

2011 Summer Internships in Molecular Genetics and Bioinformatics



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Summer Internships in Molecular Genetics and Bioinformatics

We are offering up to four summer internship positions for deaf or hard-of-hearing undergraduate students to study the molecular genetics of a common deafness gene, connexin 26. This internship will last ten weeks, beginning May 23, 2011 and ending July 29, 2011. The application deadline is March 4, 2011.

Interns will work with [Dr. Derek Braun](#) and [Elizabeth Craft](#) in our newly constructed laboratory facilities at Gallaudet University (<http://www.gallaudet.edu>). Interns will receive a stipend of \$4500, plus an \$800 meal credit and paid-for housing in a campus dormitory. Interns will need to provide their own transportation to and from Gallaudet. Applicants must be U.S. citizens or permanent residents of the U.S. and its possessions.

Our new laboratory facilities are staffed and managed by four deaf Ph.D. faculty members and one deaf M.F.S. laboratory technician. Each faculty member is leading research projects in different fields: anthropological genetics of deafness, environmental science, and cell and cancer biology.

This project combines molecular genetics with physical anthropology and computational statistics and examines the reason for the unusually high number of connexin 26 (also called *GJB2*) mutations, which altogether are responsible for 30-40% of congenital hearing loss in this country. Among the hypotheses which we are testing are whether connexin 26 deafness is under relaxed selection and whether assortative mating in the deaf community has increased connexin 26 deafness. We are testing these hypotheses by reconstructing the gene genealogy and evolutionary history of connexin 26 mutations.

Interns will perform molecular genetics experiments including polymerase chain reactions (PCR), agarose gel electrophoresis, molecular cloning, growing and handling *E. coli* cultures, mini-preparations of plasmid DNA, and preparation of samples for DNA sequencing. Interns with a background in computer science will also have the option of performing computational/statistical analyses of our sequence data and writing programs in **Python**.

Gallaudet University is located within a few miles of hundreds of historic Washington, DC destinations including the US Capitol, the Library of Congress, the Washington Monument, and the National Mall where the Smithsonian Institution museums are located. The underground Metrorail system makes travel between hotspots quick and easy. Washington, DC has a vibrant culture and nightlife popular with people of all ages and interests.

These summer positions are funded by the Mellon Foundation and NASA via the DC Space Grant Consortium.

Instructions

You can fill out this application electronically using the latest version of [Adobe® Reader](#), or print it out and fill it out manually. Either email or mail your completed application to: Dr. Derek Braun • W411B Hall Memorial Building • 800 Florida Avenue, N.E. • Washington DC 20002 • email: derek.braun@gallaudet.edu

General Information

name: _____	email: _____	
permanent mailing address: _____ _____	current mailing address: _____ _____	
citizenship: <input type="checkbox"/> US Citizen	<input type="checkbox"/> Permanent Resident	<input type="checkbox"/> Other
current college: _____		
current class: <input type="checkbox"/> Freshman	<input type="checkbox"/> Sophomore	<input type="checkbox"/> Junior
anticipated date of graduation: _____		

Supporting Documents

- Official transcript(s)**
- One-page resumé**
Please include:
 - (1) education, honors
 - (2) work experience
 - (3) other activities
- One-page statement of interest**
Please include:
 - (1) career interests
 - (2) research experience
 - (3) reasons for interest in this internship
- Two letters of recommendation**
Attach letters of recommendation to this application or email letters as PDF documents on an official letterhead

Letters of Recommendation

1	name: _____	email: _____
	position: _____	
	mailing address: _____ _____ _____	
2	name: _____	email: _____
	position: _____	
	mailing address: _____ _____ _____	