



Genes and Addiction  
NIDA Center for GWAS in Outbred Rats



FRONTIERS  
IN ADDICTION RESEARCH

University of Chicago  
University of Michigan  
University of Tennessee Health Sciences Center  
University of Buffalo  
Medical College of Wisconsin



**Stipends**

Stipends (\$4K undergrad; \$2K high school) are based on academic excellence and research potential. Students are given lab space to work on projects in Center sites. Mentoring and housing will be provided for ten weeks.

**NIDA Center Training Focus**

The Center is training the next generation of scientists and physicians to investigate scientific problems about the genetics of drug abuse.

**Applicants**

REHU participants are selected from a nationwide pool of students. REHU students will learn about the relationship between genetic endowment, environmental factors, and biological mechanisms that increase addiction vulnerability of a model organism, the rat.

# 2015 Genes and Addictive Behavior REHU Program

research experiences for high school and undergraduate students

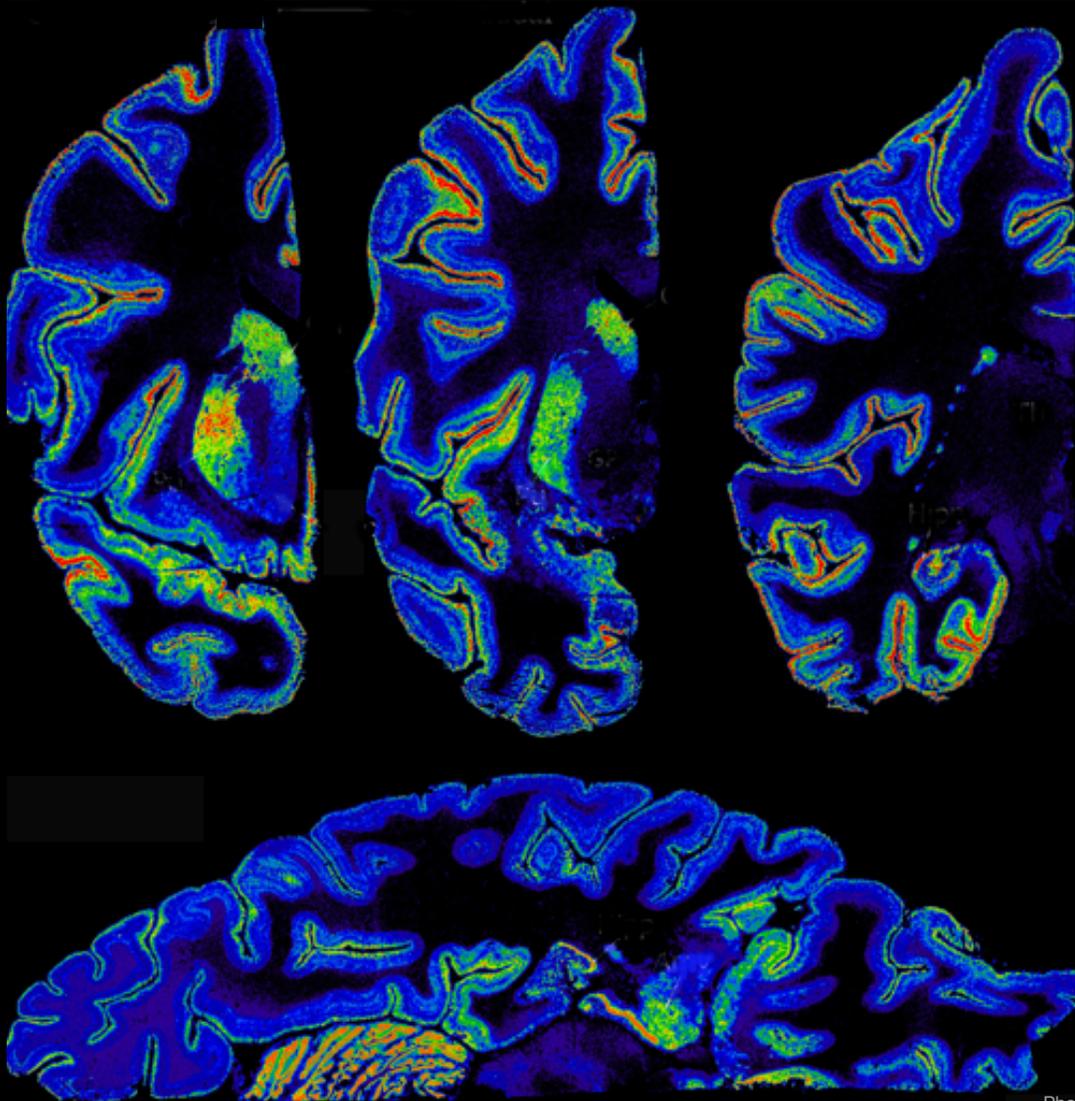


Photo: Dr. Yasmin Hurd

[www.ratgenes.org](http://www.ratgenes.org)





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Institute for  
Genomics &  
Systems Biology

## 2015 Genes and Addictive Behavior REHU Program

research experiences for high school and undergraduate students

The *NIDA Center for GWAS in Outbred Rats* seeks high school and college students for **Research Experiences for High School and Undergraduate (REHU)** projects. The goal is to encourage research training for future STEM-related careers. The REHU program is at Center research sites in Chicago, Ann Arbor, Memphis, Buffalo, and Milwaukee. Stipends of \$2,000 for high school students and \$4,000 for college students per summer quarter (June 15 - August 21, 2015) are available. The stipends will be awarded on a competitive basis based on academic excellence, motivation, scientific potential, and career goals aligned with Center interests. Besides stipends, housing and travel support, if needed, will be provided. Participants must be U.S. citizens or permanent residents and be enrolled in an accredited high school or undergraduate degree program with a concentration in the biological or physical sciences. Information about the Center is at [www.ratgenes.org](http://www.ratgenes.org).

If selected, high school and college students will be matched with faculty researchers and lab associates who will mentor REHU activities. There will be a mid-summer working lunch and informal journal club program to discuss research projects and papers. At the conclusion of the REHU, students will produce a written report and present research findings at a REHU symposium.

The NIDA Center is led by the University of Chicago but includes collaborating investigators at the University of Michigan, University of Tennessee Health Science Center, University of Buffalo, and the Medical College of Wisconsin. Center research projects are about genes and behavior. There is a primary focus on the genetics of drug abuse. Investigations include projects about incentive salience, socially-acquired nicotine self-administration, association between behavioral regulation and cocaine cue preference, and integration of genome wide association studies (GWAS) and expression quantitative traits (eQTL) data.

Depending on the project, some REHU students may use Center GWAS applications and core sequencing technologies. Others may work with heterogeneous stock rat populations. Participants will have University privileges with access to athletic facilities and social and cultural events.

Deadline for receipt of application materials is **February 9, 2015**. To apply, send via mail or email the filled out application, personal statement, official transcript, and two letters of recommendation to:

Barry Aprison, Ph.D.  
University of Chicago  
Institute for Genomics & Systems Biology  
Knapp Center for Biomedical Discovery  
900 East 57th Street, Rm. 10-114  
Chicago, IL 60637  
[baprisson@bsd.uchicago.edu](mailto:baprisson@bsd.uchicago.edu)

[www.ratgenes.org](http://www.ratgenes.org)



# 2015 Genes and Addictive Behavior REHU Program

research experiences for high school and undergraduate students

## Research Experiences for High School & Undergraduate Students

Application Deadline: **February 9, 2015**

**Name** (first, middle, last): \_\_\_\_\_

male/female

**High School, College or University:** \_\_\_\_\_

**Major field of study:** \_\_\_\_\_

**Current year of study:** \_\_\_\_\_

**Expected graduation date:** \_\_\_\_\_

**High School or College address:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Home address:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**email:** \_\_\_\_\_

**Cell phone:** \_\_\_\_\_

**Home phone:** \_\_\_\_\_

**Date of birth:** \_\_\_\_\_

**Place of birth** (city, county, country): \_\_\_\_\_

**Citizenship** (must be US citizen or permanent resident):

U. S.

Other \_\_\_\_\_

(country)

U.S. Permanent Resident

**Social Security number:** \_\_\_\_\_

**Ethnicity:**

African-American

Hispanic

Asian-American

Native American

Caucasian

Other \_\_\_\_\_

**Overall GPA:** \_\_\_\_\_

**GPA in science and math-related subjects:** \_\_\_\_\_

**Previous high schools, colleges or universities attended:**

**Have you participated in a REU or REHU program before? If so, when? & where?**



# 2015 Genes and Addictive Behavior REHU Program

research experiences for high school and undergraduate students

*Research area(s) of interest:*

- Genetic studies of incentive salience (**University of Michigan**)
- Socially-acquired nicotine self-administration (**University of Tennessee Health Sciences Center**)
- Association between behavioral regulation and cocaine cue preference (**University of Buffalo**)
- Integration of GWAS and eQTL data (**University of Chicago**)
- Heterogeneous stock (HS) rat breeding core (**Medical College of Wisconsin**)
- Other:

**Describe your specific interest regarding this program** (e.g. experiment or theory, particular research area, or project if strong preferences exist):

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**Relevant Work, Life, or Laboratory Experience** (employer, type of work, dates of employment, talents and practical skills, previous participation in an REHU, REU or other summer program):

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**Computer Experience** (Please list the types of computers you have used and any programming languages or operating systems with which you have had experience):

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# 2015 Genes and Addictive Behavior REHU Program

research experiences for high school and undergraduate students

**Please include along with the application a personal statement (of at least 200 words) describing your academic and research goals and how participation in the NIDA Center REHU summer program will help you achieve these goals.**

***Personal Statement:***

**Please mail or email your completed application to:**

Barry Aprison, Ph.D.  
Knapp Center for Biomedical Discovery, Rm. 10-114  
University of Chicago  
900 E. 57th Street  
Chicago, Illinois 60637  
bapriso@bsd.uchicago.edu

**Separate confidential letters of recommendation (2) and an official transcript can be mailed or emailed by your recommenders and school.**



# 2015 Genes and Addictive Behavior REU Program

research experiences for high school and undergraduate students

## **Letter of Recommendation**

Name of applicant: \_\_\_\_\_

In accordance with the provisions of the Federal Education and Privacy Act of 1974, enrolled students have the right to see their letters of recommendation unless they have explicitly waived that right.

Circle one:

I waive my right of access to this recommendation. • I do not waive my right of access to this recommendation.

\_\_\_\_\_  
Signature of applicant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name of respondent (Please print)

\_\_\_\_\_  
College, University, or Company

\_\_\_\_\_  
Department

\_\_\_\_\_  
Title and Position

**Note to respondent:** We appreciate your candid evaluation of the applicant named above. We are interested in how long and in what capacity you have known the applicant, your impression of the applicant's initiative, intellectual capabilities, resourcefulness, and any other specific qualities that you feel are important to judge his or her potential for further study and research leading to a career in the biological sciences.

\_\_\_\_\_  
Signature of respondent

\_\_\_\_\_  
Date

Please mail or email the completed recommendation by **February 9, 2015**.

