



EducationUSA Weekly Update

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I. Scholarships and Fellowships

- Postdoctoral Position, Molecular and Evolutionary Genetics of Colonial Invertebrate Allorecognition - Yale University, USA
- Postdoctoral Position - Optical imaging of retinal neural activities - University of Alabama, USA
- Samuel P. Hays Research Fellowship
- Hal Rothman Research Fellowship
- PhD program in Urban Studies and a redesigned MA in Geography and Urban Studies

II. News you can use

- Office of Oceanic and Atmospheric Research
- Immunobiology Interactive

I. Scholarships and Fellowships

Postdoctoral Position, Molecular and Evolutionary Genetics of Colonial Invertebrate Allorecognition - Yale University, USA

We are currently seeking two postdoctoral researchers interested in the molecular and evolutionary genetics of colonial invertebrate allorecognition. Allorecognition phenomena have long captured the attention of marine ecologists because they couple the mechanisms and outcomes of intraspecific competition, geneticists because of the allotypic diversity they support, evolutionary biologists because they control the level at which selection acts, and immunologists because they resemble the allogeneic interactions that characterize pregnancy and transplantation. Despite their ubiquity in colonial phyla, however, the molecular basis of allorecognition has, heretofore, not been identified outside the chordates. We have recently succeeded in using positional cloning to identify allorecognition complex encoding at least two loci controlling self-not self recognition in colonies of the hydroid *Hydractinia symbiolongicarpus*. Both loci are structural complex and encode highly divergent members of the immunoglobulin supergene family.

Two projects are available. The first involves functional characterization of allorecognition genes and their encoded proteins including the isolation of interacting proteins using yeast two-hybrid and biochemical methods. The second position will characterize natural structural and sequence variation of the allorecognition complex using high-throughput sequencing and genomic techniques. The latter project is expected to bear directly on the question of how variation in the system arises and is maintained. Opportunities are also present to participate in field studies and computational work.

The successful candidates will join a unique research team comprised of an invertebrate zoologist (Professor Leo Buss, Yale EEB), a molecular geneticist (Stephen Dellaporta, Yale MCDB) and a transplant immunologist (Fadi Lakkis, UPMC). The position will be based at Yale. Experience with molecular biology, genomics and proteomics is required. These positions are available immediately and will remain open until filled. Please send a cover letter outlining the reasoning for your interest in the project, a current CV, and contact information for 3 professional references to leo.bussyale.edu

Yale University is an equal opportunity/affirmative action employer.

Postdoctoral Position - Optical imaging of retinal neural activities - University of Alabama, USA

Applications are invited for a postdoctoral position in the Biomedical Optics and Retinal Imaging Laboratory at the Department of Biomedical Engineering (BME), University of Alabama (UAB). Our project will combine multichannel electrophysiological measurement and high resolution imaging of retinal neural activities for better understanding of the retinal function. The position is partially supported by the Eyesight Foundation of Alabama.

The successful candidate should have a Ph.D. degree in vision science, neurobiology, or other related disciplines. Demonstrated excellence in electrophysiological study of neural systems is required. Proficiency in programming using Labview, IDL, or Matlab is a plus. Self motivation and creativity are highly desirable.

The position is supervised by Dr. Xincheng Yao (BME department, UAB), in collaboration with Dr. Lei Liu (Optometry Department, UAB) and other colleagues in the Vision Science Research Center, UAB. The candidate would have excellent opportunities to interact with researchers in Engineering, Neurophysiology, and Vision Science for a multi- & interdisciplinary research training.

Application

Interested applicants should send application materials to Dr. Xincheng Yao (xcyuab.edu). The application materials should include: a brief summary of research background, interests, and a current CV with contact information of at least three references.

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Samuel P. Hays Research Fellowship

American Society of Environmental History (ASEH) created this fellowship to recognize the contributions of Samuel P. Hays, the inaugural recipient of the society's Distinguished Scholar Award, and to advance the field of environmental history, broadly conceived. The fellowship provides a single payment of \$1,000 to help fund travel to and use of an archive or manuscript repository. It is open to practicing historians (either academic, public, or independent). Graduate students are ineligible. A Ph.D. is not required. Submissions will be accepted June 1 - September 30, 2008, and the recipient will be selected and notified in December 2008, for funding in January 2009.

Applications should include a C.V. and a two-page statement (500 words) explaining the project and how the research funds will be used, and should be submitted electronically to Jeffrey Stine, chair of the committee, by September 30, 2008, at stine@si.edu

Hal Rothman Research Fellowship

The Hal Rothman Research Fellowship was created to recognize graduate student achievements in environmental history research in honor of Hal Rothman, recipient of ASEH's Distinguished Service award in 2006 and editor of Environmental History for many years. The fellowship provides a single payment of \$1,000 for PhD graduate student research and travel in the field of environmental history, without geographical restriction. The funds must be used to support archival research and travel during 2009.

Students enrolled in any PhD program worldwide are eligible to apply. Applications will be accepted June 1 - September 30, 2008, and the recipient will be selected and notified in December 2008, for funding in January 2009. To apply, please submit the following three items:

- 1. A two-page statement (500 words) explaining your project and how you intend to use the research funds.
- 2. A c.v.
- 3. A letter of recommendation from your graduate advisor.

All items must be submitted electronically to Dolly Jorgensen, chair of the committee, by September 30, 2008 at dolly@jorgensenweb.net

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Temple University, Philadelphia, announces its new PhD program in Urban Studies and a redesigned MA in Geography and Urban Studies

Temple University, Philadelphia, announces its new PhD program in Urban Studies and a redesigned MA in Geography and Urban Studies, both housed in the Department of Geography and Urban Studies. The department is now accepting applications for the PhD and MA programs for the entering class of Fall 2009. The graduate program will emphasize geographic approaches to the study of urban conditions and dynamics in the US and around the world. It will focus on the themes of globalization, sustainability, and social justice, three areas that increasingly are central to confronting urban challenges. It will train students in interdisciplinary and spatially integrative frameworks, equipping them to employ a range of methods including quantitative (emphasizing Geographic Information Science) and qualitative techniques. Temple University expects to award financial aid packages, including stipends and tuition remission, to highly qualified applicants. Applications must be submitted by January 15, 2009. More information on the PhD program is available on the department website at <http://www.temple.edu/gus/grad.html>.

Questions and requests for information may be directed to the department's graduate director, Prof. Carolyn Adams, at carolyn.adams@temple.edu.

II. News you can use

Office of Oceanic and Atmospheric Research

Contact an EducationUSA adviser near you for guidance on finding and applying to an accredited U.S. college or university <http://www.educationusa.state.gov/> 2

<http://www.research.noaa.gov/>

The National Oceanic and Atmospheric Administration (NOAA) Research office works to provide "better forecasts, earlier warnings for natural disasters and a greater understanding of the Earth." Visitors can find about those subjects here and they may wish to start their journey through the site in the "NOAA Research From A to Z" area. It's a great way to learn about their work on everything from air quality to zoo plankton, and each section contains links to other relevant sites. Moving on, visitors will also want to click on over to the "Climate Research" area which provides updates on their work on modeling climate change, the ozone layer, and other germane matters. Of course, visitors would be remiss not to look at the "Weather Research" area as this is where NOAA research truly shines.

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Immunobiology Interactive

<http://www.blink.biz/immunoanimations/>

No one ever said immunobiology was easy, but this handy collection of Flash-animated features from the design company Blink does make a number of processes and concepts a bit easier to understand. What is perhaps most impressive about the site is the ability it gives visitors to tweak certain viewing preferences, sound settings, and even the size of the actual animated feature. Narrated by a pleasant sounding voice, the animated features cover such topics as phagocytosis, rolling adhesion, and gene recombination. It is worth noting that visitors also have the option to fast forward and rewind to segments that interest them, and they can also print out screenshots from each feature. Also, users of the site can change the display format of each feature as they see fit.

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