students are guided to select didactic training and research rotations appropriate for research goals.
- End of 1st year, students select thesis advisor and co-advisor representing basic and clinical science disciplines of thesis project.
- Start of 2nd year, primary mentor and student prepare Research & Career Development Plan; reviewed twice yearly with a member of CTSI Mentor-Protégé Committee.
- Year 2, student continues didactic training and starts mentored research to gather preliminary feasibility data for Thesis Proposal.
- In 2nd year, student assembles 4-member thesis committee.
- Thesis proposal written in style of NIH R01 grant; Oral Qualifying Exam taken by summer before start of 3rd year.
- Years 2-4 (or 5), mentored research then thesis defense.

## Research Rotations
- Bench Research in Vascular Biology, Virology, HIV/AIDS, Metabolomics, Genomics, Orthopaedics, Neurology
- Assist in Retrospective/Prospective Clinical Trial Design
- Data Analysis & Authorship on Peer-reviewed Publications
- Assist in IRB Protocol Preparation and Patient Recruitment
- Health Disparities Research
- Comparative Effectiveness Research

## Evaluation and Outcome Metrics
- Complete 3 research rotations with written evaluations by student and faculty mentor; complete 32 core curriculum and elective credits to be eligible to take qualifying exam.
- Write thesis proposal and pass oral qualifying exam.
- Submit abstracts for presentations at National Meetings.
- Submit predoc fellowship grant applications (e.g., NIH F31).
- Publish as first author in peer-reviewed journals with high impact in field; the goal is three 1st authored papers.
- Annual Thesis Committee Progress Meetings.
- Public seminar and defense of thesis.
- Successfully advance to next Career Stage and identify/apply for funding (e.g., NIH F32 postdoc).
What does it take to write an F-award application? (refusal to take “No” for an answer)

• Allow plenty of time to complete all sections.
  – make sure when editing sections, such as goals you also edit activities planned to accommodate changes in goals.
  – same goes for specific aims and research strategy—if you add or delete an aim, make sure the experimental design matches!

• Recommend you have at least 1 first-author publication for F31/F30 (at least submitted) and two-three for F32.

• Enlist mentors and outside referees early and discuss project and goals so they can commit to participate and write supportive letters because they KNOW you.

• Work with sponsor and university representative to complete all aspects of project.

• Pay attention to detail, let others read, & edit, edit, edit.
Upcoming Changes in NIH Biosketch Format

• New format, described on the SF424 (R&R) Applications and Electronic Submission Page, will allow up to five pages for the entire biosketch.
• Researchers will describe up to five of their most significant contributions to science, their influence on their scientific field, and any effects of those contributions on health or technology.
• Researchers will describe their specific role in those discoveries and annotate their description with up to four publications.
• Include a link to their complete list of publications in SciENcv or My Bibliography.
  – See more at: http://nexus.od.nih.gov/all/2014/05/22/changes-to-the-biosketch/#sthash.tU6wQBd6.dpuf
Acknowledgements

• Thanks to PJ’s students in Translational Biomedical Science PhD program at the University of Rochester who have graciously agreed to share their experiences in writing F-awards.

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Disclaimer

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