Of Mice and Maine:
Science Writing at The Jackson Laboratory

Amber Bauer
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*Science Writing at The Jackson Laboratory,*

Amber Bauer

Journalism Internship and Senior Honors Thesis
Thesis Adviser: Sheryl Swingley

Ball State University  
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Acknowledgements

I would like to thank Sheryl Swingley for agreeing to be my adviser for this project. If it hadn’t been for her encouragement, I would not have renewed some very important science writing contacts.

I would also like to thank everyone at The Jackson Laboratory – Joyce, Jade, Jon, Rita, Jenn – for believing in my writing skills enough to give me real assignments and for fanning my passion for science writing.
Abstract

During the summer of 2004, I interned at The Jackson Laboratory in Bar Harbor, Maine, in the Office of Public Information. Throughout the summer I was able to explore the field of science writing in its various forms: public information, science journalism and grant writing. This volume contains examples of each of the three aspects of science writing. Public information news releases are targeted at media outlets, specifically newspapers. It is the journalist that actually communicates the story to the public, writing the science in an approachable manner helps sell the story, especially to local newspapers. In science journalism, the reporter must make complex scientific concepts approachable to the average person. The journalist must also make science interesting to an audience that may be intimidated by the subject. With grant writing, not only does science need to be translated, but the reasons the research is important must also be stressed – a more persuasive type of writing. Overall though, science writing serves to bridge the gap between scientists and the public.
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Writer’s Statement

I was sitting in the internship meeting that is required for all journalism students, but little did I know that this meeting was going to alter my life’s path forever. It was at this meeting that I first learned about The Jackson Laboratory, described as the “largest producer of inbred mice in the country,” and the public information position in The Summer Student Program. “It’s 33 science geeks and one communications person living in the same house for an entire summer,” Internship Coordinator Sheryl Swingley said. To which I silently replied, “I want to be that communications person.”

Following that meeting and a bit of Web research, I found an entire career path that I hadn’t known existed: science writing. I had always loved my science courses in high school, well minus the labs. I had taken more three years to convince both my chemistry and biology teachers that I was not going to make science my career. Secretly, though, I wished that I could major in science without having to be in the laboratory. I had even told my mother on numerous occasions that “if I could write about science for the rest of my life I would be happy.” It was not until my sophomore year at Ball State that I realized my wish could come true.

At the time I was a public relations and advertising double major. In order to pursue my newfound science writing career path, I dropped my advertising major and picked up a biology minor, thereby creating my own makeshift science writing major.

Ever since that internship meeting, I knew I wanted to do my internship at The Jackson Laboratory. There was really no other place that I wanted to go. Besides, it seemed fitting that the place that started me down the path toward science writing would be the one that would give me the practical experience I needed to succeed. And to my great excitement, on May 30, 2004 I
arrived in Bar Harbor, Maine, to start my 11-week internship at The Jackson Laboratory in the Office of Public Information.

This internship, and by extension this project, provided the fusion of science and writing that I was preparing for through my course work. This internship provided me with experience in not only scientific public information but science journalism and grant writing as well, allowing me to explore the breadth of “science writing.” As you can see, exemplified in the following pages, my internship provided me with numerous writing samples and clips that exhibit the amount of knowledge I gained throughout the summer. It is these samples that will provide the foundation for my application to MIT’s science-writing graduate program, which I hope will propel me into the next stage of my career.
Ball State Internship Materials

Part of the requirements for receiving credit for an internship in the Department of Journalism is to write a goals summary statement during the first few weeks of the internship and to write an internship assessment during the last few weeks. The goals summary statement is suppose to outline what you want to accomplish during your internship. The internship assessment is suppose to evaluate how well you met those goals and to think about how much diversity was suppose to be present in the workplace.
Goal Summary Statement

Internship and Job Description

This summer I was given the opportunity to complete my dream internship. I was chosen by The Jackson Laboratory for the 78th year of the Summer Student Program. It seems fitting that I am here at TJL this summer, seeing as it was this internship that put me on the path toward combining science and public relations my sophomore year.

My internship title is science writing, which spans two departments at the lab: Public Information and Scientific Development. Science writing, plus living in a mansion that is on the coast and surrounded by a national park, not a bad way to spend your internship (or your summer for that matter).

My supervisor is the director of public information, so the majority of my projects will be in that area. I will be writing two sets of news releases to send to the hometown newspapers of the 34 summer students in residence. The first set of releases is announcing the selection of each student and briefly describes his or her research project. The second set of releases will be sent out later in the summer and will show the contributions each student made to the lab and relate their experiences on Mount Desert Island. I also will write a few features for the Mount Desert Islander’s special pull-out section that will commemorate the laboratory’s 75th anniversary.

For Scientific Development I will help write a grant for educational programs. The project will not commence until later in the summer so I am still sketchy on the exact details.

My major project will span both departments. I was asked to interview Dr. Ken Paigen, a leading mouse genetic researcher and former director of the lab. From this interview I will write
a history of mouse genetics. The history will be targeted to a lay audience while being scientifically accurate. The information will be compiled in a number of different ways, including a handout for Development, a feature story for the Bangor newspaper and maybe even an article in The Scientist, the leading trade publication in this field.

**Internship Goals**

Before I even started my internship I had specific goals for myself, the most prominent being: I want to be able to load my portfolio with a wide-range of materials I produced this summer. More specifically, I want to have at least five news releases picked up by media outlets and publish two bylined features. Overall, I want to end the summer with at least five strong portfolio pieces.

**Professional Goals**

The structure of this internship has provided me with a unique opportunity because I am able to work in the three major fields of science writing: scientific public relations, science journalism and grant writing. I hope to come out of this experience with a good framework of knowledge in all three areas, allowing me greater career opportunities. I also hope to figure out exactly what is needed to excel in my chosen field of science writing.

**Personal Goals**

Besides giving me great science writing experience, this internship program also gives me the opportunity to explore some of the most amazing scenery I have ever encountered. Thus, my personal goals stray from the academic toward the active. Before leaving Bar Harbor, I want to hike all five peaks in Arcadia National Park, go whale watching, bike the entire 26-mile park loop and win a trophy for the Summer Student float in the Fourth of July parade.
All of these goals can be succinctly summarized as the follow: I want to find my niche and lay the groundwork for landing a great job after graduation while experiencing everything Bar Harbor has to offer. This is one time where I will balance work and play.
Amber Bauer  
Summer 2004

**Internship Assessment**

*Goals*

I set a number of goals that I strove to accomplish during my internship at The Jackson Laboratory. These goals could be divided into three categories: internship goals, professional goals and personal goals. Over the course of my 11-week internship I accomplished a majority of my goals.

**Internship Goals**

I stated in my goals summary statement: "I want to be able to load my portfolio with a wide-range of materials I produced this summer. More specifically, I want to have at least five news releases picked up by media outlets and publish two bylined features. Overall, I want to end the summer with at least five strong portfolio pieces."

I more than accomplished my internship goals. So far I’ve had nine releases picked up by media outlets, both print and online. I published one bylined article in the Mount Desert Islander about Press Week (approximately 500 words) and will have my 1,500-word feature published Sept. 2, 2004, in a supplement that will be distributed by most of Maine’s major dailies. I also had time this summer to create the 2004 Summer Student Web site, as well as write and design a book of research summaries for a nonscientific audience that was distributed at the Summer Student Symposium and will be sent to Jackson Laboratory trustees.

I also had the opportunity to publish some of my photos. The Summer Student Web site is filled primarily with my photos. Also, the Centre College Web site did a feature on one of the Summer Students and used three of my photos to accompany the story. There is a possibility that
some of my photos of Highseas and the Bar Harbor area will be used in future education and
courses and conferences materials.

Overall, I had enough strong writing samples to create a digital portfolio of my internship
for my final project. I hope to send a modified version of this portfolio to graduate schools and
hope to use it in job interviews.

Professional Goals

I stated that my goals in this area were "to come out of this experience with a good
framework of knowledge in all three areas, allowing me greater career opportunities. I also hope
to figure out exactly what is needed to excel in my chosen field of science writing."

The entire summer provided me with experience in all three areas of science writing. I
also had the opportunity to network with 12 national science writers during the laboratory’s
annual Press Week. During this time I made valuable contacts in a field that is very tightknit.
One of the editors of Nature Genetics actually challenged me to get a freelance article in Science
Times (the weekly science section of The New York Times). He said he would edit any story I
sent him. I already have a story idea and hope to have a draft to him by mid-September.

This experience also gave me renewed enthusiasm for graduate school. I discovered that
a majority of science journalists have advanced degrees; many hold scientific Ph.D.s. My
sponsor at the laboratory happens to know the man in charge of the MIT science writing graduate
program, which is my top choice. This internship seems to have provided me with contacts that
will be able to open doors for me in the near future.

Personal Goals

My personal goals are where I fell short. (I suppose if I wasn’t going to achieve a goal it
is best that it was in this area.) I said I wanted to “hike all five peaks in Arcadia National Park,
go whale watching, bike the entire 26-mile park loop and win a trophy for the Summer Student float in the Fourth of July parade.”

What actually happened was that I hiked all of the major peaks in Acadia except Cadillac, couldn’t get on a whale watch because they were always full or canceled, biked the 9-mile bike loop but not the 26-mile park loop (although a group of us did bike 22 miles of carriage roads one Saturday so I think that could count) and didn’t place for our float. (We were most certainly robbed, seeing as our float was pretty amazing.)

My Work Experience

Overall I had an amazing work experience at The Jackson Laboratory. My projects were slow to start, but by the end of the summer I was swamped with work. I was able to produce a wide range of documents related to science at the laboratory or The Summer Student Program. Also, because of the way this internship program was set up, I was not only able to expand my portfolio, but I had a ton of fun in the natural beauty of Maine.

Evaluation of PR Program

I believe I was very well prepared for my internship. In fact, I found it ironic that in my first week I was asked to write hometown news releases for each of the summer students, and my first assignment in J360 was to write a hometown news release. Also, because of the skills I’ve learned through the journalism department, I was able to enhance my internship projects, namely creating the Web site and designing a digital portfolio for my final project. My PR classes made me self-sufficient at my internship, much to the joy of my supervisor.

Diversity in the Workplace

The Jackson Laboratory is a very diverse work environment overall. For example, there are researchers from China, Japan, Russia and a variety of other countries. Unfortunately the
diversity in the External Relations Department was relatively nonexistent. The department was all white and predominately female. The diversity in my department came from diversity of opinion.

The Summer Student Program was predominately white and female; however, Jon Geiger, manager of education programs, is trying to create more diversity through high school recruiting programs. Out of 34 students, there were five African Americans and two Asians. There was also diversity in geography and experience. Students came from states from California to Maine, as well as one student who came from Dublin, Ireland. Students attended high schools, state universities, small liberal arts colleges and Ivy League universities.

This program provided me with a unique opportunity to experience science and the scenic beauty of Maine. I left the program with portfolio material, a solid direction for my future career and new friendships that will last a lifetime. I would definitely recommend the science-writing internship at The Jackson Laboratory to future Ball State interns.
Summer Student Project Proposal

The Summer Student Program was designed to mimic the entire scientific research process in one summer. The research process begins by securing funding for your research project. This stage was simulated in the project proposal. The proposal was suppose to contain a methods section and a literature review to make sure the student understood what he or she would be working on during the summer. The second stage is research, followed by presentation of results, usually in a journal paper and a presentation at a scientific meeting. The final paper and the Summer Student Scientific Symposium simulated this final stage.

Because I was not doing research this summer, my project was manipulated to fit into this mold. As a result, I wrote the following proposal about the various writing projects I hoped to accomplish, as well as including some prereporting for the various interviews I foresaw myself conducting. My project changed quite considerably from what I proposed because of the various grant projects and other tasks I was asked to do.

I was able to modify the final paper for my project so I did not have to write 15 pages about writing. Instead I compiled a sample of the work I completed over the summer and designed a digital portfolio. The result is the CD that is on the inside front cover.
Summer Student Project Proposal

Project Description

My project will be to produce documents characteristic of the three major specializations of science writing: laboratory public information, science journalism and grant writing.

Public Information: News Releases

I will begin my project by writing hometown news releases for the summer students. The releases will follow a rough template: announcement of the student’s selection, description of the program, description of the student’s project and the reasons why the student wanted to participate. The template is necessary because more than 30 releases need to be written. Following completion, each release will be sent to the student’s hometown and school newspapers. The release format and contact for each paper will be researched via the News Media Yellow Book and the Internet, as well as phone calls to some of the smaller newspapers.

These releases will be dry because this is only the first few weeks of the program, and the students haven’t had the opportunity to accomplish or experience anything yet. However, if the releases were postponed until later in the program, reporters would not have time to follow up on the story. Thus, I will be writing a second set of releases at the end of July or beginning of August to recognize each student’s achievements during the summer.

The second set of releases will be more personalized. Each student will have had different experiences that will need to be highlighted. Upon completion, the distribution of these releases will be much easier than the first set because I will already have created a complete media list.
Also during my internship I will have the opportunity to meet professional science writers at the laboratory, as well as those from national and international media during Press Week. These contacts could prove to be invaluable in a field that has networking as its backbone.

Science Journalism: Feature Articles

The fact that I am a summer student during the 75th anniversary of the laboratory provides me with some unique writing opportunities. I will most likely be writing a few historical features for the Bangor Daily News’ special anniversary pullout section.

I have begun researching the history of the lab by reading “The First Fifty Years at the Jackson Laboratory,” as well as many articles and annual reports. Based on this background research and suggestions from the Development Office, I am planning to write one feature connecting Shaoguang Li’s current leukemia research to David Baltimore’s research and the cancer research tradition at the laboratory.

Grant Writing

I have been asked to help write a grant that is due in August for educational funding. However, I have never even seen a grant before, let alone written one. This should prove to be a valuable experience because I have been told that many professional science writers have grant writing on their résumés. Unfortunately, since my proposal has been described as “overly ambitious,” this part of my project might be scaled back or cut.

History of Mouse Genetics

The largest portion of my project will come from an interview with Dr. Kenneth Paigen. During this interview I hope to gather information about the history of mouse genetics and the events of the last 75 years that caused the increase in the use of mice for genetic research, as well as the growth of The Jackson Laboratory. Currently, mice are seen as the closest animal to an
ideal research model because they are small, quick breeders and cheap, as well as having virtually the same genes and diseases as humans (Canfield).

I have scheduled the interview with Dr. Paigen for June 16. To prepare my questions I read information on The Jackson Laboratory Web site, as well as Dr. Paigen’s “One Hundred Years of Mouse Genetics: An Intellectual History,” which was published in a 2003 issue of Genetics, and a selection of articles about the completion of the mouse genome sequencing, which was published in the Dec. 5, 2002, issue of Nature.

Dr. Paigen is currently a senior staff scientist at The Jackson Laboratory and is researching recombination hotspots in the mouse genome. Dr. Paigen, however, was the director of the laboratory from 1989 until 2002.

Dr. Paigen earned his undergraduate degree in biology at John Hopkins University and his Ph.D. in biochemistry at the California Institute of Technology. He had postdoctoral appointments at Cold Spring Harbor Laboratory, Harvard and Berkeley before becoming the chairman of the Department of Molecular Biology at the Roswell Memorial Institute in Buffalo, New York. In 1982, Dr. Paigen became a professor and chair of the Department of Genetics at Berkeley.

Dr. Paigen has published more than 100 scientific papers, as well as a book titled “The Jackson Laboratory.” Dr. Paigen is highly respected throughout the global scientific community for the breadth and creativity of his work (“Dr. Kenneth Paigen”) and for his pioneering work in the field of biochemical genetics (Jax Notes).

After the interview, I will create several documents with the information I have gathered: a handout for donors and feature stories for newspapers like the Mount Desert Islander and the Bangor Daily News and trade publications like The Scientist.
Goals and Objectives

Based on the breadth of my project, I have set overall goals for my internship that I will strive to achieve by the end of the summer.

I want to be able to load my portfolio with a wide range of materials produced throughout the program. To quantify, I want to have at least five news releases picked up by media outlets and publish two bylined features. Overall, I want to end the summer with at least five strong portfolio pieces.

I want to come out of this experience with a good framework of knowledge in all three science writing specialties, giving me more career opportunities. I also hope to discover and develop the characteristics needed to excel in my chosen specialization of science writing.
Works Cited


News Releases

Over the course of my internship I wrote two sets of news releases. The first set announced the selection of each student to The 2004 Summer Student Program. The second set highlighted each student's feelings toward their research and toward The Summer Student Program as a whole. These releases are important because they capture each student's unique experiences in their own words. The end-of-summer releases are vital tool for continued financial support of the program. Both sets of releases were sent to each student's hometown newspaper, as well as school newspapers that publish in the summer. Overall, my releases sparked at least 13 print and Web stories.
Media Release
The Jackson Laboratory

Office of Public Information • 600 Main Street, Bar Harbor, Maine 04609-1500
Voice: 207-288-6051 • Fax: 207-288-6076 • E-Mail: pubinfo@jax.org • http://www.jax.org

FOR IMMEDIATE RELEASE

June 23, 2004

Contact:
Amber Bauer, The Jackson Laboratory, 207-288-6051, abauer@jax.org
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Greenville Local Selected for Prestigious Jackson Laboratory Summer Student Program

Bar Harbor, Maine – Phillips Academy Andover senior Ayodele Adesanya joined the ranks of two Nobel Prize winners last week as he began his research as a Summer Student at The Jackson Laboratory.

In its 78 years, the Summer Student Program has helped to develop more than 2,000 young scientists, many of whom have gone on to make important scientific and medical discoveries. Alumni of the program include Drs. David Baltimore and Howard Temin, who shared the 1975 Nobel Prize in physiology or medicine. This year, the program is giving 34 talented high school and college students the opportunity to conduct scientific research under the guidance of a laboratory researcher.

Ayodele, who dreams of becoming an orthopedic surgeon, was chosen from approximately 300 applicants. He will spend the next eight weeks working with Staff Scientist Dr. Carol Bult to organize and enhance a genetics database by adding genetic sequences for certain diseases in mice. Every day Jackson Laboratory genetics databases are accessed by thousands of researchers worldwide.

“There is a possibility that I will make my own discoveries and leave my own mark on the extensive and deep field of science,” Ayodele said.

Besides engaging in research, Ayodele also has the opportunity to interact with other students from around the world who share his passion for science while residing at Highseas, a Jackson Laboratory residence overlooking Frenchman Bay.

More information about The Jackson Laboratory Summer Student Program is available at http://www.jax.org/education/index.html.

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With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine’s largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer’s disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high school, college and graduate students.

For information on automatic e-mail delivery of news releases (journalists only), please send an e-mail request.
FOR IMMEDIATE RELEASE

August 12, 2004

Contact: Amber Bauer, The Jackson Laboratory, 207-288-6051, abauer@jax.org
Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Summer Research Program Gives Greenville Local New Knowledge, New Friends

Bar Harbor, Maine – The lazy days of summer were anything but lazy for Greenville local Ayodele Adesanya. After nine weeks of intensive research at The Jackson Laboratory, Ayodele will present his results during the 75th Annual Summer Student Scientific Symposium on August 16.

As a Summer Student Ayo, the son of Timothy and Joyce Adesanya, had the opportunity to conduct bioinformatics research under the direction of Staff Scientist Carol Bult, Ph.D. Ayodele redesigned and updated the Positional Candidate Analysis Display (PLAD), a database of quantitative trait loci (QTL) available online that is used by researchers to identify disease-related genes.

All of Ayodele’s modifications to PLAD will decrease the time needed to narrow down thousands of genes to specific genes of interest that can be tested. Hopefully this will lead to more time for researchers to spend on actual gene investigations and, eventually, more discoveries, Ayodele said.

Outside of the laboratory, Ayodele had the opportunity to interact with other students who share his love of science while living at Highseas, a Jackson Laboratory residence on the shore of Frenchman’s Bay.

It is the people and the quiet scenery that this Phillips Academy Andover rising senior will miss most.

Ayodele’s participation was supported by the Howard Hughes Medical Institute and The Horace W. Goldsmith Foundation.

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For more information about The Summer Student Program visit www.jax.org/education/index.html.

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For information on automatic e-mail delivery of news releases (journalists only), please send an e-mail request.
FOR IMMEDIATE RELEASE

June 7, 2004

Contact:
Amber Bauer, The Jackson Laboratory, 207-288-6051, abauer@jax.org
Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Fairborn Local Selected for Prestigious Jackson Laboratory Summer Student Program

Bar Harbor, Maine – Fairborn High School graduate Amber Bauer joined the ranks of two Nobel Prize winners last week as she became a Summer Student at The Jackson Laboratory.

In its 78 years, the Summer Student Program has helped to develop more than 2,000 young scientists, many of whom have gone on to make important scientific and medical discoveries. Alumni of the program include Drs. David Baltimore and Howard Temin, who shared the 1975 Nobel Prize in physiology or medicine. This year, the program is giving 34 talented high school and college students the opportunity to conduct scientific research under the guidance of a laboratory researcher.

Amber, a public relations major at Ball State University, was chosen from approximately 300 applicants. Amber will spend the next 10 weeks discovering the multiple facets of science writing, including public information, science journalism and grant writing, under the guidance of Public Information Manager Joyce Peterson.

“It was learning about the Summer Student program that made me decide to pursue science writing,” Amber said. “It seems only fitting that I would do my internship at the institution that inspired my career choice.”

Besides writing, Amber also has the opportunity to interact with other students from around the world who share her passion for science while residing at Highseas, a Jackson Laboratory residence overlooking Frenchman Bay.

For more information about The Jackson Laboratory Summer Student Program visit http://www.jax.org/education/index.html.

With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine’s largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer’s disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high school, college and graduate students.

For information on automatic e-mail delivery of news releases (journalists only), please send an e-mail request.
Summer Internships under way (6/8/2004)

PR intern travels to Maine for opportunity of a lifetime

Amber Bauer is interested in pursuing a career in science and technical writing. Bauer is the second Ball State student to do a public relations internship at The Jackson Laboratory, which is the largest mammalian genetics research institute in the world, located in Bar Harbor, Maine.

One of her first assignments for the internship was to write 34 hometown news releases for the summer interns working at the laboratory. Later in the summer, she will help host journalists from around the world who are invited to learn about the latest developments in genetics at a special Press Week at the laboratory. Press Week will be sponsored in conjunction with the 2004 Scientific Symposium, the 45th Annual Short Course in Medical and Experimental Mammalian Genetics and the 75th Anniversary of the Jackson Laboratory.

Bauer writes: "I just wanted to let you know that I'm midway through my first week at The Jackson Laboratory, and things here are FABULOUS! I love it here in Maine and at the lab. It sounds like I will be doing a lot of work, which is great. And it seems like everyone is trying to make sure I lose my fear of rodents by the end of the summer.

"Yesterday we went on a tour of the lab, and we went into a mouse room. Just think of an entire classroom filled with shelf after shelf filled with plastic containers of mice. Then tomorrow I'm going through biomethods training with the rest of the group in which I get to learn to sex mice among other things. But, I figure if I'm going to work in this field and write intelligently about it, then I should do it since I have the opportunity."

The Jackson Laboratory is one of the few Internship sites that provides housing for its interns. The first photograph shows the view from Bauer's back porch. The second photograph shows a view from Bauer's first hike in Acadia National Park.

For more news about Bauer, read her hometown news release.
Internship puts senior with elite

Program combines student's love of science and writing

Myra Dalton | Chief Reporter

Public relations major Amber Bauer is among many Ball State students spending the summer as an intern, but she has landed a coveted position at the place that inspired her career choice. Bauer competed with 300 applicants from across the country to get accepted to an internship program at the Jackson Laboratory in Maine; a program that has graduated two Nobel Prize doctors.

Jon Geiger, head of educational programs at the laboratory, said the laboratory picks its summer semester students through an application process and that, many times, those students come back to work at the laboratory after college. “Some of the scientists have been summer semester students when they were younger,” Geiger said.

Jackson Laboratory, founded by geneticist Clarence Cool Little, has been running for 75 years and studies the genetic orientation of diseases and disorders. Jackson Laboratory geneticists use mice to research the genetic basis of human development and diseases. Knowledge gained through the research has become key in the world of science.

Because she has a love of science but not of laboratory work, Bauer decided to major in advertising. With the help of journalism professor Sheryl Swingly, Bauer said she realized that there were other ways to be involved in the science community. “I thought a career in science wasn’t an option,” Bauer said. “However, after learning about the internship at the Jackson Laboratory, I discovered that there was this whole career that I never knew about: science writing.”

After dropping her advertising major and picking up a biology minor, Bauer turned to science writing as an option and began looking to the Jackson Laboratory for a possible internship. “When it was time to apply for internships, I knew that I wanted to be at the Jackson Laboratory,” Bauer said. “It was the only place I could imagine spending my internship summer.”

At the Jackson Laboratory, Bauer works at the Public Information Department, which falls under the heading of External Relations. Her daily work includes networking with professional science writers at the laboratory and with national and international media during press week.

Bauer also writes hometown news releases for the other summer interns that highlight their achievements at the laboratory and describe what they have been doing over their summer internship.

In addition to these responsibilities, the laboratory has asked Bauer to help write a grant for education funding that is due in August.

“This should prove to be a valuable experience because I have been told that many professional science writers have grant writing on their resumes,” Bauer said.

Since this is the laboratory’s 75th year, Bauer will work on a project to celebrate the anniversary. “I will most likely be writing a few historical features for the Bangor Daily News’ special anniversary pullout section,” Bauer said. “The special anniversary pullout will be published in early September.”

After the 11-week program, Bauer will graduate during their August 16 symposium.

Please see INTERN, page 2
FOR IMMEDIATE RELEASE

August 12, 2004

Contact: Amber Bauer, The Jackson Laboratory, 207-288-6051, abauer@jax.org
Jade Hanner, The Jackson Laboratory, 207-288-6051, jade@jax.org

Summer Student Program Gives Fairborn Local New Knowledge, New Friends

Bar Harbor, Maine – The lazy days of summer were anything but lazy for Fairborn local Amber Bauer. After 11 weeks of intensive science writing at The Jackson Laboratory, Amber will present her portfolio and acquired knowledge during the 75th Annual Summer Student Scientific Symposium on August 16.

As a Summer Student Amber, the daughter of Bruce and Martha Bauer, had the opportunity to explore three different fields of science writing: public information, science journalism and grant writing, under the direction of Public Information Manager Joyce Peterson. Some of Amber’s accomplishments for the summer were having eight news releases pick up for publication by newspapers across the country, publishing two bylined articles in local Maine newspapers, designing a 2004 Summer Student Web site (www.jax.org/education/ss04/index.html), and meeting national science writers during the Laboratory’s annual Press Week.

“In the span of one week, Press Week, I met a Nobel Laureate, watched the BBC film a-documentary, was introduced to the governor of Maine and went to a party with Glenn Close – not too bad for an intern!” said Amber, a public relations major at Ball State University.

Outside of the laboratory, Amber had the opportunity to interact with other students who share her love of science while living at Highseas, a Jackson Laboratory residence on the shore of Frenchman’s Bay.

“This experience has given me a wider understanding of genetics, great portfolio material and career contacts, as well as friends that will last a lifetime,” Amber said.

Amber’s participation was supported by The Horace W. Goldsmith Foundation.

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For more information about The Summer Student Program visit www.jax.org/education/index.html.

With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine’s largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer’s disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high school, college and graduate students.

For information on automatic e-mail delivery of news releases (journalists only), please send an e-mail request.
West Chester Local Selected for Prestigious Jackson Laboratory Summer Student Program

Bar Harbor, Maine – Unionville High School graduate Megan Campbell joined the ranks of two Nobel Prize winners last week as she began her research as a Summer Student at The Jackson Laboratory.

In its 78 years, the Summer Student Program has helped to develop more than 2,000 young scientists, many of whom have gone on to make important scientific and medical discoveries. Alumni of the program include Drs. David Baltimore and Howard Temin, who shared the 1975 Nobel Prize in physiology or medicine. This year, the program is giving 34 talented high school and college students the opportunity to conduct scientific research under the guidance of a laboratory researcher.

Megan, a biochemistry and molecular biology major at Gettysburg College, was chosen from approximately 300 applicants. Megan will spend the next 10 weeks developing a structured vocabulary for the scientific community to use when comparing the mouse and rat genomes. Working under Associate Staff Scientist Judith Blake, Ph.D., Megan’s research will help ensure consistency and will stimulate a more robust flow of information. Every day Jackson Laboratory genetic databases are accessed by thousands of researchers worldwide.

“I was interested in pursuing research this summer,” Megan said. “The Jackson Laboratory has a cutting-edge facility and is conducting fascinating research.”

Besides engaging in research, Megan also has the opportunity to interact with other students from around the world who share her passion for science while residing at Highseas, a Jackson Laboratory residence overlooking Frenchman Bay.

For more information about The Jackson Laboratory Summer Student Program visit http://www.jax.org/education/index.html.

With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine’s largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer’s disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high school, college and graduate students.

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FOR IMMEDIATE RELEASE

August 12, 2004

Contact: Amber Bauer, The Jackson Laboratory, 207-288-6051, abauer@jax.org
Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Summer Research Program Gives West Chester Local New Knowledge, New Friends

Bar Harbor, Maine — The lazy days of summer were anything but lazy for West Chester local Megan Campbell. After 11 weeks of intensive research at The Jackson Laboratory, Megan will present her results during the 75th Annual Summer Student Scientific Symposium on August 16.

As a Summer Student Megan, the daughter of Cheryl and David Campbell, had the opportunity to generate several reports analyzing the consistency of the GO annotations across species. as well as to write several bioinformatics programs as part of Associate Staff Scientist Dr. Judith Blake’s bioinformatics group.

Outside the laboratory, Megan had the opportunity to interact with other students who share her love of science while living at Highseas, a Jackson Laboratory residence on the shore of Frenchman’s Bay.

“The thing I’ve enjoyed most about this summer is the people I’ve shared it with,” Megan said. “I’ve also really enjoyed living next to the ocean.”

It has been living next to the water that has captured Megan’s imagination.

“White water rafting, sea kayaking – anything having to do with the water was amazing,” Megan said. “The beautiful landscape. as well as the opportunity to explore the coast will be sorely missed.

Megan’s participation was supported by The Horace W. Goldsmith Foundation and The Allen C. Schroeder Endowed Scholarship Fund.

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For more information about The Summer Student Program visit www.jax.org/education/index.html.

With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine’s largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer’s disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high school, college and graduate students.

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FOR IMMEDIATE RELEASE

June 23, 2004

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Amber Bauer, The Jackson Laboratory, 207-288-6051, abauer@jax.org
Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Cheverly Local Selected for Prestigious Jackson Laboratory Summer Student Program

Bar Harbor, Maine – Fairmont Heights High School graduate Constantin Chikando joined the ranks of two Nobel Prize winners last week as he began his research as a Summer Student at The Jackson Laboratory.

In its 78 years, the Summer Student Program has helped to develop more than 2,000 young scientists, many of whom have gone on to make important scientific and medical discoveries. Alumni of the program include Drs. David Baltimore and Howard Temin, who shared the 1975 Nobel Prize in physiology or medicine. This year, the program is giving 34 talented high school and college students the opportunity to conduct scientific research under the guidance of a laboratory researcher.

Constantin, a chemical engineering major at Northwestern University, was chosen from approximately 300 applicants. Constantin will spend the next eight weeks researching the effects of agrin, a protein found in the brain and muscles in Alzheimer’s disease under the direction of Associate Staff Scientist Robert Burgess, Ph.D.

“I have been interested in the research being done here at The Jackson Laboratory since high school, especially the neurobiology research,” Constantin said.

Besides engaging in research, Constantin also has the opportunity to interact with other students from around the world who share his passion for science while residing at Highseas, a Jackson Laboratory residence overlooking Frenchman Bay.

More information about The Jackson Laboratory Summer Student Program is available at http://www.jax.org/education/index.html.

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With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine’s largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer’s disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high school, college and graduate students.

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August 12, 2004

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Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Summer Research Program Gives Cheverly Local New Knowledge, New Friends

Bar Harbor, Maine – The lazy days of summer were anything but lazy for Cheverly local Constantin Chikando. After nine weeks of intensive research at The Jackson Laboratory, Constantin will present his results during the 75th Annual Summer Student Scientific Symposium on August 16.

As a Summer Student, Constantin had the opportunity to conduct scientific research “at the bench” under the direction of Associate Staff Scientist Robert Burress, Ph.D. His research focused on the role of agrin in Alzheimer’s disease. If agrin is involved in the formation of the plaque and tangles that characterize the disease, agrin may be used as a potential molecular target for new drug treatments.

Outside of the laboratory, Constantin had the opportunity to interact with other students who share his love of science while living at Highseas, a Jackson Laboratory residence on the shore of Frenchman’s Bay.

Although Constantin said he will miss hiking and the view of Frenchman’s Bay when he leaves, he is looking forward to his mother’s cooking.

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June 23, 2004

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Dubliner Heads to US for Prestigious Jackson Laboratory Summer Student Program

Bar Harbor, Maine – Trinity College student Jane Ferguson journeyed across the Atlantic from Ireland last week to begin her research as a Summer Student at The Jackson Laboratory, joining the ranks of two Nobel Prize winners.

In its 78 years, the Summer Student Program has helped to develop more than 2,000 young scientists, many of whom have gone on to make important scientific and medical discoveries. Alumni of the program include Drs. David Baltimore and Howard Temin, who shared the 1975 Nobel Prize in physiology or medicine. This year, the program is giving 34 talented international high school and college students the opportunity to conduct scientific research under the guidance of a laboratory researcher.

Jane, who is studying human genetics, was chosen from approximately 300 applicants. She will spend the next eight weeks researching XY sex reversal in mice under the direction of Senior Staff Scientist Eva Eicher, Ph.D.

"I wanted to spend a summer in the US working in a lab, and the research undertaken at The Jackson Laboratory interested me," Jane said. "The program sounded like it would be fun and would be a new experience."

Besides engaging in research, Jane also has the opportunity to interact with other students from around the world who share her passion for science while residing at Highseas, a Jackson Laboratory residence overlooking Frenchman Bay.

More information about The Jackson Laboratory Summer Student Program is available at http://www.jax.org/education/index.html.

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August 12, 2004

Contact: Amber Bauer, The Jackson Laboratory, 207-288-6051, abauer@jax.org
Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Summer Research Program Gives Dublin Student New Knowledge, New Friends

Bar Harbor, Maine -- The lazy days of summer were anything but lazy for Trinity College student Jane Ferguson. After nine weeks of intensive research at The Jackson Laboratory, Jane will present her results during the 75th Annual Summer Student Scientific Symposium on August 16.

As a Summer Student Jane, the daughter of Kenneth and Traudi Ferguson, had the opportunity to conduct scientific research “at the bench” under the direction of Senior Staff Scientist Eva Eicher, Ph.D. Jane’s project was to investigate the role of a protein in sex reversal, when the gonads develop as ovaries despite the presence of a Y chromosome or develop as testes despite the absence of a Y chromosome.

Outside of the laboratory, Jane had the opportunity to interact with other students who share her love of science while living at Highseas, a Jackson Laboratory residence on the shore of Frenchman’s Bay.

“I will always remember all of the people I met here: the conversations we had and the things we did,” Jane said.

Jane’s participation was supported by The Horace W. Goldsmith Foundation and The Jane D. Weinberger Endowed Scholarship Fund.

For more information about The Summer Student Program visit www.jax.org/education/index.html.

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FOR IMMEDIATE RELEASE

June 7, 2004

Contact:
Amber Bauer, The Jackson Laboratory, 207-288-6051, abauer@jax.org
Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Lombard Local Selected for Prestigious Jackson Laboratory Summer Student Program

Bar Harbor, Maine – Glenbard South High School graduate Nathan Harbacek joined the ranks of two Nobel Prize winners last week as he began his research as a Summer Student at The Jackson Laboratory.

In its 78 years, the Summer Student Program has helped to develop more than 2,000 young scientists, many of whom have gone on to make important scientific and medical discoveries. Alumni of the program include Drs. David Baltimore and Howard Temin, who shared the 1975 Nobel Prize in physiology or medicine. This year, the program is giving 34 talented high school and college students the opportunity to conduct scientific research under the guidance of a laboratory researcher.

Nathan, a science major at Princeton University, was chosen from approximately 300 applicants. Nathan will spend the next 10 weeks completing two research projects under the direction of Research Assistant Peter Reifsnyder in Dr. Edward Leiter’s laboratory. One project will investigate colitis, while the other will investigate type 1 diabetes. Both projects aim to identify new techniques for treating these diseases.

“I wanted to do research this summer, and after seeing the program description and the research, I had to attend.” Nathan said.

Besides conducting research, Nathan also has the opportunity to interact with other students from around the world who share his passion for science while residing at Highseas, a Jackson Laboratory residence overlooking Frenchman Bay.

For more information about The Jackson Laboratory Summer Student Program visit http://www.jax.org/education/index.html.

With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine’s largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer’s disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high school, college and graduate students.

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August 12, 2004

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Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Summer Research Program Gives Lombard Local New Knowledge, New Friends

Bar Harbor, Maine – The lazy days of summer were anything but lazy for Lombard local Nathan Harbacek. After 11 weeks of intensive research at The Jackson Laboratory, Nathan will present his results during the 75th Annual Summer Student Scientific Symposium on August 16.

As a Summer Student Nathan, the son of Richard and Marie Harbacek, had the opportunity to conduct research “at the bench” under the direction of Senior Staff Scientist Edward Leiter, Ph.D. and Senior Research Assistants Peter Reifsnyder and Jason Beckwith. Nathan researched autoimmune responses in connection to type 1 diabetes and inflammatory bowel disease.

“This summer I’ve learned patience and self-reliance in the lab, my strengths and my weaknesses in experimental work and that I truly love research,” Nathan said.

Outside of the laboratory, Nathan had the opportunity to interact with other students who share his love of science while living at Hi2hseas, a Jackson Laboratory residence on the shore of Frenchman’s Bay.

The combination of laboratory work and making new friends has provided this Princeton science major with many memories.

“I will always remember the feeling I had the first time I thought I made a discovery and then disproving the preliminary results.” Nathan said. “I also will never forget the people at Hi2hseas and the lab. There were some unforgettable personalities.”

Nathan’s participation was supported by The Horace W. Goldsmith Foundation.

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Neighbors in the news

- Megan Shore of West Chicago participated in the National Youth Leadership Forum on Medicine in Chicago this summer. She was chosen along with about 350 high school students from across the country for demonstrating academic excellence, leadership potential and an interest in a career in medicine.

- During the forum, she visited medical facilities, participated in patient-treatment simulations and shadowed medical professionals on the job.

- Nathan Herbeck of Lombard presented his research findings at the 75th Annual Summer Student Scientific Symposium last week in Maine.

  The Princeton University student spent 11 weeks at Jackson Laboratory in Bar Harbor, Maine, researching autoimmune responses in connection to diabetes and inflammatory bowel disease. Two senior research assistants and a senior staff scientist at Jackson Laboratory supervised the project.

- James Mensching of Kasca was appointed to the board of directors of First National Bank & Trust Co. this month. He is the senior vice president of information systems at the bank where he has worked since 1999.

  Mensching graduated from Ripon College, earned a master's degree in business administration from Washington University and has worked in banking for almost 20 years.
FOR IMMEDIATE RELEASE

June 7, 2004

Contact:
Amber Bauer, The Jackson Laboratory, 207-288-6051, abauer@jax.org
Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Fort Myers Local Selected for Prestigious Jackson Laboratory Summer Student Program

Bar Harbor, Maine – Canterbury School graduate Hannah Keirnes joined the ranks of two Nobel Prize winners last week as she began her research as a Summer Student at The Jackson Laboratory.

In its 78 years, the Summer Student Program has helped to develop more than 2,000 young scientists, many of whom have gone on to make important scientific and medical discoveries. Alumni of the program include Drs. David Baltimore and Howard Temin, who shared the 1975 Nobel Prize in physiology or medicine. This year, the program is giving 34 talented high school and college students the opportunity to conduct scientific research under the guidance of a laboratory researcher.

Hannah, a neurobiology major at Harvard, was chosen from approximately 300 applicants. Hannah will spend the next 10 weeks researching genetic mutations that lead to hearing loss under the direction of Research Assistant Leona Gagnon in Dr. Kenneth Johnson’s lab.

Hannah said she decided to become a Summer Student because of the Laboratory’s reputation and beautiful setting, as well as for research experience.

Besides conducting research, Hannah has the opportunity to interact with other students from around the world who share her passion for science while residing at Highseas, a Jackson Laboratory residence overlooking Frenchman Bay.

For more information about The Jackson Laboratory Summer Student Program visit http://www.jax.org/education/index.html.

With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine’s largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer’s disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high school, college and graduate students.

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August 12, 2004

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Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Summer Research Program Gives Fort Myers Local New Knowledge, New Skills

Bar Harbor, Maine – The lazy days of summer were anything but lazy for Fort Myers local Hannah Keimes. After 11 weeks of intensive research at The Jackson Laboratory, Hannah will present her results during the 75th Annual Summer Student Scientific Symposium on August 16.

As a Summer Student Hannah, the daughter of Byron and Carolyn Keimes, had the opportunity to conduct scientific research “at the bench” under the direction of Research Assistant Leona Gagnon in Dr. Kenneth Johnson’s laboratory. Her research focused on mutations that lead to hearing loss in mice, and she has mapped three such mutations.

Outside of the laboratory, Hannah had the opportunity to interact with other students who share her love of science while living at Highseas, a Jackson Laboratory residence on the shore of Frenchman’s Bay.

“I love the peacefulness of Highseas,” Hannah said. “Falling asleep to waves crashing on rocks and waking up to a beautiful ocean view is incredible.”

It has been the combination of science and outdoor activities that have provided the greatest lessons and memories for this Harvard University neurobiology major.

“I will always remember having the opportunity to challenge myself both intellectually and physically,” Hannah said. “There have been times that I have doubted the progress of my project and my footing during a hike, but I’ve been able to continue on.”

Hannah’s participation was supported by the Clark Endowment, The Horace W. Goldsmith Foundation and the Elizabeth S. Russell Scholarship Fund.

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June 23, 2004

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Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Los Angeles Student Selected for Prestigious Jackson Laboratory Summer Student Program

Bar Harbor, Maine – Archer School for Girls graduate Ebony King joined the ranks of two Nobel Prize winners last week as she began her research as a Summer Student at The Jackson Laboratory.

In its 78 years, the Summer Student Program has helped to develop more than 2,000 young scientists, many of whom have gone on to make important scientific and medical discoveries. Alumni of the program include Drs. David Baltimore and Howard Temin, who shared the 1975 Nobel Prize in physiology or medicine. This year, the program is giving 34 talented high school and college students the opportunity to conduct scientific research under the guidance of a laboratory researcher.

Ebony, who will attend Brown University in the fall, was chosen from approximately 300 applicants. She will spend the next eight weeks researching agents that relieve pain in different mouse strains without causing a loss of consciousness under the guidance of Research Associate Anthony Nicholson, Ph.D.

“I wanted to come to The Jackson Laboratory because I thought it would be a wonderful experience,” Ebony said.

Besides engaging in research, Ebony also has the opportunity to interact with other students from around the world who share her passion for science while residing at Highseas, a Jackson Laboratory residence overlooking Frenchman Bay.

More information about The Jackson Laboratory Summer Student Program is available at http://www.jax.org/education/index.html.

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Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Summer Research Program Gives Los Angeles Student New Knowledge, New Friends

Bar Harbor, Maine – The lazy days of summer were anything but lazy for Los Angeles student Ebony King. After nine weeks of intensive research at The Jackson Laboratory, Ebony will present her results during the 75th Annual Summer Student Scientific Symposium on August 16.

As a Summer Student Ebony, the daughter of Randi and Michael Jones, conducted scientific research “at the bench” under the direction of Research Associate Anthony Nicholson, Ph.D. Ebony’s project was to establish a protocol for pain assessment on mice to better the lives of laboratory mice.

Outside the laboratory, Ebony had the opportunity to interact with other students who share her love of science while living at Highseas, a Jackson Laboratory residence on the shore of Frenchman’s Bay. Ebony, who will start attending Brown University in the fall, spent her free time running, biking and seeing movies in Bar Harbor.

“I will miss the wildlife and serenity of being out of the city,” Ebony said.

Ebony’s participation was supported by the Howard Hughes Medical Institute, The Horace W. Goldsmith Foundation and the Barbara H. Sanford Endowment.

For more information about The Summer Student Program visit www.jax.org/education/index.html.

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Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Muskogee Local Selected for Prestigious Jackson Laboratory Summer Student Program

Bar Harbor, Maine - Muskogee High School graduate Julie Linden joined the ranks of two Nobel Prize winners last week as she began her research as a Summer Student at The Jackson Laboratory.

In its 78 years, the Summer Student Program has helped to develop more than 2,000 young scientists, many of whom have gone on to make important scientific and medical discoveries. Alumni of the program include Drs. David Baltimore and Howard Temin, who shared the 1975 Nobel Prize in physiology or medicine. This year, the program is giving 34 talented high school and college students the opportunity to conduct scientific research under the guidance of a laboratory researcher.

Julie, a biology major at Westminster College, was chosen from approximately 300 applicants. Julie will spend the next 10 weeks mapping a genetic mutation that leads to hearing loss, under the direction of Research Scientist Qing Yin Zheng, M.D.

"The Jackson Laboratory is providing a great opportunity for me this summer and will serve as a window into the field of scientific research," Julie said.

Besides conducting research, Julie also has the opportunity to interact with other students from around the world who share her passion for science while residing at Highseas, a Jackson Laboratory residence overlooking Frenchman Bay.

For more information about The Jackson Laboratory Summer Student Program visit http://www.jax.org/education/index.html.

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MHS grad selected for laboratory program

Vicky Holland

Muskogee High School graduate Julia Unden joined the ranks of two Nobel Prize winners last week as she began her research as a Summer Student at The Jackson Laboratory.

In its 78 years, the Summer Student Program in Bar Harbor, Maine, has helped to develop more than 2,000 young scientists, many of whom have gone on to make important scientific and medical discoveries. Alumni of the program include Drs. David Baltimore and Howard Temin, who shared the 1975 Nobel Prize in physiology or medicine. This year, the program is giving 34 talented high school and college students the opportunity to conduct scientific research under the guidance of a laboratory researcher.

Unden, a biology major at Westminster College, was chosen from approximately 300 applicants. She will spend the next 10 weeks mapping a genetic mutation that leads to hearing loss, under the direction of Research Scientist Qing Yin Zhang, M.D.

The Jackson Laboratory is providing a great opportunity for me this summer and will serve as a window into the field of scientific research, Unden said.

Besides conducting research, Linden also has the opportunity to interact with other students from around the world who share her passion for science while residing at Highseas, a Jackson Laboratory residence overlooking Frenchman Bay.

For more information about The Jackson Laboratory Summer Student Program visit http://www.jax.org/education/index.html.

With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine's largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer's disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database.
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August 12, 2004

Contact: Amber Bauer, The Jackson Laboratory, 207-288-6051, abauer@jax.org
Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Summer Student Program Gives Muskogee Local Valuable Research Experience

Bar Harbor, Maine – The lazy days of summer were anything but lazy for Muskogee local Julie Linden. After 11 weeks of intensive research at The Jackson Laboratory, Julie will present her results during the 75th Annual Summer Student Scientific Symposium on August 16.

As a Summer Student Julie, the daughter of Mike and Evalyn Massey, had the opportunity to conduct scientific research “at the bench” under the direction of Research Scientist Qing Yin Zheng, M.D. Her research focused on hearing loss, increasing researchers’ understanding of the mechanisms of auditory diseases and hopefully leading to better diagnosis, prevention and treatment of human hearing disorders.

Julie’s days were also filled with studying for the MCATs and running.

“I definitely enjoy running on the carriage roads after work,” Julie said. “The scenery is beautiful with a variety of six to eight mile loops to reflect on a long day of intensive research.”

Outside of the laboratory, Julie had the opportunity to interact with other students who share her love of science while living at HiRhseas, a Jackson Laboratory residence on the shore of Frenchman’s Bay. Julie said she loved living next to the ocean: listening to it as she fell asleep and watching the boats and cruise ships go in and out of the harbor.

Julie’s participation was supported by The Horace W. Goldsmith Foundation.

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For more information about The Summer Student Program visit www.jax.org/education/index.html.

With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine’s largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer’s disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high school, college and graduate students.

For information on automatic e-mail delivery of news releases (journalists only), please send an e-mail request.
Media Release

The Jackson Laboratory

Office of Public Information • 600 Main Street, Bar Harbor, Maine 04609-1500

FOR IMMEDIATE RELEASE

June 23, 2004

Contact:
Amber Bauer, The Jackson Laboratory, 207-288-6051, abauer@jax.org
Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Seven Mainers Selected for Prestigious Jackson Laboratory Summer Student Program

Bar Harbor, Maine – The lazy days of summer will be anything but lazy for seven Maine students who were selected to take part in the Summer Student Program at The Jackson Laboratory.

Over the next nine weeks these young scientists will be developing and completing their own research project under the guidance of their sponsor, a laboratory researcher. The research being undertaken by these students spans a wide range of genetic topics:

- Joe Barter of Mount Desert – a graduated senior from Mount Desert Island High School
  Sponsor: Postdoctoral Associate Rick Libby, Ph.D.
  Research area: Glaucoma
- Rebecca Barter of Raymond – a senior at the Maine School of Science and Mathematics
  Sponsor: Staff Scientist Carol Bult, Ph.D.
  Research area: Cancer genetics
- Erika Cyr of Fort Kent – a biology major at Bates College
  Sponsor: Research Assistant Gayle Collin
  Research area: Alström syndrome
- Gina Luchini of Ellsworth – a senior at Ellsworth High School
  Sponsor: Senior Staff Scientist Leonard Shultz, Ph.D.
  Research area: Hematology
- Jacquelyn Masse of New Canada – a biomedical engineering major at the University of Connecticut
  Sponsor: Microscopist James Denegre, Ph.D.
  Research area: Reproductive biology (oogenesis)
- Jesse Sayers of Fort Fairfield – a senior at Fort Fairfield High School
  Sponsor: Research Laboratory Manager Connie Birkenmeier
  Research area: Cell Membrane protein deficiencies in the brain
- Alicia Vose of Grand Lake Stream – a 2004 graduate of Woodland High School
  Sponsor: Heart, Lung and Blood Program Manager Karen Svenson
  Research area: Heart, lung and blood disorders

Each student was selected from approximately 300 applicants.

-MORE-
Besides conducting research, these students also have the opportunity to interact with other students from around the world who share their passion for science while residing at Highseas, a Jackson Laboratory residence overlooking Frenchman Bay.

In its 78 years, the Summer Student Program has helped to develop more than 2,000 young scientists, many of whom have gone on to make important scientific and medical discoveries. Drs. David Baltimore and Howard Temin met as Summer Students and later shared the 1975 Nobel Prize in physiology or medicine.

More information about The Jackson Laboratory Summer Student Program is available at http://www.jax.org/education/index.html.

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Seven Mainers selected for Jax Lab Summer Student Program

BAR HARBOR — The lazy days of summer will be anything but lazy for seven Maine students who were selected to take part in the Summer Student Program at The Jackson Laboratory.

Over the next nine weeks, these young scientists will be developing and completing their own research projects under the guidance of their sponsor, a laboratory researcher. The research being undertaken by these students spans a wide range of genetic topics.

• Joe Barter of Mount Desert, a graduated senior from Mount Desert Island High School. Sponsor: postdoctoral associate Rick Libby, Ph.D. Research area: glaucoma.

• Rebecca Barter of Raymond, a senior at the Maine School of Science and Mathemastics. Sponsor: staff scientist Carol Bilt, Ph.D. Research area: cancer genetics.


• Gina Luchini of Ellsworth, a senior at Ellsworth High School. Sponsor: senior staff scientist Leonard Shultz, Ph.D. Research area: hematology.

• Jacqueline Mass of New Canada, a biomedical engineering major at the University of Connecticut. Sponsor: microscopist James Deshore, Ph.D. Research area: reproductive biology (oogenesis).


Each student was selected from approximately 300 applicants. Besides conducting research, these students also have the opportunity to interact with other students from around the world who share their passion for science while residing at Highseas, a Jackson Laboratory residence overlooking Frenchman Bay.

In its 78 years, the Summer Student Program has helped to develop more than 2,000 young scientists, many of whom have gone on to make important scientific and medical discoveries.

Drs. David Baltimore and Howard Temin met as summer students and later shared the 1975 Nobel Prize in physiology or medicine.

More information about The Jackson Laboratory Summer Student Program is available at http://www.jax.org/education/index.html.
FOR IMMEDIATE RELEASE

August 12, 2004

Contact: Amber Bauer, The Jackson Laboratory, 207-288-6051, abauer@jax.org
Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Summer Research Program Gives Seven Mainers New Knowledge, New Friends

Bar Harbor, Maine – As the days grow shorter, the time draws nearer for seven Maine students to trade their lab coats for textbooks. After nine to 11 weeks of intensive research at The Jackson Laboratory, Joe Barter of Mount Desert, Rebecca Barter of Raymond, Erika Cyr of Fort Kent, Gina Luchini of Ellsworth, Jacquelyn Masse of New Canada, Jesse Savers of Fort Fairfield and Alicia Vose of Grand Lake Stream will present their results during the 75th Annual Summer Student Scientific Symposium on August 16.

As Summer Students these Mainers had the opportunity to conduct research “at the bench” of a Jackson Laboratory researcher.

Joe, under the direction of Postdoctoral Associate Rick Libby, Ph.D., investigated whether an important signaling pathway activator was involved in causing neurons to self-destruct in glaucoma.

Rebecca, under the direction of Staff Scientist Carol Bult, Ph.D., developed visual representations of molecular pathways from information found in The Mouse Genome Informatics database that will allow researchers to have an immediate and interactive environment for their research and for the application of genetic information.

Erika, under the direction of Research Assistant Gayle Collin, researched the protein involved in Alström syndrome, a rare genetic disease found in 250 children worldwide that leads to blindness, hearing loss and obesity.

Gina, under the direction of Senior Staff Scientist Leonard Shultz, Ph.D., performed complete blood screens on mice that had been identified by animal caretakers as having new mutations.

Jacquelyn, under the direction of Microscopist James Denegre, Ph.D., researched the role of mitochondrial movement during egg formation and embryo development.

Jesse, under the direction of Research Laboratory Manager Connie Birkenmeier, investigated the role of ankvrins in neurological disorders.

Alicia, under the direction of Heart, Lung and Blood Program Manager Karen Svenson, investigated the chromosomal locations of two genes that are linked to obesity in mice.

...MORE...
Outside of the laboratory, these Mainerers the opportunity to interact with other students who share their love of science while living at Highseas, a Jackson Laboratory residence on the shore of Frenchman’s Bay.

“When I leave the thing I will miss most is the opportunity to meet and experience new things I’ve never seen or done before,” Rebecca said. “I’m sure it will be hard to find another hiking group that discusses interesting properties of acids and bases on the trip and talks leisurely about the composition of Vitamin C.”

Sources of support for the Mainerers’ participation were the BRIN, Howard Hughes Medical Institute; The Betterment Fund Scholarship Endowment; the C.C. Little Scholarship Fund; The Horace W. Goldsmith Foundation; The Aristotle Fund of the Maine Community Foundation; The Harold Alfond Foundation; Fleet National Bank, A Bank of America Company and Trustee of the Lloyd G. Balfour Foundation; and the Academy of Applied Sciences.

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For more information about The Summer Student Program visit www.jax.org/education/index.html.

With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine’s largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer’s disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high school, college and graduate students.

For information on automatic e-mail delivery of news releases (journalists only), please send an e-mail request.
Lab summer research programives seven Mainers new knowledge

MCI High School graduate Mr. Barter, under the direction of post-doctoral associate Rick Libby, Ph.D., investigated whether an
important regulatory mechanism discovered in causing
injury to and in the brain in gliomas. Mr. Barter, under the direction of staff scientist Carol Bult, Ph.D., worked on pathways
the gene family found in The Mouse Genome Informatics database that will allow researchers to have an immediate
and interactive environment for their research and for the application of genetic information. Ms. Cyr, under the
direction of research assistant Gayle Collin, researched the pro-
tein involved in Alström syndrome, a rare genetic disease
found in 250 children worldwide that leads to blindness, hearing
loss, and obesity. Ms. Luccini, under the direction of senior staff scientist Leonard Shultz, Ph.D.,
performed complete blood screens on mice that had been identified
by animal researchers as having new mutations. Ms. Luccini, under
the direction of microscopist James Denegre, Ph.D., researched
the role of mitochondrial movement during egg formation
and embryo development. Ms. Sayers, under the direction of Research
Laboratory Manager Connie Birkemeier, investigated the role
of ankyrins in neurological disorders. Ms. Vose, under the direction
of Heart, Lung and Blood Program manager Karen Steppert,
investigated the pharmacological locations of two genes that are
linked to obesity in mice.

Outside the laboratory, these
Mainers had the opportunity to interact with other students who
shared their love of science with living at 
Highland, a Jackson Laboratory residence on the shore of Frenchman Bay. "When I leave,
the thing I will miss most is the
opportunity to meet and experience
new things I've never seen or done before," Ms. Barter said.
"I'm sure it will be hard to find
another hiking group that discusses
interesting properties of acids and bases and involves visits to the local farms talk
actively about the conjugation of
Vitamin C.

Sponsors supported the participation of these students were the Biomedical Research Infrastructure Network; Howard Hughes Medical Institutes; The Betterment Fund Scholarship Endowment; the C.C. Little Scholarship Fund; The Horace W. Goldsmith Foundation; The Aristotle Fund of the Maine Community Foundation; The MCI High School; Bar Harbor Hyper Island; and the Academy of Applied Sciences.
Summer Research Program Gives 7 Mainer New Knowledge, New Friends
By IPR
Aug 19, 2004, 12:52

BAR HARBOR -- As the days grew shorter, the time drew nearer for seven Maine students to trade their lab coats for textbooks. After nine to 11 weeks of intensive research at The Jackson Laboratory, Joe Barter of Mount Desert, Rebecca Barter of Raymond, Erika Cyr of Fort Kent, Gina Luchini of Ellsworth, Jacquelyn Massie of New Canada, Jesse Sayers of Fort Fairfield, and Alicia Vose of Grand Lake Stream presented their final results during the annual Summer Student Scientific Symposium on August 16.

As Summer Students these Mainer had the opportunity to conduct research "at the bench" of a Jackson Laboratory researcher.

Joe, under the direction of Postdoctoral Associate Rick Libby, Ph.D., investigated whether an important signaling pathway activator was involved in causing neurons to self-destruct in glaucoma.

Rebecca, under the direction of Staff Scientist Carol Balt, Ph.D., developed visual representations of molecular pathways from information found in The Mouse Genome Informatics database that will allow researchers to have an immediate and interactive environment for their research and for the application of genetic information.

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Outside of the laboratory, these Mainer had the opportunity to interact with other students who shared their love of science while living at Highseas, a Jackson Laboratory residence on the shore of Frenchman's Bay.

"When I leave the thing I will miss most is the opportunity to meet and experience new things I've never seen or done before," Rebecca said. "I'm sure it will be hard to find another hiking group that discusses interesting properties of acids and bases on the trip, and talks leisurely about the composition of Vitamin C."

Sources of support for the participation of these students were:

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Student Notes

Alex Schoppe, a 2004 graduate of MDI High School, is spending a month in Otta, Japan, to experience living with a Japanese family. Schoppe joined “The Experiment in International Living” based in Brattleboro, VT. He is attending language classes at Nippon Bunri University, cultural and group activities, as well as doing some traveling in the country. Schoppe, the son of David and Carole Schoppe of Hancock, will attend San Diego University in the fall.

William C. Macaree of Winter Harbor and a mental health counseling graduate major at University of Southern Maine in Portland, has been awarded the John M. and Annie T. Sutton Scholarship.

He received the award earlier this spring at the college’s annual Recognition Day ceremonies.

Collins Grady, son of William and Debra Kirk-Grady of Bucksport, has been inducted into the Senior Skull Honor Society at University of Maine at Orono. The Society, founded in 1906, consists of male seniors who have shown “outstanding leadership abilities, academic achievement, community and campus involvement, responsibility and integrity while an undergraduate” at the university.

Two Hancock County students and one from Washington County are among seven Maine high schoolers participating in The Jackson Laboratory’s Summer Student Program.

In the course of nine weeks, Joe Barter of Mount Desert, a graduated senior from MDI High School; Gina Luchini of Ellsworth, a senior at Ellsworth High School, and Alicja Vose of Grand Lake Stream, a 2004 graduate of Woodland High School will develop their own research project under the guidance of their sponsor; a bio-medical researcher. Barter will conduct research on glaucoma with postdoctoral associate Rick Libby; Luchini will research hematology with senior staff scientist Leonard Shultz, and Vose on heart, lung and blood disorders with program manager Karen Svenson.

The seven students were selected from nearly 300 applicants.

Cody Wilson of Bucksport and Abby Jerdan of Ellsworth were among 18 Maine high school students who traveled to the nation’s capital to take part in a week-long seminar; “Citizenship: Washington Focus,” a 4-H leadership program. While there, they met their Maine senator, U.S. Sen. Olympia Snowe.
Four NYC Students Selected for Prestigious Jackson Laboratory Summer Student Program

Bar Harbor, Maine—Four New York students joined the ranks of two Nobel Prize winners last week as they began their research as Summer Students at The Jackson Laboratory.

In its 78 years, the Summer Student Program has helped to develop more than 2,000 young scientists, many of whom have gone on to make important scientific and medical discoveries. Alumni of the program include Drs. David Baltimore and Howard Temin, who shared the 1975 Nobel Prize in physiology or medicine. This year, the program is giving 34 talented high school and college students the opportunity to conduct scientific research under the guidance of a laboratory researcher.

Over the next eight weeks these young scientists will be developing and completing their own research project under the guidance of their sponsor, a Laboratory researcher. The research being undertaken by New York students spans a wide range of genetic topics:

- Laura Brenner, a molecular biophysics and biochemistry major at Yale
  Sponsor: Adjunct Staff Member Lindsay Shopland, Ph.D.
  Research area: Genetic mapping

- Bomoprega Julius, a junior at Science Skills Center High School
  Sponsor: Senior Staff Scientist David Harrison, Ph.D.
  Research area: Aging

- Whitney Reid, a junior at Brooklyn Technical High School
  Sponsor: Research Scientist Qing Yin Zheng, M.D.
  Research area: Genetic mapping

- Jiyang Zhang, a biology major at the Massachusetts Institute of Technology
  Sponsor: Research Scientist Bo Chang, M.D.
  Research area: Retinal degeneration

Each student was hand-chosen by their sponsor from approximately 300 applicants.

Both Bomoprega and Whitney are involved in the Gateway Institute for Pre-College Education. The goal of the institute is to prepare minority students for college and careers in science, medicine, health, engineering, technology and teaching. Gateway students are encouraged to complete summer programs like the one at The Jackson Laboratory.

-MORE-
Besides conducting research, these students also have the opportunity to interact with other students from around the world who share their passion for science while residing at Highseas, a Jackson Laboratory residence overlooking Frenchman Bay.

For more information about The Jackson Laboratory Summer Student Program visit http://www.jax.org/education/index.html.

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For information on automatic e-mail delivery of news releases (journalists only), please send an e-mail request.
Media Release
The Jackson Laboratory

Office of Public Information • 600 Main Street, Bar Harbor, Maine 04609-1500
Voice: 207-288-6051 • Fax: 207-288-6076 • E-Mail: pubinfo@jax.org • http://www.jax.org

FOR IMMEDIATE RELEASE

June 23, 2004

Contact:
Amber Bauer, The Jackson Laboratory, 207-288-6051, abauer@jax.org
Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Four NYC Students Selected for Prestigious Jackson Laboratory Summer Student Program

Bar Harbor, Maine - Four New York students joined the ranks of two Nobel Prize winners last week as they began their research as Summer Students at The Jackson Laboratory.

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FOR IMMEDIATE RELEASE

August 12, 2004

Contact: Amber Bauer, The Jackson Laboratory, 207-288-6051, abauer@jax.org
         Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Summer Research Program Gives Four New York Students New Knowledge, New Insights

Bar Harbor, Maine – The lazy days of summer were anything but lazy for New York City students Laura Brenner, Bomopregha Julius, Whitney Reid and Ji Yang Zhang. After nine weeks of intensive research at The Jackson Laboratory, they will present their results during the 75th Annual Summer Student Scientific Symposium on August 16.

As Summer Students these young scientists had the opportunity to conduct research “at the bench” with a Jackson Laboratory researcher.

Laura Brenner, a molecular biophysics and biochemistry major at Yale, researched the folding and location of chromosomes within the nucleus under the direction of Adjunct Staff Member Lindsay Shopland, Ph.D.

Bomopregha Julius, a rising senior at Science Skills Center High School, researched the role of growth hormone in the aging process under the direction of Senior Staff Scientist David Harrison, Ph.D.

Whitney Reid, a rising senior at Brooklyn Technical High School, researched genetic mutations linked to ear infections under the direction of Research Scientist Qing Yin Zheng, M.D.

Ji Yang Zhang, a biology major at the Massachusetts Institute of Technology, located a new mutation that causes retinal degeneration under the direction of Research Scientist Bo Chang, M.D.

“I’ve learned this summer that research calls for dedication, time and patience.” Whitney said.

Outside of the laboratory, these New Yorkers had the opportunity to interact with other students who share their love of science while living at Highseas, a Jackson Laboratory residence on the shore of Frenchman’s Bay.
"I enjoyed being exposed to many different personalities," Bomoprega said. "It allowed me to learn more and grow as a person. It also showed me how it feels to live away from home for a long time."

These students' participation was supported by the Howard Hughes Medical Institute, The Horace W. Goldsmith Foundation, the Clark Endowment and the William Randolph Hearst Foundation.

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For more information about The Summer Student Program visit www.iax.org/education/index.html.

With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine's largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer's disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high, school, college and graduate students.

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FOR IMMEDIATE RELEASE

June 7, 2004

Contact:
Amber Bauer, The Jackson Laboratory, 207-288-6051, abauer@jax.org
Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Iron Mountain Local Selected for Prestigious Jackson Laboratory Summer Student Program

Bar Harbor, Maine - Kingsford High School graduate Jill Recla joined the ranks of two Nobel Prize winners last week as she began her research as a Summer Student at The Jackson Laboratory.

In its 78 years, the Summer Student Program has helped to develop more than 2,000 young scientists, many of whom have gone on to make important scientific and medical discoveries. Alumni of the program include Drs. David Baltimore and Howard Temin, who shared the 1975 Nobel Prize in physiology or medicine. This year, the program is giving 34 talented high school and college students the opportunity to conduct scientific research under the guidance of a laboratory researcher.

Jill, a bioinformatics major at Michigan Technological University, was chosen from approximately 300 applicants. Jill will spend the next 10 weeks conducting a computational analysis of post-transcriptional gene regulation under the direction of Associate Staff Scientist Joel Graber, Ph.D. Post-transcriptional gene regulation occurs after DNA in a cell has been transcribed to RNA, the blueprint for building a protein. A disruption in this process often leads to disease and developmental problems.

"I wanted to gain valuable experience in my field in addition to having the opportunity to work with a bioinformatics expert," Jill said. "Plus I also enjoy the area."

Besides conducting research, Jill has the opportunity to interact with other students from around the world who share her passion for science while residing at Highseas, a Jackson Laboratory residence overlooking Frenchman Bay.

For more information about The Jackson Laboratory Summer Student Program visit http://www.jax.org/education/index.html.

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Recla selected for summer program

BAR HARBOR, Maine — Kingsford High School graduate Jill Recla joined the ranks of two Nobel Prize winners as she began her research as a Summer Student at The Jackson Laboratory.

In its 78 years, the Summer Student Program has helped to develop more than 2,000 young scientists, many of whom have gone on to make important scientific and medical discoveries. Alumni of the program include Drs. David Baltimore and Howard Temin, who shared the 1975 Nobel Prize in physiology or medicine.

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She will spend the next 10 weeks conducting a computational analysis of post-transcriptional gene regulation under the direction of Associate Staff Scientist Joel Graber, Ph.D. Post-transcriptional gene regulation occurs after DNA in a cell has been transcribed to RNA, the blueprint for building a protein.

A disruption in this process often leads to disease and developmental problems.

"I wanted to gain valuable experience in my field in addition to having the opportunity to work with a bioinformatics expert," said Recla. "Plus I also enjoy the area."

Besides conducting research, Recla has the opportunity to interact with other students from around the world who share her passion for science.
FOR IMMEDIATE RELEASE

August 12, 2004

Contact: Amber Bauer, The Jackson Laboratory, 207-288-6051, abauer@jax.org
           Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Summer Student Program Gives Iron Mountain Local Valuable Research Experience

Bar Harbor, Maine — The lazy days of summer were anything but lazy for Iron Mountain local Jill Recla. After 11 weeks of intensive research at The Jackson Laboratory, Jill will present her results during the 75th Annual Summer Student Scientific Symposium on August 16.

As a Summer Student Jill, the daughter of Dan and Joan Recla, had the opportunity to conduct bioinformatics research under the direction of Associate Staff Scientist Joel Graber, Ph.D. Jill’s project was to compare regulatory sequences in RNA across species to identify patterns that remained constant, as well as the positions of those patterns. Jill also developed a computer program that will allow future comparison to be completed much more quickly in the future.

Outside of the laboratory, Jill had the opportunity to interact with other students who share her love of science while living at Highseas, a Jackson Laboratory residence on the shore of Frenchman’s Bay.

“I will always remember the friends I made, the fun activities I participated in and the skills and knowledge I gained from working at The Jackson Laboratory,” Jill said.

Despite having a wonderful time exploring Mount Desert Island and playing in the Bar Harbor band, this Michigan Technological University bioinformatics major said she missed the Yooper dialect.

Jill’s participation was supported by the Edwin D. Murphy Memorial Scholarship Fund and The Horace W. Goldsmith Foundation.

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For more information about The Summer Student Program visit www.jax.org/education/index.html.

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Iron Mountain student studies with science experts

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Jill's project was to compare regulatory sequences in RNA across species to identify patterns that remained constant, as well as the positions of those patterns. Jill also developed a computer program that will allow comparison to be completed much more quickly in the future.

Outside of the laboratory, Jill had the opportunity to interact with other students who share her love of science while living at High-seas, a Jackson Laboratory residence on the shore of Frenchman's Bay.

"I will always remember the friends I made, the fun activities I participated in, and the skills and knowledge I gained from working at The Jackson Laboratory," Jill said.

Despite having a wonderful time exploring Mount Desert Island and playing in the Bar Harbor band, this Michigan Technological University bioinformatics major said she missed the Yooper dialect.

Jill's participation was supported by the Edwin D. Murphy Memorial Scholarship Fund and The Horace W. Goldsmith Foundation.

From The Iron Mountain Daily News
FOR IMMEDIATE RELEASE

June 23, 2004

Contact:
Amber Bauer, The Jackson Laboratory, 207-288-6051, abauer@jax.org
Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Champaign Local Selected for Prestigious Jackson Laboratory Summer Student Program

Bar Harbor, Maine – Carolyn Schook joined the ranks of two Nobel Prize winners last week as she began her research as a Summer Student at The Jackson Laboratory.

In its 78 years, the Summer Student Program has helped to develop more than 2,000 young scientists, many of whom have gone on to make important scientific and medical discoveries. Alumni of the program include Drs. David Baltimore and Howard Temin, who shared the 1975 Nobel Prize in physiology or medicine. This year, the program is giving 34 talented high school and college students the opportunity to conduct scientific research under the guidance of a laboratory researcher.

Carolyn, a biology and sociology major at Columbia University, was chosen from approximately 300 applicants. Carolyn will spend the next eight weeks researching osteoporosis. Working under the direction of Senior Staff Scientist Wesley Beamer, Ph.D., Carolyn will be researching the genes that control bone strength.

Carolyn said she decided to become involved in the Summer Student program for the chance to do an original research project. Carolyn was also lured by the Laboratory’s reputation and location.

Besides engaging in research, Carolyn also has the opportunity to interact with other students from around the world who share her passion for science while residing at Highseas, a Jackson Laboratory residence overlooking Frenchman Bay.

More information about The Jackson Laboratory Summer Student Program is available at http://www.jax.org/education/index.html.

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With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine’s largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer’s disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high school, college and graduate students.

For information on automatic e-mail delivery of news releases (journalists only), please send an e-mail request.
FOR IMMEDIATE RELEASE

August 12, 2004

Contact: Amber Bauer, The Jackson Laboratory, 207-288-6051, abauer@jax.org
Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Summer Research Program Gives Champaign Local New Knowledge, New Friends

Bar Harbor, Maine – The lazy days of summer were anything but lazy for Champaign local Carolyn Schook. After nine weeks of intensive research at The Jackson Laboratory, Carolyn will present her results during the 75th Annual Summer Student Scientific Symposium on August 16.

As a Summer Student Carolyn, the daughter of Frances and Lawrence Schook, had the opportunity to conduct scientific research “at the bench” in Senior Staff Scientist Dr. Wesley Beamer’s laboratory. Her research focused on osteoporosis and will add to researchers’ understanding of how bone formation could be stimulated in an offensive attack against skeletal deterioration. Her study may also reveal how underlying gene function is responsible for bone density differences between males and females are regulated by sex.

Outside of the laboratory, Carolyn had the opportunity to interact with other students who share her love of science while living at Highseas, a Jackson Laboratory residence on the shore of Frenchman’s Bay.

“The most enjoyable aspect to living at Highseas has been meeting amiable, motivated people with similar academic interests and then becoming their friend,” Carolyn said.

It has been the combination of science and friends that have provided the greatest memories for this Columbia University biology and sociology major.

“This has been a program that has given me academic and career direction but with the amazing added benefit of meeting wonderful people my age who I will keep in touch with,” Carolyn said.

Carolyn’s participation was supported by The Horace W. Goldsmith Foundation and The Jane D. Weinberger Endowed Scholarship Fund.

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For more information about The Summer Student Program visit www.jax.org/education/index.html.

With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine’s largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer’s disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high school, college and graduate students.

For information on automatic e-mail delivery of news releases (journalists only), please send an e-mail request.
Media Release
The Jackson Laboratory

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FOR IMMEDIATE RELEASE

June 23, 2004

Contact:
Amber Bauer, The Jackson Laboratory, 207-288-6051, abauer@jax.org
Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Philadelphia Student Selected for Prestigious Jackson Laboratory Summer Student Program

Bar Harbor, Maine – Central High School student Michael Segal has a big lab coat to fill. Last week, more than 50 years after Nobel Laureate and Central High School graduate Dr. Howard Temin spent his summers at The Jackson Laboratory, Michael began his research as a Jackson Laboratory Summer Student.

It was during the summer of 1952 that Howard Temin met David Baltimore with whom he shared the 1975 Nobel Prize in physiology or medicine. In 2004, Michael is one of the 34 talented high school and college students who were given the opportunity to conduct scientific research at The Jackson Laboratory, perhaps sparking another influential scientific collaboration.

Michael, who will start his senior year this fall, was chosen from approximately 300 applicants. For the next eight weeks, Michael will be searching for patterns in stem cell gene sequences under the guidance of Postdoctoral Associate Rong Yuan, Ph.D. in Dr. David Harrison’s laboratory.

“I am currently very interested in the field of biology,” Michael said. “And from my experience, research is the best way to immerse yourself in the field.”

Besides engaging in research, Michael also has the opportunity to interact with other students from around the world who share his passion for science, as well as to indulge his love of clam chowder and lobster, while he resides at Highseas, a Jackson Laboratory residence overlooking Frenchman Bay.

More information about The Jackson Laboratory Summer Student Program is available at http://www.jax.org/education/index.html.

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With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine’s largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer’s disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high school, college and graduate students.

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FOR IMMEDIATE RELEASE

August 12, 2004

Contact: Amber Bauer, The Jackson Laboratory, 207-288-6051, abauer@jax.org
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Summer Research Program Gives Philadelphia Student New Knowledge, New Friends

Bar Harbor, Maine – The lazy days of summer were anything but lazy for Philadelphia high-school student Michael Segal. After nine weeks of intensive research at The Jackson Laboratory, Michael will present his results during the 75th Annual Summer Student Scientific Symposium on August 16.

As a Summer Student Michael, the son of Mark and Alla Segal, had the opportunity to conduct bioinformatics research under the guidance of Postdoctoral Associate Rong Yuan, Ph.D. Michael’s research is focusing on understanding the regulatory factors that control stem cell function through bioinformatics. as well as comparing the various tools that are currently used for this type of analysis. This research will further researchers’ understanding of the central mechanisms that govern stem cell function, bringing them one step closer to being able to use stem cells to understand and treat diseases.

“I am going to miss getting the chance to do real work with real significance.” Michael said.

Outside of the laboratory, Michael had the opportunity to interact with other students who share his love of science while living at Highsea, a Jackson Laboratory residence on the shore of Frenchman’s Bay.

For this Central High School rising senior the summer was filled with many unforgettable moments.

“I will always remember the people, the beautiful surroundings and the work I have done, which I am very proud of.” Michael said.

Michael’s participation was supported by the Howard Hughes Medical Institute and The Horace W. Goldsmith Foundation

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For more information about The Summer Student Program visit www.jax.org/education/index.html.

With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine’s largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer’s disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high school, college and graduate students.

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Microscoping things out

By Elizabeth Stieber
Times Staff Writer

Central High's Michael Segal looks over some of his technical materials after spending the summer in Maine doing stem-cell research.

Michael Segal is Central High's Maine man after spending his summer at Jackson Laboratory learning about stem cells.

One thing's for sure, though. He is now part of an ongoing effort to study the lifesaving possibilities of stem-cell research, a hot topic these
ty that investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer's disease, glaucoma, diabetes and other human disorders.
P. High School student to spend a summer of research at the Jackson Laboratory in Maine did so 50 years ago.

His name was Howard Temin, and he went on to win the Nobel Prize in physiology and medicine in 1975 during a high-profile career as a professor and cancer researcher until his death 10 years ago — to lung cancer.

Could Segal, a Bustleton teen, be a Nobel

“I didn’t know anything about stem cells coming into (the project). I have a pretty good idea now of how helpful they are, and it’s especially relevant now with all the political controversy surrounding it.”

—Michael Segal on his stem-cell research work

RESEARCH

Continued from Page 74

At the heart of the controversy surrounding stem-cell research are the implications behind embryonic stem-cell research.

Scientists have learned that embryonic stem cells, taken from days-old embryos, are able to differentiate into pretty much any adult cell, opening a wide array of medical possibilities.

However, President George W. Bush has restricted federal funding for this type of research, and those who oppose abortion believe it is destroying human life.

Currently, the testing has been limited to animals — in Segal’s case, mice because the mouse’s genetic makeup is 90 percent similar to a human’s, he explained.

Segal spent several hours a day on the computer to understand how stem-cell genes function and to analyze any patterns in their regulation. His efforts will be helpful to researchers, who are still trying to understand what controls stem-cell function.

“I learned a ton of molecular cell biology — how DNA works, how genes become expressed and turned into proteins, and how those proteins regulate our body’s functions,” he said.

Segal has always liked math, but he found that he enjoyed biology even more when he took a class in high school.

But he didn’t spend his summer holed up in a lab. Segal and his fellow student researchers explored Bar Harbor, a summer vacation spot. He went hiking for the first time and participated in the island’s Fourth of July parade.

“It’s good to get away from the big city, relax and make some new friends and mingle with a lot of really intelligent people,” said Segal, who is entering his senior year at Central High School as president of his class, holder of a No. 1 academic ranking, and a member of the National Honor Society and the Drama Society.

He also competes in math competitions.

The summer research opportunity helped Segal realize that he would like to pursue this type of research as a career. In fact, he will stay in touch with the Jackson Laboratory and continue his research for it throughout the school year.

“It’s definitely pushed me toward biomedical research because I see all the benefits and it’s a very interesting field,” he said.

The experience also helped him gain a better understanding of the benefits of stem-cell research, which has even become a major issue during this presidential election.

“People are eventually going to have to decide, is this ethically correct?” said Segal.

“I think, in my opinion, anything that has the potential to save lives as much as this is a great thing. It should definitely be considered.”

Every summer, the laboratory accepts students to spend two months working with researchers on different projects.

Segal was one of 34 high school and college students in the program. He was chosen from about 300 applicants.

Stem cells are basically undeveloped cells that can divide and differentiate into adult cells. Scientists theorize that fully matured stem cells can only develop into their own tissue type. For example, stem cells taken from the blood can only become more blood cells, and muscle stem cells can differentiate into other muscle cells.

Stem-cell technology has the capability to help rebuild damaged cells, researchers believe, and eventually cure even cancers and neurological disorders like Alzheimer’s disease.
FOR IMMEDIATE RELEASE

June 7, 2004

Contact:
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Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Fort Wright Local Selected for Prestigious Jackson Laboratory Summer Student Program

Bar Harbor, Maine – Notre Dame Academy graduate Angela Sia joined the ranks of two Nobel Prize winners last week as she began her research as a Summer Student at The Jackson Laboratory.

In its 78 years, the Summer Student Program has helped to develop more than 2,000 young scientists, many of whom have gone on to make important scientific and medical discoveries. Alumni of the program include Drs. David Baltimore and Howard Temin, who shared the 1975 Nobel Prize in physiology or medicine. This year, the program is giving 34 talented high school and college students the opportunity to conduct scientific research under the guidance of a laboratory researcher.

Angela, a biology major at the University of Tampa, was chosen from approximately 300 applicants. Angela will spend the next 10 weeks researching recombination hotspots, similar pieces of mouse DNA on paired chromosomes that have a high probability of switching with each other during meiosis. Angela is working under the direction of Dr. Kenneth Paigen, a senior staff scientist and former director of the Laboratory.

Angela decided to become a Summer Student to gain experience for graduate school, to live in the beauty of Maine for a summer and to share the experience with other students with similar interests.

Angela has the opportunity to interact with other students from around the world who share her passion for science while residing at Highseas, a Jackson Laboratory residence overlooking Frenchman Bay.

For more information about The Jackson Laboratory Summer Student Program visit http://www.jax.org/education/index.html.

With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine’s largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer’s disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high school, college and graduate students.

For information on automatic e-mail delivery of news releases (journalists only), please send an e-mail request.
FOR IMMEDIATE RELEASE

August 12, 2004

Contact: Amber Bauer, The Jackson Laboratory, 207-288-6051, abauer@jax.org
Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Summer Research Program Gives Fort Wright Local New Insights

Bar Harbor, Maine – The lazy days of summer were anything but lazy for Fort Wright local Angela Sia. After 11 weeks of intensive research at The Jackson Laboratory, Angela will present her results during the 75th Annual Summer Student Scientific Symposium on August 16.

As a Summer Student Angela, the daughter of Drs. Arturo and Bernadette Sia, had the opportunity to conduct scientific research “at the bench” in Senior Staff Scientist Dr. Kenneth Paigen’s laboratory. Throughout the summer Angela investigated the non-random distribution of genes on chromosomes in inbred strains of mice. Understanding this non-random distribution will help lead to a better understanding of how chromosomes are organized.

“My experiences in the lab this summer have confirmed that I want to do research,” Angela said.

Outside of the laboratory, Angela had the opportunity to interact with other students who share her love of science while living at Highseas, a Jackson Laboratory residence on the shore of Frenchman’s Bay. Two of this University of Tampa biology major’s favorite activities were hiking and exploring Mount Desert Island.

“After hiking to the top of numerous mountains on the island, I’ve learned that persevering through obstacles or difficulties and continuing to work hard makes a goal so much sweeter, and not just in climbing mountains, but also in life,” Angela said. “And once you’re on top of that mountain and you gaze out at the vast world around you, you realize that your problems and stresses are small and insignificant. So if life ever seems too overwhelming, I just need to remind myself that there are always higher mountains to climb!”

Angela’s participation was supported by the James B. Murphy Memorial Scholarship Fund, The Horace W. Goldsmith Foundation and the William Randolph Hearst Foundation.

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For more information about The Summer Student Program visit www.jax.org/education/index.html.

With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine’s largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer’s disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high school, college and graduate students.

For information on automatic e-mail delivery of news releases (journalists only), please send an e-mail request.
Sunday, August 29, 2004

Angela Sia, daughter of Drs. Arturo and Bernadetta Sia of Fort Wright, presented a research paper on the non-random distribution of genes on chromosomes in mice at the 75th annual Summer Student Scientific Symposium at the Jackson Laboratory in Bar Harbor, Maine, Aug. 16.

The University of Tampa student is majoring in biology.

"After hiking to the top of numerous mountains on the island, I have learned that persevering through obstacles or difficulties and continuing to work hard makes a goal so much sweeter and not just in climbing mountains, but also in life," she said.

Presidential scholars

Six students from Kenton County will attend the University of Kentucky this fall under presidential scholarships, valued at $20,000 each.

They are Daniel M. Arnold, Brian Hoffman, Nathan Lowry, Kaitlyn McClelland, Brian P. O'Conner and Mary Lauren.
Hanover Local Selected for Prestigious Jackson Laboratory Summer Student Program

Bar Harbor, Maine – Burke Mountain Academy graduate Caitlin Stanton joined the ranks of two Nobel Prize winners as she began her research as a Summer Student at The Jackson Laboratory.

In its 78 years, the Summer Student Program has helped to develop more than 2,000 young scientists, many of whom have gone on to make important scientific and medical discoveries. Alumni of the program include Drs. David Baltimore and Howard Temin, who shared the 1975 Nobel Prize in physiology or medicine. This year, the program is giving 34 talented high school and college students the opportunity to conduct scientific research under the guidance of a laboratory researcher.

Caitlin, a biology major at Brown University, was chosen from approximately 300 applicants. Working with Postdoctoral Associate Keith DiPetrillo, Ph.D., Caitlin will spend the next eight weeks finding the genes that correspond to kidney disease in mice.

Caitlin said she decided to become involved in the Summer Student program for the diverse research experience.

Besides engaging in research, Caitlin also has the opportunity to interact with other students from around the world who share her passion for science while residing at Highseas, a Jackson Laboratory residence overlooking Frenchman Bay.

More information about The Jackson Laboratory Summer Student Program is available at http://www.jax.org/education/index.html.

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With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine’s largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer’s disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high school, college and graduate students.

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FOR IMMEDIATE RELEASE

August 12, 2004

Contact: Amber Bauer, The Jackson Laboratory; 207-288-6051, abauer@jax.org
Jade Hanner, The Jackson Laboratory, 207-288-6051, jade@jax.org

Summer Student Program Gives Hanover Local Valuable Research Experience

Bar Harbor, Maine — The lazy days of summer were anything but lazy for Hanover local Caitlin Stanton. After 11 weeks of intensive research at The Jackson Laboratory, Caitlin will present her results during the 75th Annual Summer Student Scientific Symposium on August 16.

As a Summer Student Caitlin, the daughter of Bruce and Elizabeth Stanton, had the opportunity to conduct research “at the bench” under the direction of Postdoctoral Associate Keith DiPetrillo, Ph.D. Throughout the summer, Caitlin was attempting to discover chromosome regions, and later individual genes, that contribute to kidney disease. Understanding the genetics of kidney disease could ultimately lead to earlier detection and new treatments.

“This summer I learned that even if immediate results aren’t found, data can always go towards bigger projects and help in the end.” Caitlin said.

Outside of the laboratory, Caitlin had the opportunity to interact with other students who share her love of science while living at Highseas, a Jackson Laboratory residence on the shore of Frenchman’s Bay.

It was this atmosphere of learning that provided this Brown University biology major with her greatest memories.

“I will always remember this summer as the summer I learned that genetics isn’t impossible to understand,” Caitlin said.

Caitlin’s participation was supported by The Horace W. Goldsmith Foundation.

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For more information about The Summer Student Program visit www.jax.org/education/index.html.

With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine’s largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer’s disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high school, college and graduate students.

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FOR IMMEDIATE RELEASE

June 23, 2004

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Amber Bauer, The Jackson Laboratory, 207-288-6051, abauer@jax.org
Jade Harner, The Jackson Laboratory, 207-288-6051, jade@jax.org

Murrysville Local Selected for Prestigious Jackson Laboratory Summer Student Program

Bar Harbor, Maine – Franklin Regional High School graduate Sarah Swerdlow joined the ranks of two Nobel Prize winners last week as she began her research as a Summer Student at The Jackson Laboratory.

In its 78 years, the Summer Student Program has helped to develop more than 2,000 young scientists, many of whom have gone on to make important scientific and medical discoveries. Alumni of the program include Drs. David Baltimore and Howard Temin, who shared the 1975 Nobel Prize in physiology or medicine. This year, the program is giving 34 talented high school and college students the opportunity to conduct scientific research under the guidance of a laboratory researcher.

Sarah, a biotechnology and molecular biology major at Clarion University, was chosen from approximately 300 applicants. She will spend the next eight weeks working under the guidance of Associate Staff Scientist Dr. Shaoguang Li. Her research will focus on human Philadelphia chromosome-positive leukemias in mice.

Sarah decided to become involved in the Summer Student Program on the recommendation of previous students and her adviser.

Besides engaging in research, Sarah also has the opportunity to interact with other students from around the world who share her passion for science while residing at Highseas, a Jackson Laboratory residence overlooking Frenchman Bay.

More information about The Jackson Laboratory Summer Student Program is available at http://www.jax.org/education/index.html.

With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine’s largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer’s disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high school, college and graduate students.

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August 12, 2004

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Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Summer Student Program Gives Murrysville Local Valuable Research Experience

Bar Harbor, Maine – The lazy days of summer were anything but lazy for Murrysville local Sarah Swerdlow. After nine weeks of intensive research at The Jackson Laboratory, Sarah will present her results during the 75th Annual Summer Student Scientific Symposium on August 16.

As a Summer Student Sarah, the daughter of Ed and Mary Ann Swerdlow, had the opportunity to conduct scientific research “at the bench” in Associate Staff Scientist Dr. Shaoquang Li’s laboratory. Sarah’s research focused on the pathways that lead to the transformation of normal cells to cancer cells in Philadelphia chromosome-positive leukemias. Discovering how each protein in these signaling pathways are involved in leukemia development will help in the creation of effective therapies that can be used to slow or cure Ph+ leukemias.

The laboratory has held many lessons for this Clarion University biotechnology and molecular biology major.

“I’ve learned that PCRs hate me and that when you think something is not important it probably is,” Sarah said.

Outside of the laboratory, Sarah had the opportunity to interact with other students who share her love of science while living at Highseas, a Jackson Laboratory residence on the shore of Frenchman’s Bay. Sarah says she will miss the people and the atmosphere of Highseas the most when she leaves Bar Harbor.

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For more information about The Summer Student Program visit www.jax.org/education/index.html.

With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine’s largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer’s disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high school, college and graduate students.

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Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Maceo Local Selected for Prestigious Jackson Laboratory Summer Student Program

Bar Harbor, Maine – Daviess County High School graduate Ashley Taylor joined the ranks of two Nobel Prize winners last week as the Summer Student Program commenced at The Jackson Laboratory.

In its 78 years, the Summer Student Program has helped to develop more than 2,000 young scientists, many of whom have gone on to make important scientific and medical discoveries. Alumni of the program include Drs. David Baltimore and Howard Temin, who shared the 1975 Nobel Prize in physiology or medicine. This year, the program is giving 34 talented high school and college students the opportunity to conduct scientific research under the guidance of a laboratory researcher.

Ashley, a biology major at Oberlin College, was chosen from approximately 300 applicants. She will spend the next eight weeks studying neuromuscular genes in Dr. Gregory Cox’s laboratory, the same laboratory she worked in on a visit in January.

“I enjoyed my time here in January and wanted to have more research experience in the wonderful environment provided here,” Ashley said.

Besides engaging in research, Ashley also has the opportunity to interact with other students from around the world who share her passion for science while residing at Highseas, a Jackson Laboratory residence overlooking Frenchman Bay. She is looking forward to living in “a house full of students in such a fun and beautiful town.”

More information about The Jackson Laboratory Summer Student Program is available at http://www.jax.org/education/index.html.

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With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine’s largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer’s disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high school, college and graduate students.

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Jade Harner, The Jackson Laboratory, 207-288-6051, jade@jax.org

Summer Research Program Gives Maceo Local New Knowledge, New Friends

Bar Harbor, Maine – The lazy days of summer were anything but lazy for Maceo local Ashley Taylor. After nine weeks of intensive research at The Jackson Laboratory, Ashley will present her results during the 75th Annual Summer Student Scientific Symposium on August 16.

As a Summer Student Ashley, the daughter of Ben Taylor and Sandi Phillips, conducted scientific research “at the bench” under the direction of Associate Staff Scientist Gregory Cox, Ph.D. Ashley’s project was to locate a new mutation that causes neuromuscular problems, increasing researchers’ understanding of human neuromuscular diseases.

Outside the laboratory, Ashley had the opportunity to interact with other students who share her love of science while living at Highseas, a Jackson Laboratory residence on the shore of Frenchman’s Bay. Ashley, a biology major at Oberlin College, said the best part of living at Highseas has been “having it feel like a home.”

“This has been a wonderful experience for me,” Ashley said. “And I am brimming with thanks.”

Ashley’s participation was supported by The Horace W. Goldsmith Foundation, the Elizabeth S. Russell Scholarship Fund and The Allen C. Schroeder Endowed Fund.

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For more information about The Summer Student Program visit www.jax.org/education/index.html.

With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine’s largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer’s disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high school, college and graduate students.

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Ryland Local Selected for Prestigious Jackson Laboratory Summer Student Program

Bar Harbor, Maine — Holy Cross District High School graduate Abby Winterberg joined the ranks of two Nobel Prize winners last week as she began her research as a Summer Student at The Jackson Laboratory.

In its 78 years, the Summer Student Program has helped to develop more than 2,000 young scientists, many of whom have gone on to make important scientific and medical discoveries. Alumni of the program include Drs. David Baltimore and Howard Temin, who shared the 1975 Nobel Prize in physiology or medicine. This year, the program is giving 34 talented high school and college students the opportunity to conduct scientific research under the guidance of a laboratory researcher.

Abby, a psychobiology major at Centre College, was chosen from approximately 300 applicants. Abby will spend the next eight weeks researching the genetic component of non-alcoholic fatty liver disease under the direction of Postdoctoral Associate Naoki Ishimori, Ph.D., in Dr. Beverly Paigen's laboratory.

"This is a wonderful research institution with great scientists," Abby said. "I am very excited to get to work here this summer."

Besides engaging in research, Abby also has the opportunity to interact with other students from around the world who share her passion for science while residing at Highseas, a Jackson Laboratory residence overlooking Frenchman Bay.

More information about The Jackson Laboratory Summer Student Program is available at http://www.jax.org/education/index.html.

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With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine's largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer's disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high school, college and graduate students.

For information on automatic e-mail delivery of news releases (journalists only), please send an e-mail request.
FOR IMMEDIATE RELEASE

August 12, 2004

Contact: Amber Bauer, The Jackson Laboratory, 207-288-6051, abauer@jax.org
Jade Harmer, The Jackson Laboratory, 207-288-6076, jade@jax.org

Summer Research Program Gives Ryland Local New Knowledge, New Friends

Bar Harbor, Maine – The lazy days of summer were anything but lazy for Ryland local Abby Winterberg. After nine weeks of intensive research at The Jackson Laboratory, Abby will present her results during the 75th Annual Summer Student Scientific Symposium on August 16.

As a Summer Student Abby, the daughter of Ed and Bobbye Winerberg, had the opportunity to conduct scientific research “at the bench” under the direction of Postdoctoral Associate Naoki Ishimori, Ph.D. The main objective of Abby’s research was to determine if there was a strong genetic component regulating susceptibility to non-alcoholic fatty liver disease (NAFLD) and, if so, to map the gene’s location. Abby’s research hopefully will lead to a better understanding of the pathology of NAFLD and possibly determine new risk factors for the disease.

Outside of the laboratory, Abby had the opportunity to interact with other students who share her love of science while living at Highseas, a Jackson Laboratory residence on the shore of Frenchman’s Bay.

It was this combination of work and play that made the summer memorable for this Centre College psychobiology major.

“I’ll always remember all of the awesome people I’ve met and my first chance to really get to experience research as a career,” Abby said. “Also I’ll remember all of the fun I’ve had with the other students.”

Abby’s participation was supported by The Nathan Kaliss Scholarship Fund, the James B. Murphy Memorial Scholarship and The Horace W. Goldsmith Foundation.

For more information about The Summer Student Program visit www.jax.org/education/index.html.

With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine’s largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer’s disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high school, college and graduate students.

For information on automatic e-mail delivery of news releases (journalists only), please send an e-mail request.
Interesting class leads student to 'incredible' internship

RELEASED: Aug. 12, 2004

DAHLGREN, KY—Abby Winterberg has had the best of both worlds this summer. She’s spent a lot of her free time on the coast of Maine hiking, biking, swimming and relaxing on beautiful beaches and lakes.

But the rising Centre senior from Ryland, Ky., is also having fun indoors. Winterberg is taking part in the 2004 Summer Student Program at The Jackson Laboratory in Bar Harbor, Maine. Students learn how to conduct research working on an independent, original project under the mentorship of a research scientist. The Jackson Laboratory is an independent, not-for-profit research institution dedicated to the betterment of human health.

Winterberg, a psychology major, is conducting research on the genetic component of non-alcoholic fatty liver disease, known as NAFLD. She works closely with a cardiologist from Japan.

"The research experience has been excellent," she says. "There has been a good combination of lab work, work with animals, computer work, and writing and presenting my work. I have learned a lot from my sponsor and have gained a sense of what it is like to be a researcher."

A typical week for Winterberg is to conduct research at the lab from 9 to 5 on weekdays. On Tuesday and Thursday evenings the students gather to discuss their projects. Research scientists also speak to the students during lunch seminars. Winterberg adds that it’s a diverse environment. At one point, there were people from seven different countries working in her area.

On the final day of the program, students present their results at the annual Summer Student Symposium, attended by their mentors, peers and parents.

Winterberg became interested in genetic research after taking a Centre course taught by Christine Barton, associate professor of biology. Introductory to Evolutionary Genetics (Biology 210) is a course in which students learn the basic mechanism of inheritance in individuals, the molecular basis for this genetic expression, and the mechanisms of evolution that account for genetic changes within populations.

"Dr. Barton was very enthusiastic about everything she taught and made the class so interesting for me," Winterberg says. "This led me to want to learn more about genetics."

Winterberg’s advisor, Brent White, Merton Professor of Psychology, and Denny Henderson, visiting assistant professor of biology, encouraged her to apply for the program. She applied for five summer programs, with Jackson Laboratory being her first choice. White and Henderson helped with the application process and wrote letters of recommendation for her.

"They were very encouraging and helpful," she says. "Their willingness is a reflection of what I’ve experienced everyday with our faculty at Centre."

Winterberg plans to apply for medical school following her graduation from Centre next spring. But she’ll keep busy in the year to come. Winterberg will serve as vice president of Delta Omicron, Centre’s music organization. She will be a fourth-year runner and co-captain on the cross-country team and plans to run track for the third year. Winterberg is an officer in her sorority and is a member of Centre’s Panhellenic Council. She’ll also serve as a member of Rho Gamma, which gives leadership to incoming sorority members. She volunteers weekly at Danville’s Ephraim McDowell Regional Medical Center and at Woodlawn Elementary School in the reading buddy program. And during Centre Term, she’ll study abroad in Russia.

For more on The Jackson Laboratory, go to http://www.jax.org/education/esp.html.

- end -

Founded in 1919, Centre College is ranked among the U.S. News top 50 national liberal arts colleges. Centre alumni, known for their nation-leading loyalty in annual financial support, include two U.S. vice presidents and two Supreme Court justices. For more, visit http://www.centre.edu/web/coverpage.html.


Communications Office
"Centre College
30 W. Walnut Street
Danville, KY 40422

Public Information Coordinator: Telephone 859-238-5714

Back to News and Events Home Page
FOR IMMEDIATE RELEASE

June 23, 2004

Contact:
Amber Bauer, The Jackson Laboratory, 207-288-6051, abauer@jax.org
Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Thousand Oaks Local Selected for Prestigious Jackson Laboratory Summer Student Program

Bar Harbor, Maine – Thousand Oaks High School graduate Carol Yan joined the ranks of two Nobel Prize winners last week as she began her research as a Summer Student at The Jackson Laboratory.

In its 78 years, the Summer Student Program has helped to develop more than 2,000 young scientists, many of whom have gone on to make important scientific and medical discoveries. Alumni of the program include Drs. David Baltimore and Howard Temin, who shared the 1975 Nobel Prize in physiology or medicine. This year, the program is giving 34 talented high school and college students the opportunity to conduct scientific research under the guidance of a laboratory researcher.

Carol, a chemical engineering major at Princeton University, was chosen from approximately 300 applicants. Carol will spend the next eight weeks researching the difference between strains of mice that have induced type I diabetes and one strain of mice that is immune, under the direction of Staff Scientist Dr. Alexander Chervonsky. Her research may help people in the future who suffer from autoimmune-related diabetes.

"I am interested in molecular biology and wanted to gain experience performing hands-on research that may have such a large and meaningful impact on human lives," Carol said.

Besides engaging in research, Carol also has the opportunity to interact with other students from around the world who share her passion for science while residing at Highseas, a Jackson Laboratory residence overlooking Frenchman Bay.

More information about The Jackson Laboratory Summer Student Program is available at http://www.jax.org/education/index.html.

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With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine’s largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer’s disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high school, college and graduate students.

For information on automatic e-mail delivery of news releases (journalists only), please send an e-mail request.
Media Release
The Jackson Laboratory

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Voice: 207-288-6051 • Fax: 207-288-6075 • E-Mail: pubinfo@jax.org • http://www.jax.org

FOR IMMEDIATE RELEASE

August 12, 2004

Contact: Amber Bauer, The Jackson Laboratory, 207-288-6051, abauer@jax.org
Jade Harmer, The Jackson Laboratory, 207-288-6051, jade@jax.org

Summer Research Program Gives Thousand Oaks Local New Knowledge, New Friends

Bar Harbor, Maine – The lazy days of summer were anything but lazy for Thousand Oaks local Carol Yan. After nine weeks of intensive research at The Jackson Laboratory, Carol will present her results during the 75th Annual Summer Student Scientific Symposium on August 16.

As a Summer Student Carol, the daughter of Andrew Yan and Jilin Sun, conducted scientific research “at the bench” under the direction of Staff Scientist Alexander Chervonsky, M.D., Ph.D. Throughout the summer Carol researched the genetic cause of resistance to type 1 diabetes in one type of laboratory mouse.

“I’ve learned so much!” Carol said. “This summer at Jackson has taught me many valuable lab techniques, as well as to think like a researcher.”

Outside the laboratory, Carol had the opportunity to interact with other students who share her love of science while living at Highseas, a Jackson Laboratory residence on the shore of Frenchman’s Bay.

It has been the people that have made the biggest impression on this Princeton University chemical engineering major.

“The times shared with friends will be forever instilled in my memory,” Carol said.

Carol’s participation was supported by The Horace W. Goldsmith Foundation and the Barbara H. Sanford Endowment.

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More information about The Jackson Laboratory Summer Student Program is available at http://www.jax.org/education/index.html.

With more than 1,300 employees and a budget of $130 million, the 75-year-old Jackson Laboratory is one of Maine’s largest employers. Its 350-person research staff investigates the genetic basis of cancers, heart disease, osteoporosis, Alzheimer’s disease, glaucoma, diabetes and many other human diseases and disorders. The Laboratory is also home of the Mouse Genome Database and many other publicly available information resources, and is an international hub for scientific courses, conferences, training and education—including programs for Maine primary school, high school, college and graduate students.

For information on automatic e-mail delivery of news releases (journalists only), please send an e-mail request.
Bravo!

Degrees earned

Travis Clarke Ross of Thousand Oaks and Annalisa Brown of Westlake Village were among spring graduates of Miami University, Oxford, Ohio.

Ross earned a bachelor of science degree in business. Brown received a bachelor of arts degree and a bachelor of science degree in business.

Attends forum


Fluharty joined 350 other high school students from across the country who demonstrated academic excellence, leadership potential and interest in a career in medicine.

The students visited medical schools and clinics and had an opportunity to interact with leaders in the medical field.

Attended symposium

Carol Yan of Thousand Oaks took part in nine weeks of intensive research this summer at The Jackson Laboratory, Bar Harbor, Maine.

Yan researched the genetic cause of resistance to Type I diabetes and presented her results during the 75th Annual Summer Student Scientific Symposium on Aug. 16.

A chemical engineering major at Princeton University, Yan is the daughter of Andrew Yan and Jin Sun.

Her participation in the program was supported by The Horace W. Goldsmith Foundation and the Barbara H. Sanford Endowment.

Featured in

Time magazine

Roger Custer was featured in an article in the Aug. 30 issue of Time magazine.

The article, titled "The Right's New Wing," is about young conservatives and discusses the impact of Custer's conservative activism at Ithaca College, Ithaca, N.Y.

It examines successful efforts by the Ithaca College Republicans during the past four years under Custer's leadership.

Custer is a 2000 graduate of Westlake High School.

Earns scholarship

Conor Delaney of Newbury Park received a dean's partial tuition scholarship to DeVry University's West Hills campus.

Scholarships are based on ACT/SAT test scores.

Delaney is a 2004 graduate of Newbury Park High School.

Given scholar honors

Matthew Franklin Smith of Simi Valley has been selected for membership in the National Society of High School Scholars. Smith is a student at Royal High School.

The society invites only those students who have superior academic achievement and are among the top scholars in the nation.

The announcement was made by NSHSS Honorary Chair Claes Nobel, a senior member of the Nobel Prize family.

Named to dean's list

Kevin S. Fukagawa of Thousand Oaks was named to the dean's list for academic achievement during the spring semester at the University of Oregon, Eugene.

They are Heather Christine Cairns, a freshman music major from Moorpark; Jessica Anne Fernandez, a senior political science major from Thousand Oaks; and Megan Lindsey Edgar, a senior geography major from Ventura.

Award received

Audrianna Bonilla, a student at Anacapa Middle School, received the Above and Beyond award from the Los Angeles Times.

Bonilla and nine other children from Southern California were honored for academic achievement, community service and cultural contributions.

The finalists were nominated by parents, teachers and community leaders who submitted 200-word essays about the nominees.

The judges - parents, educators and community leaders from Los Angeles, Orange, Riverside, San Bernardino and Ventura counties - selected winners from each county.

Winners received statues, passes to a local amusement park and T-shirts.
National Science Foundation Grant

Jon Geiger, manager of educational programs, was writing an undergraduate research grant for the National Science Foundation during my time at The Jackson Laboratory. One contribution I made to this project was editing the grant theme. The theme was very important to this grant because in 2003 the NSF declined to fund the program because the proposal was too disease-related. In 2004, the grant was written to emphasize the fact that The Summer Student Program is centered on functional genomics and provides projects in basic science that include developmental biology, computational biology, basic genetics and bioinformatics. The grant theme was essential to setting the tone of the entire grant request.

I also played a large role in this grant. A sizable portion of the request was research summaries written by prospective research sponsors describing their current projects and also explaining how future Summer Students would be involved. The audience for these summaries was other scientists, however, probably not geneticists. Therefore, the research summaries could be written at a fairly sophisticated scientific level but could not include the jargon of genetics. I edited the summaries so this audience could understand.

In one case, the prospective research sponsor, Dr. Judith Blake, did not have the time to write her summary. Using the 2003 scientific report and background on the GO Consortium, I wrote the summary about Dr. Blake’s research that appeared in the NSF grant request.
original:

we propose to offer research opportunities for ten undergraduate students in the area of functional genomics. we will provide projects that integrate genetic and genomic data, the use of physical methods and comparative bioinformatics, and quantitative analysis tools to discover and dissect mammalian regulatory sequences that control somatic development, to study phenotype variability, and to examine the functional organization of chromosomes. our goal is to introduce students to modern methods and to use these to explore current questions on the frontier of knowledge in functional genomics.

final form:

we propose to offer research opportunities in functional genomics for eight undergraduate students. these students will have the opportunity to complete projects that integrate genetic and genomic data using physical methods, comparative bioinformatics, and quantitative analysis tools. the projects will focus on a variety of areas, including the discovery and dissection of mammalian regulatory sequences, the study of phenotypic variability, and the examination of the functional organization of chromosomes. our goal is to introduce students to hypothesis-driven research through the opportunity to become part of a laboratory team. each research laboratory provides students with cutting-edge technology to explore questions on the frontier of knowledge in functional genomics. we have found that becoming full-fledged members of research teams and working on independent research projects are the best methods for students to fully experience the true nature of experimental science.
The mammalian oocyte-to-embryo transition is characterized by a period of transcriptional silence that lasts from the time the oocyte is fully-grown to when the activation of the embryonic genome takes place. During this time a number of significant changes take place: the oocyte matures, gets fertilized, and nuclear reprogramming takes place. The exquisitely fine tuned regulation of these changes is completely under the control of maternal mRNA and proteins stock piled in the oocyte during its development.

Analysis of EST sequences obtained from full-grown oocyte, 2-cell stage, and blastocyst stage cDNA libraries has revealed that a number of molecules involved in the Wnt signaling pathway are present in these stages of oocyte- and preimplantation development. The Wnt signaling pathway plays a role in determination of cell fate, differentiation, proliferation and morphogenesis. This pathway can be divided into three pathways depending on the molecules acting downstream of the Wnt signal: the Wnt/b-catenin pathway, the Wnt/ Ca2+ pathway, and the Wnt/PCP (planar cell polarity) pathway. Our results have indicated that the Wnt/b-catenin pathway is not active during preimplantation embryo development, but nothing is known about the action of this pathway during oocyte development, or the Wnt/Ca2+ and Wnt/PCP pathway during oocyte and preimplantation embryo development. We are in the process of determining the expression of members of these pathways during oocyte and preimplantation embryo development using RT-PCR, in situ hybridization, and immunohistochemistry. We are also using a
conditional knock out approach to determine the function of selected members of the pathway during these developmental stages. This project lends itself perfectly to the involvement of undergraduate students in the research as it can be subdivided into discrete units that will give students insight into the pathway itself, but also the approaches being used to explore basic scientific questions.

immunohistochemistry. We are also using a conditional knockout approach to determine the function of selected members of the pathway during these developmental stages. This project lends itself perfectly to the involvement of undergraduate students because it can be subdivided into discrete units that will give students insight into a specific pathway, as well as provide hands-on experience for the approaches and techniques being used to explore basic scientific questions.
The sequencing of mouse, human and other genomes, the rapid accumulation of very large data sets, and the need to integrate biological information from multiple heterogeneous sources all contribute to the need to develop bioinformatics systems. Our primary research focuses on the development of bio-ontologies (defined, controlled, structured vocabularies) for molecular biology. These vocabularies allow gene and gene products to be categorized so that their function and position in the cell can be easily accessed and compared to the genes and gene products of other organisms. This work is undertaken as part of the Gene Ontology Consortium, a group of 17 Model Organism Databases and Genome Annotation Centers. My group also provides official nomenclature for mouse genes and contributes to the development of additional bio-ontologies needed for mouse genomic and phenotypic annotations. My staff then uses these resources to annotate mouse genes and gene products as part of the Mouse Genome Informatics Consortium at The Jackson Laboratory.
Jane’s Trust Concept Paper

Jane Cook began supporting The Jackson Laboratory in 1977. After her death from cancer in July 2002, The Jane B. Cook Charitable Trust was established. Since the trust was created, $251,000 has been given to the laboratory. The following is a concept paper that I helped Nessa Reifsnnyder and Jill Kline from the Development Office write. The concept paper outlines an endowment request of $1 million for the laboratory’s training and education programs. The trust has indicated that it plans to give grants in amounts between $50,000 and $1 million each year for the next 35 years.
June 25, 2004

Jane’s Trust
Hemenway & Barnes
60 State Street
Boston, MA 02109

Dear Trustees:

On behalf of The Jackson Laboratory, I am pleased to enclose a concept paper inquiring about possible support from Jane’s Trust.

For the past 75 years, Jackson scientists have dramatically increased our understanding of human development and disease. With the sequencing of the human and mouse genomes bringing new insight into the molecular mechanisms of diseases, there has never been a more promising time in the field of biomedical discovery.

We greatly appreciate the generous contributions given by Mrs. Cook to The Jackson Laboratory since 1977. Her steadfast support has helped us to become the largest mammalian research institute in the world. We hope that Jane’s Trust will help the Laboratory fulfill its mission to provide educational opportunities in genetics research to students from the second grade through the post-graduate level.

Please contact me with any questions you may have concerning our enclosed concept paper. Thank you for your consideration of our request.

Sincerely yours,

Elizabeth M. Erickson

Enclosures:
  Cover Sheet
  Concept Paper and Budget
  IRS exemption letter (redacted)
An Endowment to Benefit Science and Technology Education

For nearly three decades, the Jane B. Cook Charitable Trust has supported cutting-edge research initiatives at The Jackson Laboratory, a leading biomedical research institute in Bar Harbor, Maine. In all, the Jane B. Cook Charitable Trust has donated $251,000 to The Jackson Laboratory’s research efforts since 1977, for which we are most grateful.

Background

The Jackson Laboratory is a nonprofit organization working to improve human health through genetics research, genetic resources, public databases and education. With an annual budget of more than $100 million and 1,350 employees, The Jackson Laboratory plays a critical role in major biomedical research advances. Bone marrow transplants, stem cell transfer, organ transplants, and the discovery of genes involved in scores of human diseases all were accomplished using mouse models at The Jackson Laboratory. The Laboratory houses 2,800 different mouse strains including models for cancer, heart disease, diabetes, Alzheimer's disease, and countless other human conditions.

As the Laboratory has grown and diversified, so have our offerings in scientific education. Since the 1930s, thousands of students have worked side-by-side with Jackson Laboratory scientist-mentors, and scores have gone on to have careers as accomplished scientists, physicians, and teachers (including two Nobel Prize winners).

We ask that Jane’s Trust consider building on Mrs. Cook’s legacy by supporting our research where it begins: at the educational level. An endowment gift in the amount of $1 million from Jane’s Trust would provide vital sustenance for the full range of educational initiatives at The Jackson Laboratory:

• Training newly graduated Ph.D.s to establish their own biomedical research programs.
• Providing hands-on laboratory experience to high school science teachers.
• Offering full-time internships to undergraduates, affording research opportunities beyond a typical collegiate curriculum.
• Stimulating high school students’ innate interest in science by giving them productive research projects to accomplish.
• Programming science outreach initiatives to introduce basic genetics concepts to school-aged children that awaken interest in science.

Description of Science and Technology Education Programs at The Jackson Laboratory

At present, The Jackson Laboratory’s educational programs train students from the second grade through post-graduate studies. All programs share a key goal: drawing students into the excitement and challenges of biomedical research. Moreover, we actively seek to increase participation in science and technology education by students from underrepresented populations (women, racial minorities, urban, rural and persons with disabilities). Of particular interest to Jane’s Trust may be our pilot effort in the greater Boston region, organized in tandem with Lawrence J. Murphy, science chair of the Beaver Country Day School and director of the school’s Advanced Biotechnology Institute. This program will give underprivileged high school
students from eastern Massachusetts access to laboratory equipment and protocols, while imparting sophisticated computer research skills. With funding, we hope to enroll three inner-city students in the pilot program. One of these students will be selected to participate in The Jackson Laboratory's Summer Student Program as a "Boston Fellow."

The Jackson Laboratory maintains similar educational partnerships in Connecticut, New York, Pennsylvania, and Maine. These efforts include collaboration with New York City's Gateway Institute for Pre-College Education program for inner-city high school students. Additionally, the Summer Student Program collaborates with Central High School in Philadelphia to help recruit underrepresented students. We also have re-emphasized undergraduate recruitment visits by the Educational Programs Manager to programs that attract students from tribal and historically black colleges and universities.

Jon Geiger, Ph.D., the Laboratory's Educational Programs Officer, has increased minority-student recruitment activities in the past year, including more school visits and contacts with guidance departments, state agencies, and educational organizations. In 2003 minority students were 21% of the Summer Student Program body and women were 73%. The programs for which we seek endowment support are the following:

The Bacteriology Course, established in 1992, addresses the need to interest rural elementary students in science and math. This week-long course is taught by Jackson Laboratory staff members to students in ten classrooms across Hancock County. Participating second-graders are instructed by a Jackson Laboratory scientist to investigate the world of bacteriology.

The Maine School Outreach Program encompasses frequent school visits and interactions for hundreds of students in grades K-12, statewide. Participating students may tour the research facility and talk with Laboratory scientists, or the scientists may travel to their classrooms.

Established in 1993, the High School Internship Program gives motivated local juniors and seniors an opportunity to work at The Jackson Laboratory during the academic year. These students conduct research "at the bench" under the sponsorship of a staff scientist. This year, 12 seniors and 2 juniors participated.

The nationally renowned Summer Student Program for high school and college students has been a mainstay at Jackson since 1929. This summer, 34 students arrived from states ranging from California to Maine, and points in between. Under the tutelage of Laboratory scientists, participants study the genetic basis of such diseases as cancer, diabetes, heart disease, osteoporosis, psoriasis, anemia, Down syndrome, and epilepsy, becoming familiar with techniques well beyond the scope of high school lab settings and even most university teaching laboratories. Participants are housed together at Highseas, a residence on the shore of Frenchman Bay. Often, the Program provides students with their first opportunity to spend time with peers who share their love of science.

With guidance from their mentors, all interns design a project, implement the research plan and gather, analyze and interpret data, reporting research results both orally and in writing.

The Jackson Laboratory offers an Academic-Year Program for undergraduate students at colleges that allow off-campus study. Each academic-year student works full-time on an independent research project under the sponsorship of a Jackson staff scientist who provides guidance, laboratory space, and equipment.

In 2004, The Jackson Laboratory began a partnership with the University of Maine known as the Mastering Science program. Mastering Science offers four pre-service science teachers an intense experimental research internship at our laboratory. A Howard Hughes Medical Institute
grant now funds this program for three years, with supplemental funding for two extra years from the Lloyd G. Balfour Foundation. This exciting new program will allow new science teachers to learn experimental methods that can be taught in the classroom.

The Jackson Laboratory's Graduate Program is affiliated with the University of Maine; participating Ph.D. candidates may conduct their coursework at UMaine and their thesis research at Jackson. The Program is concentrated in three interdisciplinary areas of research excellence: Genetics/Genomics, Computational Biology, and Biophysics/Bioengineering. A core graduate curriculum, consisting of course work and seminars, has been collaboratively designed and is facilitated by the Laboratory's videoconferencing facility. The Laboratory also provides research appointments for graduate students from other universities who have completed their courses and require the specialized facilities and mentoring the Laboratory provides for a dissertation research project.

Like physicians, scientists must do an internship, spending several years after earning their doctoral degrees working on independent research projects under the supervision of seasoned, independent investigators. The Postdoctoral Training Program takes full advantage of The Jackson Laboratory's expertise in all aspects of mammalian genetics and is an essential component of the Laboratory's research vitality and productivity. The foundation of the training program is a one-on-one relationship between a trainee and his or her sponsor, with the trainee expected to work mainly in the laboratory of the sponsor—one of the Laboratory's 37 principal investigators.

The Postdoctoral Program has kept pace with the Laboratory's growth this decade, expanding 150% since 1989. On average, 50 postdoctoral trainees are working at the Laboratory. Most postdoctoral appointments last three years, although the trainee and sponsor may establish a longer or shorter period of study. Jackson postdoctoral trainees are in high demand to establish independent research programs at other research institutions or universities, as well as in industry.

Conclusion

As the technological and conceptual advances of the mouse and human genome projects give scientists new ways to understand human reproduction, development, and disease, biomedical research across the nation is undergoing explosive growth. The Jackson Laboratory, an internationally respected research institute, is at the forefront of this growth and continues to be a valued provider of biomedical research resources to other institutions around the world.

Heightened research activity in genetics and genomics engenders an acute need for well-trained scientists with expertise in this field. A $1 million endowment gift from Jane's Trust would help The Jackson Laboratory continue its longstanding leadership role in molecular genetics by offering a wide range of educational opportunities for the individuals who will go forward to investigate and teach mammalian genetics principles.

Increasing the Laboratory's endowment for training and education will allow us to meet the growing need for well-trained geneticists. Income generated from endowed funds assures the growth of longstanding programs and provides stability to new programs, as they secure a funding base. We hope that Jane's Trust will consider joining us to offer more training opportunities for students and researchers for the advancement of biomedical research and the betterment of human health.
George A. Ramlose Foundation Inc. Grant

The George A. Ramlose Foundation, Inc. tends to fund equipment, start-up projects, one-time projects or scholarships for nonprofits in New England. This $5,000 grant request was written by the Development Office to procure funding for improvements to Highseas, the summer student residence.

I edited the entire proposal; however, my major contribution to this grant was rewriting "The Need" section to provide more reasons why these improvements were necessary, as well as explaining how these improvements would benefit the educational programs at The Jackson Laboratory.
July 8, 2004

Mr. David L. Taylor  
Secretary-Treasurer  
George A. Ramlose Foundation, Inc.  
P.O. Box 550  
Sterling, MA 01564

Dear Mr. Taylor,

On behalf of The Jackson Laboratory, I am pleased to submit a request for a $5,000 grant from the George A. Ramlose Foundation, Inc. to help modify the Laboratory’s summer student residence, Highseas. These modifications will allow more students to participate in our internship program and will enable in-service and pre-service science teachers to intern at The Jackson Laboratory during the academic year. Students from across the country and teachers statewide come to The Jackson Laboratory to conduct genetics research “at the bench” under the sponsorship of a staff scientist.

With funding support from the George A. Ramlose Foundation, our education programs will have the resources to grow while maintaining the quality of experience that will continue to guide fundamental experimentation and lead to landmark discoveries.

Enclosed are two copies of the Foundation’s Proposal for Funding Cover Sheet, project description and project budget, as required. I am also including our current annual report and financial information about The Jackson Laboratory.

Thank you for your consideration of this request to improve student science education at The Jackson Laboratory. I look forward to hearing from you.

Sincerely,

Elizabeth M. Erickson  

EME/gmk
There is a growing consensus among scientists and educators that collaboration is needed to devise inquiry-based, secondary science curricula that will boost student performance and encourage college enrollment in the sciences. The Jackson Laboratory, a leading mammalian genetics research institution, is collaborating with the University of Maine to mentor students and teachers in scholarly inquiry. We respectfully request a grant of $5,000 from the George A. Ramlose Foundation to provide support for modifications to increase our housing capacity.

The Jackson Laboratory pursues research focused on mice to better understand human disease. Our staff scientists are among the nation's leaders in their efforts to sequence and functionally annotate the mouse genome. These same cutting-edge scientists mentor both students and teachers in groundbreaking research.

Background: Internship Programs

Established in 1929 with the founding of the Laboratory, our Summer Student Program invites competitively chosen undergraduates and high school students to conduct research for nine to 11 weeks during the summer, as a member of a sponsoring scientist's team. Participants study the genetic basis of such diseases as cancer, diabetes, heart disease, osteoporosis, psoriasis, anemia, Alzheimer's, Down syndrome, and epilepsy, learning techniques well beyond the scope of most university teaching laboratories. Each student designs a project, implements the research plan, analyzes data, and reports research results both orally and in writing.

Established in 1993, our High School Internship Program gives juniors and seniors an opportunity to work at The Jackson Laboratory. Throughout the school year, local high school students conduct research "at the bench" under the sponsorship of a staff scientist; this year, 12 seniors and 2 juniors participated. All interns write a research proposal, learn applicable techniques, and work on their project—gathering and interpreting data with guidance from their mentors. In the final month, interns write a 10- to 15-page paper and prepare a 15-minute oral presentation for the annual Jackson Laboratory High School Internship Symposium in mid-May.

In 2004, The Jackson Laboratory began a partnership with the University of Maine known as the Mastering Science program. Mastering Science offers four pre-service science teachers an intense experimental research internship in our laboratory. A Howard Hughes Medical Institute grant now funds this program for three years, with supplemental funding for two extra years from the Lloyd G. Balfour Foundation.
The Mastering Science program runs concurrently with our High School Internship Program. Participating teachers have day-to-day contact with the high school students, as all of our research labs are in close proximity (however, they have no responsibilities for supervising the students, enabling them to devote full attention to their own research projects). Past experience has shown that high school students in our academic-year program are capable of extraordinary achievements in the laboratory and impressive intellectual growth. Student teachers observe this growth firsthand during the period of their research project.

To maximize the benefit of their research experience, student teachers meet regularly during the internship with the UMaine Center for Science and Mathematics Education Research to develop plans for incorporating their experiences into effective classroom teaching. The Center also monitors alumni progress through follow-up visits to their classrooms, and a workshop allows alumni to share their teaching outcomes with other science teachers statewide.

For science teachers, professional development provided by a research experience can directly benefit classroom outcomes. Therefore, we are initiating a sabbatical program for in-service science teachers as well. Expertise provided by UMaine educators will assure that participants are professionally guided in translating their research experience to the classroom. The one-semester internship at The Jackson Laboratory will earn participants academic credit through the University of Maine’s Master of Science in Teaching (MST) program. MST provides content-rich, research-based graduate level training for in-service and pre-service teachers.

The Laboratory’s In-Service Teacher Sabbatical program will be the first of its kind in Maine and New England. We anticipate that it will become a model for other research institutions in which teachers explore experimental science in an active laboratory setting.

The Need

Improvements to Student Housing

The Laboratory is committed to expanding its educational offerings to provide more students and teachers with the opportunity to conduct original, hands-on research and to develop a life-long interest in the biological sciences. What now limits these programs is our ability to house program participants.

Our current summer student residence, Highseas, is a mansion that was constructed in 1912 and donated to the Laboratory in the 1950s. Continuous upkeep and recent renovation makes this an ideal dormitory facility. However, we are seeking funds to construct a chef/house manager apartment in the basement to create space for additional students. Moreover, until recently the top floor of Highseas was used for administrative offices. We have now moved these offices out of Highseas and put in temporary bunk space, but we need to remodel this space for permanent student use. We request $5,000 towards this important project.

The shared living experience at Highseas has long been the hallmark of the Summer Student Program. This element of the program often provides students’ with their first opportunity to spend time with peers who are similarly motivated by a love of science. Students are able to learn from these peers whose aspirations match their own, yet who come from diverse