



Genes and Addiction  
NIDA Center for GWAS in Outbred Rats

University of California, San Diego  
University of Michigan  
University of Tennessee Health Sciences Center  
University of Buffalo  
Wake Forest School of Medicine



#### Stipends

Stipends (up to \$4K undergraduate; \$2K high school) are based on academic excellence and research potential. Students work on projects in Center sites. Mentoring and housing are provided for ten weeks in the summer.



#### NIDA Center Training Focus

The Center is training the next generation of scientists to investigate the genetics of drug abuse. 2017 participants came from Smith, Vassar, Torrey Pines High School, U. of Memphis, U. of London, and Emory University.



#### Applicants

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

## 2018 Genes and Addictive Behavior REHU Program

research experiences for high school and undergraduate students

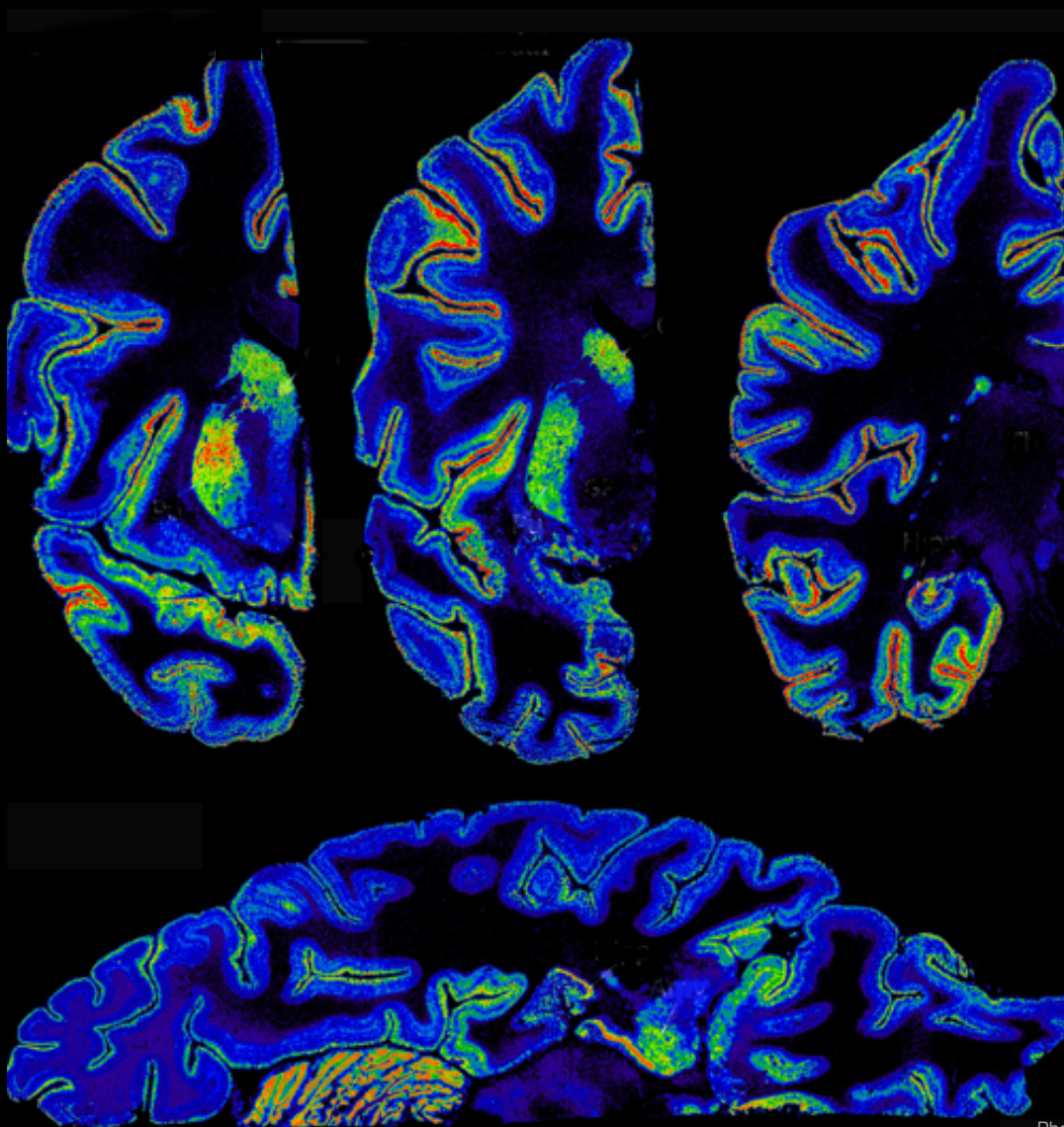


Photo: Dr. Yasmin Hurd

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







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# 2018 Genes and Addictive Behavior REHU Program

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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 located at Center research sites in San Diego, Ann Arbor, Memphis, Buffalo, and Winston-Salem. Stipends are up to \$2,000 for high school students and up to \$4,000 for college students attending the summer quarter: June 11 - August 17, 2018. Offers for participation in the program will be made based on application reviews, interviews, academic excellence, motivation, scientific potential, and career goals aligned with Center projects. 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, physical, quantitative, or computational sciences. Information about the NIDA 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 to discuss research projects and papers. At the conclusion of the REHU program, students will produce a written report and present their research findings.

The NIDA Center is led by the Principal Investigator Professor Abraham Palmer at the University of California, San Diego, but the team also includes collaborating investigators at the University of Michigan, the University of Tennessee Health Science Center, the University of Buffalo, and the Wake Forest School of Medicine. Expertise is also provided by scientists at the University of Chicago. 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 GWAS applications and core sequencing technologies. Other participants may work with heterogeneous stock rat populations. There will be access to athletic facilities and social and cultural events on campus.

Deadline for receipt of all application materials is **February 5, 2018**. To apply please use the 2018 application form. Confidential letters of recommendation and official school transcripts are required.

Barry Aprison, Ph.D.  
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Institute for Genomics & Systems Biology  
Knapp Center for Biomedical Discovery  
900 East 57th Street, Rm. 10114  
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[www.ratgenes.org](http://www.ratgenes.org)



# 2018 Genes and Addictive Behavior REHU Program

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## Research Experiences for High School & Undergraduate Students

Application Deadline: **February 5, 2018**

**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:**

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

**Cell phone:**

**Home phone:**

**Date of birth:**

**Place of birth** (City, State, Country):

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

**Student ID number:** \_\_\_\_\_

U. S.

**Ethnicity:**

Other \_\_\_\_\_

African-American

Hispanic

(country)

Asian-American

Native American

U.S. Permanent Resident

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?**



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*Research area of interest and Center site for summer project:*

- ☐ Genetic studies of incentive salience at the University of Michigan
- ☐ Socially acquired nicotine self-administration at the University of Tennessee Health Sciences Center
- ☐ Association between behavioral regulation and cocaine cue preference at the University of Buffalo
- ☐ Integration of GWAS and eQTL data at the University of California, San Diego
- ☐ Heterogeneous stock (HS) rat breeding core at the Wake Forest School of Medicine

**Very briefly explain why you selected this particular Center**

**lab:** \_\_\_\_\_

**Briefly describe a research paper, science book, or science website that inspired you and explain why:** \_\_\_\_\_

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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** (List types of computers you have used and programming languages or operating systems you have experience with):

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**Briefly identify one recent science-related news story you liked and explain why it was interesting:**

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# 2018 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. Explain how participation in the REHU summer program will help you achieve these training goals.

***Personal Statement:***

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

Barry Aprison, Ph.D.  
Knapp Center for Biomedical Discovery, Room 10114  
University of Chicago  
900 E. 57th Street  
Chicago, Illinois 60637  
bapriso@bsd.uchicago.edu

**Two separate confidential letters of recommendation and your official school transcripts should be mailed or emailed by recommenders and your school administrators.**





# 2018 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 writing the letter of recommendation (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 5, 2018**.

