



**Center for Interdisciplinary Brain Sciences Research  
Research Training in Child Psychiatry and Neurodevelopment  
Stanford University School of Medicine**

- I. Core Courses Seminars and Meetings**
- II. Applying for K Awards**
- III. NIH Loan Repayment Program**
- IV. Stanford Postdoctoral Benefits**
- V. Travel and Research Funds**
- VI. Educational Resources**
- VII. Miscellaneous**

## **Welcome**

Welcome to the T32 Research Training in Child Psychiatry and Neurodevelopment program in the Department of Psychiatry and Behavioral Sciences at the Stanford University School of Medicine

Two - three year fellowships funded by the National Institute of Mental Health (NIMH) are available for researchers who seek to improve or expand their ability to conduct interdisciplinary investigation in brain and behavioral sciences and child psychiatry. Postdoctoral projects can encompass basic and/or clinical research and might include investigation into one or more of the following areas: molecular or behavioral neurogenetics, neuroimaging, neurobiology, developmental psychopathology, endophenotypes associated with neuropsychiatric disorders, new diagnostic methods, outcomes research and intervention studies.

You will have the opportunity to work collaboratively with your identified mentor (or mentors) to define your research program and your career trajectory, monitor progress, and accrue preliminary data for peer-reviewed manuscripts and grant applications.

## I. Core Courses, Seminars and Meetings

### (Required)

Course	Location	Department
Psychiatry 250 - Methodology of Research in Behavioral Sciences	401 Quarry Road – Room 2209	Psychiatry and Behavioral Sciences
<a href="#">Medicine 255: Responsible Conduct of Research</a>	251 Campus Drive	Stanford Center for Biomedical Ethics
<a href="#">Scientific Management Series</a>	Li Ka Shing Center (LKSC), Room 130	<a href="#">Office of Postdoctoral Affairs</a>
T32 Seminar Series (Quarterly)	401 Quarry Road – Room Varies	Psychiatry and Behavioral Sciences
T32 Journal Club Luncheon (Monthly – 4 <sup>th</sup> Thursdays)	401 Quarry Road – CIBSR Conference Room	Psychiatry and Behavioral Sciences
T32 Journal Club Luncheon (Monthly – 2 <sup>nd</sup> Thursdays)	Off Site	Psychiatry and Behavioral Sciences

### (Electives)

Course	Location	Department
<a href="#">The Stanford Center for Clinical and Translational Research and Education (Spectrum)</a>	Varies	<a href="#">The Stanford Center for Clinical and Translational Research and Education (Spectrum)</a>
Division Resident Training Courses	401 Quarry Road – Room Varies	Psychiatry and Behavioral Sciences
<a href="#">Psychiatry and Behavioral Sciences Grand Rounds</a>	Li Ka Shing Center (LKSC) Room 120	Psychiatry and Behavioral Sciences
<a href="#">Software Usage and Technical Classes at Stanford Lane Library</a>	Varies	Lane Medical Library – School of Medicine
<a href="#">Career Development Institute for Psychiatry</a>	Annual 4-day workshop	<a href="#">Career Development Institute for Psychiatry</a>
<a href="#">Postdoc Academic Chats</a>	Varies	<a href="#">Office of Postdoctoral Affairs</a>
<a href="#">SNI Seminar Series</a>	Clark Auditorium	<a href="#">Stanford Neurosciences Institute</a>
<a href="#">Neurobiology 206-The Nervous System</a>	Varies	Neurobiology Department
<a href="#">Neurobiology 218-Neural Basis of Behavior</a>	Varies	Neurobiology Department
<a href="#">Neurobiology 216-Genetic Analysis of Behavior</a>	Varies	Neurobiology Department
<a href="#">Neurology and Neurological Sciences 205-Neurobiology of Disease</a>	Varies	Neurology and Neurological Sciences
<a href="#">Neurology and Neurological Sciences 459-Frontiers in Interdisciplinary Biosciences</a>	Varies	Neurology and Neurological Sciences
<a href="#">Radiology 226-In Vivo Magnetic Resonance Spectroscopy and Imaging</a>	Varies	Radiology
<i>Note: Many other courses are also available. If interested, please discuss with your mentor(s) and the program director Dr. Reiss.</i>		

**Responsible Conduct of Research** (MED 255) course offered during the Fall, Winter and Spring.

The Responsible Conduct of Research course is designed to engage participants in productive discussions about ethical issues that are commonly encountered during their research careers. This course is required for graduate students and postdoctoral scholars who are supported by grants from the National Institutes of

Health, and many departments and programs also recommend this course as part of their curricula.

Objectives:

- a. To engage participants in case-based discussions of ethical issues commonly encountered in, and raised by, current biomedical research
- b. To introduce participants to methods of analysis of ethical issues
- c. To introduce participants to policies relevant to the conduct of research

To sign up for this class go to <http://postdocs.stanford.edu/education/ethics.html>

**Methodology of Research in Behavioral Sciences** (PSYC 250: Methodology of Research in Behavioral Sciences) during the academic year taught by Drs. Booil Jo, David Hong and Laura Lazzeroni. Psyc250 focuses on methodological issues in three major psychiatric research themes: clinical psychiatric research, neuroimaging research, and genetic studies.

*Essential Methodological Topics in Clinical Psychiatric Research (Fall Quarter – Jo)*

Covers four methodological topics clinical psychiatric researchers often find critical in conducting their everyday research. A presentation on each specific topic will be given first (HK), which will be followed by a session focusing on specific examples and hands-on experience and reviews of introductory/intermediate statistics topics (JB). The class is organized in the way where each of the four topics is handled as a standalone topic, although participants are strongly encouraged to benefit fully by attending all lectures.

It is assumed that each participant has had some exposure to statistical methods, either from course work or from participation in research projects having some behavioral aspects. However, individuals with little or no statistics background are also welcomed. Basic methods of data exploration and inferential statistics will be reviewed whenever necessary. The class can be taken for credit, but auditing is also allowed.

*Neuroimaging Research Methods (Winter Quarter - Hong)*

This course will cover basic and advanced methodologies in neuroimaging research focusing specifically on data analysis methods. Lectures will cover background, conceptual information and example studies. Classes will include demonstrations of specific analyses. If you would like to follow along with the demonstration, you should bring a laptop with the software listed below preinstalled (all are freeware except Matlab but all other programs require Matlab). Background reading materials and powerpoint slides will be available prior to class at <https://coursework.stanford.edu>.

*Longitudinal Data and Survival Outcome Analysis (Summer Quarter – Lazzeroni)*

It is assumed that participants in both Part I and II have some exposure to statistical methods, either from course work or from participation in research projects having some behavioral aspects. However, individuals with little or no statistics background are also welcomed to take the course. Basic methods of data exploration and inferential statistics will be reviewed whenever necessary. It is strongly recommended that each participant brings his or her laptop to the class so that he/she can fully participate in hands-on exercise. The class is organized as two parts. Individuals are allowed to take either one or both.

Part I will cover basics of mixed effects modeling. Most clinical trials conducted in psychiatric research are longitudinal in nature. Mixed effects type analyses have been increasingly used in analyzing data from longitudinal studies because of many advantages such as better handling of missing data, interpretability, and statistical power. Individuals who take Part I will be able to model basic longitudinal trends, estimate, and interpret the results. In terms of actual model estimation, we will use a general statistical package SPSS.

Part II will cover basics of survival analysis. A primary outcome measure in a clinical trial is often defined to be the time of an important event, such as death, recurrence or remission. A common issue is that many participants remain free of the event of interest at the end of the follow-up period, so that

their contributions to the data are “censored.” Part two of this course will focus on an overview of methods related to the analysis of such data, focusing on the Kaplan-Meier estimator, log-rank test statistic, and Cox proportional hazards model. Relevant software (mostly SPSS) will be used and examples with data will be used throughout.

### **MED 255: Responsible Conduct of Research (RCR)**

This course is designed to engage participants in productive discussions about ethical issues commonly encountered during research. Course objectives include: 1) engaging participants in case-based discussions of common ethical issues raised by current biomedical research; 2) introducing participants to methods of analysis of ethical issues; and 3) introducing participants to policies relevant to the conduct of research. To ensure availability to trainees, the course is offered 10 times during the academic year. This course fulfills NIH requirements for training in research ethics. Attendance is documented, and students are limited to 2 missed classes (with a required assignment for any missed class). Trainees successfully completing the course will receive a printed certificate that can be used to demonstrate completion of research ethics training.

### **Scientific Management Series**

This excellent career development series, hosted by the Stanford Center for Biomedical Ethics, features monthly sessions covering topics such as Getting Funding and how to Write a Grant, Obtaining and Negotiating a Faculty Position, and Starting Up Your Lab and Negotiation Skills

### **T32 Journal Club Luncheon**

Monthly, throughout the academic year, trainees meet for journal club with the PD at which time a trainee presents the findings from one or two research papers of their choice (but on which they or their mentors are not co-author). A “guest” faculty member with expertise in the area of interest might also attend. When presenting the paper, the trainee is expected to provide a systematic, critical analysis of the research methods and findings presented in the manuscript that fosters discussion among their peers. These 75-minute meetings help trainees foster critical thinking about their own research methods and those of others. The multi-disciplinary backgrounds of our trainees make this a lively discussion and expose them to new and/or historically important research findings in child psychiatry and neurodevelopment.

### **T32 Professional Development Luncheon**

Postdoctoral Trainees meet monthly for an off-site luncheon with the PD, Dr. Reiss. These luncheons are an opportunity for less formal discussions about career development, ethics, academic challenges, work-life balance and program management. These luncheons are also an opportunity for trainees to build relationships with one another, which are often maintained throughout their careers.

## II. Applying for K Awards

### **What is a K Award?**

From NIH's website: NIH career development (K) awards are intended to support a period of mentored or independent career development in preparation for a role as an independent researcher (mentored K), or to enable and expand the grantee's potential to make significant contributions (independent K) in the biomedical, behavioral, and clinical sciences. Generally, K awards require the candidate to hold a full-time appointment at the applicant organization and devote a minimum of 75% of that appointment to the career award. The usual length of the award is 5-years although this has recently been reduced in some NIH Institutes to 4-years.

Visit NIH's website to gain more information about specific early career awards:

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

They have a helpful excel worksheet that summarizes the differences between the various types of K awards:

[http://grants.nih.gov/training/K-Awards\\_Across\\_ICs.xls](http://grants.nih.gov/training/K-Awards_Across_ICs.xls)

From the website:

There are nine Different Career Development awards that individuals with a **health professional doctorate** should consider. Most of these awards support individuals after they have completed clinical training and have accepted a faculty position. In this Department this is usually an Instructor position. There are a series of individual awards including the Mentored Clinical Scientist Award (K08) that supports career development experiences for individuals interested in research in areas that don't involve human subjects. If you want a career that includes work with human subjects, consider the Mentored Patient-Oriented Research Career Development Award (K23). Information on all of these awards can be found on the K Kiosk at

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

Also consider the new K99/R00 particularly for basic science applications: The omnibus K99/R00 award provides an opportunity for promising postdoctoral scientists to receive both mentored and independent research support from the same award. The initial phase will provide 1-2 years of mentored support for highly promising, postdoctoral research scientists followed by up to 3 years of independent support contingent on securing an independent research position. Award recipients will be expected to compete successfully for independent R01 support from the NIH during the career transition award period. For more information, including questions and answers see: the [Pathway to Independence Award web site](#).

### **III. NIH Loan Repayment Program**

#### **Loan Repayment Program for Clinical Researchers (CR-LRP)**

The Loan Repayment Program is designed to attract health professionals to clinical research. Clinical research is patient-oriented clinical research conducted with human subjects, or research on the causes and consequences of disease in human populations involving material of human origin (such as tissue specimens and cognitive phenomena) for which an investigator or colleague directly interacts with human subjects in an outpatient or inpatient setting to clarify a problem in human physiology, pathophysiology or disease, or epidemiologic or behavioral studies, outcomes research or health services research, or developing new technologies, therapeutic interventions, or clinical trials. Qualified health professionals who contractually agree to conduct qualified clinical research for 50 percent or more of their total level of effort for a two-year consecutive period are eligible to apply for this program. LRP participants must conduct qualifying research for an average of at least 20 hours per week during each quarterly service period. That is, during each contract quarter, he/she must conduct the required research for a minimum of 240 hours (based on a 12-week quarter) or 260 hours (based on a 13-week quarter). Participants in this program can receive educational loan repayment up to \$35,000 annually, depending on total [educational loan debt](#).

#### **Loan Repayment Program for Pediatric Research (PR-LRP)**

The Pediatric Research Loan Repayment Program is designed to attract health professionals to pediatric research. Pediatric Research is directly related to diseases, disorders, and other conditions in children. Qualified health professionals who contractually agree to conduct qualified pediatric research for 50 percent or more of their total level of effort for a two-year consecutive period are eligible to apply for this program. LRP participants must conduct qualifying research for an average of at least 20 hours per week during each quarterly service period. That is, during each contract quarter, he/she must conduct the required research for a minimum of 240 hours (based on a 12-week quarter) or 260 hours (based on a 13-week quarter). Participants in this program can receive educational loan repayment up to \$35,000 annually, depending on total educational loan debt.

For more information visit the website: [http://www.lrp.nih.gov/about\\_the\\_programs/extramural/intro.aspx](http://www.lrp.nih.gov/about_the_programs/extramural/intro.aspx)

#### **IV. Stanford Postdoctoral Benefits**

For benefits and other information, you can go on the Office of Postdoctoral Affairs website and sign up for a mandatory benefits session: <http://benefits.stanford.edu/postdocs-benefit-sessions>. You must enroll in 31 days of date of hire. [http://postdocs.stanford.edu/incoming\\_scholars/orientation.html](http://postdocs.stanford.edu/incoming_scholars/orientation.html)



## V. Travel and Research Funds

### **Travel and Research Funds**

Each year T32 postdoctoral fellows are provided with budgeted amounts for travel and research supplies. The amounts vary year to year so check with the coordinator and/or grants manager to determine how much you have to spend. Note that if you do not use the money in a given fiscal year, the money is lost and will not be carried over to the next fiscal year. Check with the finance team about your travel and research supply balances. Also check with the finance team before you make travel arrangements about specific travel rules and required paperwork. If you do not follow these rules reimbursement will be delayed.

### **Travel and research supplies:**

- The funds allocated to Fellows on the T32 grant are for **travel** and **supplies**
  - All travel and supplies must relate to the Fellow's research under the grant
  - Any supplies purchased under the T32 must be within reason

### **Reimbursement:**

Please do not make large purchases with your own funds if you expect to receive reimbursement. It is best to check with either Joanna Yu ([joannayu@stanford.edu](mailto:joannayu@stanford.edu)) or Reiko Riley ([reikor@stanford.edu](mailto:reikor@stanford.edu)) whether the item is related to your research and allowable under the grant.

- Justification for reimbursement requests is mandatory.
- Receipts must be included in reimbursement requests. If a receipt is missing, the Lost Receipt form must be completed along with document of payment method (e.g., credit card statement, bank statement)
- If reimbursement is being sought for purchases completed by check, a bank statement and cancelled check must be included in the reimbursement documents
- Reimbursement for food will only be allowed under one of the following two criteria:
  - The food was purchased while traveling for a research-related conference, meeting, etc.
  - The food is used at a meeting that relates to your research. You must provide an agenda or other document which clearly explains the relation between the meeting and your research

## **VI. Educational Resources**

- Statistical consultation. In addition to consultation with statisticians within the Department of Psychiatry, Social Science Data and Software (SSDS) is a group within the Stanford University Libraries & Academic Information Resources (SULAIR) that provides services and support to Stanford faculty, staff and students in the acquisition of social science data and the selection and use of quantitative (statistical) and qualitative analysis software. SSDS staff provide these services in a variety of ways that include consulting, workshops and help documentation. They are located in the [Social Sciences Resource Center \(SSRC\)](#) on the first floor of the Green Library Bing Wing.  
<https://www.stanford.edu/group/ssds/cgi-bin/drupal/>
- Lane Library resources. Lane library offers a number of workshops that may be useful for Fellows and also has links to statistical consultation in the Department of Statistics.  
<http://lane.stanford.edu/index.html>
- Continuing Medical Education: <http://med.stanford.edu/cme/>
- Post Doc Scholar Office <http://postdocs.stanford.edu/education/>
- Office of Post Doctoral Affairs <http://postdocs.stanford.edu/>
- Stanford School of Medicine Career Center <http://med.stanford.edu/careercenter/>
- On Being a Scientist: A Guide to Responsible Conduct in Research: Third Edition  
<http://www.nap.edu/catalog/12192.html>

## **VII. Miscellaneous**

Sign up for the following listservs:

[allpsychiatry-request@lists.stanford.edu](mailto:allpsychiatry-request@lists.stanford.edu)

[supd-members@lists.stanford.edu](mailto:supd-members@lists.stanford.edu) (Stanford Postdoc list)

### **Program Contacts**

*Program Director*

*Program Coordinator*

*Program Budget Manager*

*Psychiatry and Behavioral Sciences Fellowship Coordinator*

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