

“This is the real deal here. These students are doing real and useful research right along side the undergrads and graduate students and faculty in the labs.”

— Greg Owens, RAHI Academic Coordinator



Rural Alaska Honors Institute

presents

# RAHI-II Next Step

2010



## Campus Life

**Housing** Students live in a UAF residence hall with a RAHI roommate and full-time residence staff who supervise, tutor, and give support to students to live comfortably and to work efficiently. Students are divided into family groups of roughly eight each. Weeknight study hours are required and tutors are on hand to help with all courses.

**Recreation** Recreational offerings on weekends are available, with a fun, stress relieving midterm break weekend outing. Student Recreation Center, Wood Student Center, and Patty Pool are among campus recreational facilities available for use.

**Meals** Students eat at the campus dining facility.

**Graduation** A cap and gown ceremony graduation ends the program on July 14 followed by an evening banquet. UAF tuition waivers are awarded to the top two academic students in RAHI. RAHI-II *Next Step* students are eligible for a number of scholarship and academic recognition awards.

## Is RAHI-II *Next Step* for you?

Are you curious? Not afraid of hard work? Willing to really stretch your mind? Ready for a challenge? *Next Step* is all of that and more. You'll learn to be a competent and confident part of a lab team, taking part in the real day-to-day world of a university biological research lab. Methods you learn are also used in forensics, new drug discovery, biotechnology, and medical research. Come on – take the *Next Step*!

## For more information, contact

**Denise Wartes**, RAHI director, or

**Greg Owens**, RAHI Academic coordinator

Toll-free 1-800-478-6886

fyrahi@uaf.edu

www.uaf.edu/rahi

P.O. Box 756305, Fairbanks, AK 99775-6305

**Amanda Meyer**, RAHI-II *Next Step* coordinator

Voice 907-474-5680

Fax 907-474-5326

abmeyer@alaska.edu.

This publication was made possible by Alaska INBRE Grant Number 5P20RR016466 from the National Center for Research Resources (NCRR), and the Alaska SEPA, Alaska BioPREP Grant Number 5R25RR024282-02, both are components of the National Institutes of Health (NIH). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of NCRR or NIH. The University of Alaska Fairbanks is accredited by the Northwest Commission on Colleges and Universities. UAF is an affirmative action/equal opportunity employer and educational institution. Photos by Sue Hills except: left and cover by Dwayne Alexie Myers.

- A six week summer residence program on the University of Alaska Fairbanks campus
- Work in a research lab, learn genetics and molecular biology
- Integrated with RAHI

**Program dates: June 1 – July 15, 2010**

**Application deadline: March 31, 2010**



## Blaze Your Own Trail on the Frontier of Biology

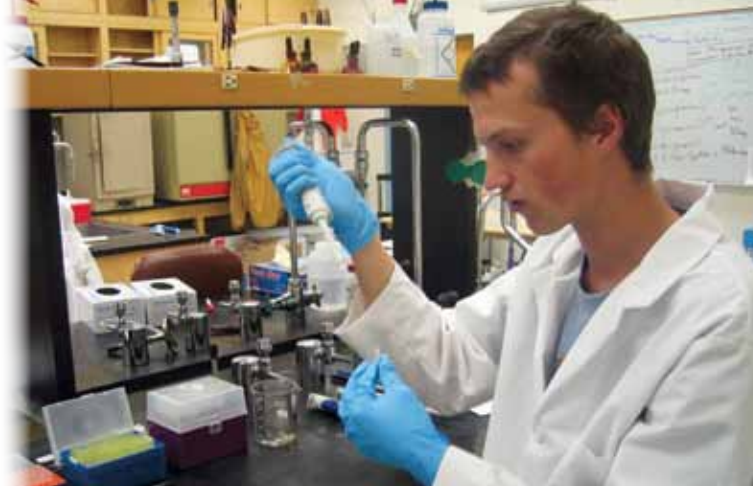
Most of the amazing advances of the 20th century were the result of scientific breakthroughs in physics; in the 21st century, discoveries in biology, especially genetics, will revolutionize our lives. From personalized medicine to understanding cancer and infectious diseases, modern molecular biology is the foundation. This course gives you the confidence and skills for undergraduate molecular biology research as you begin college rather than waiting until you are a junior or senior, making the material more interesting and relevant.

You will start with lab methods such as pipetting and work up to DNA extraction, electrophoresis, polymerase chain reactions, and cloning — backed up with the fundamental concepts of biochemistry and genetics necessary to understand the research. It is accelerated, concentrated, and fascinating.

Your new knowledge and skills will be put to use as you work alongside University researchers in one of the many biological labs at UAF. You will become part of the lab team — attending lab meetings, discussing results, taking part in the discoveries as they happen — all under the mentorship of an experienced graduate student mentor.

### History of Rural Alaska Honors Institute

RAHI was founded at the request of the Alaska Federation of Natives in 1982 to prepare rural and Alaska Native high school students for academic excellence and college success. RAHI-II *Next Step* was added in 2007 to give high school students in-depth knowledge of molecular biology and experience working in research labs to understand research and modern biology and to encourage students to major and graduate in the sciences.



“I initially simply wanted to come in order to gain college credits. When I got here I found that RAHI was a ton more than that! You do not truly know what college life is like until you have been there.”

— Timothy Sanner, RAHI II 2009 participant.

## RAHI-II *Next Step* Program Details

### Curriculum

UAF courses are offered for full university credit (7 to 11 credits). Completion of the RAHI-II *Next Step* course will give the student the skills for undergraduate research or work in a molecular biology research lab. The integrated, intensive RAHI-II *Next Step* course includes scientific writing, lab math, molecular biology theory and practice, and ethical discussions of the responsible conduct of research. Students may also choose either Alaska Native dance or swimming for exercise and to get to know the other RAHI students. Credits earned may also help satisfy some requirements for high school graduation, depending upon your school district policy. Course work loads are substantial. With small classes and individual research mentors, RAHI-II *Next Step* has a safety net to give individual help and encouragement to those who may struggle from time to time.

### To Apply

To apply, submit RAHI-II *Next Step* application, available at [www.uaf.edu/rahi](http://www.uaf.edu/rahi) or from your science teacher or school counselor. You will be notified by mid-April of the decision. Not everyone is accepted. To be successful you should:

- Be committed to earning a college degree
- Have a cumulative GPA of at least 3.0
- Finished your junior or senior year in 2010
- Be 18 or younger on August 1, 2010
- Read at or above grade level
- Have taken a previous RAHI chemistry class, high school biology, chemistry, or genetics
- Be curious and ready to stretch your mind!

### Student Safety

Responsibility to self and to each other, plus university and state law all combine to shape RAHI rules of conduct outlined in a student contract. Safety, comfort, and the need to ensure an atmosphere that supports learning are all objectives of this policy. Students are expected to attend classes, be prepared and on time, and participate in program social events. Students respect each other, instructors, and residence staff, as well as property. RAHI-II *Next Step* students work in labs with research-grade equipment and materials and will complete a lab safety training course.

**Permission to Leave Campus** Students may be checked out to leave the campus only with adults, approved in writing, in advance, by parents or guardians, and only at times that do not conflict with academic schedules. Students may not be checked out overnight or weekends.

### Schedule and Costs

Travel to Fairbanks is June 1st; orientation is June 2nd. The fast-paced RAHI-II *Next Step* course will begin after orientation on June 3rd. Students may not start RAHI-II late or leave early. No late starts! No early departures! If you quit and leave before completion you will not graduate or earn college credits.

**Costs** All program costs (about \$6,500+ per student for RAHI-II *Next Step*) including travel, books, supplies, room, tuition, board, and weekly stipend are provided through the program and are free to students accepted into the program.