

Tuesday, April 15, 2014

## Native American students get research opportunities through CCC program

Katherine Locke  
Reporter

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FLAGSTAFF, Ariz. - The Bridging Native Americans to Bachelor Degrees program at Coconino Community College (CCC) is looking to send three of its Native American students and their mentor to a regional medical conference in May and need sponsorships or donations.

Brittney Hornsby, Adam Bradley and Eleanor Miller get hands on laboratory experience and enhance their knowledge in biology-related scientific fields. The program is two semesters and includes summer research at [Northern Arizona University](#) (NAU). The National Institute of Health pays for the program with a five-year grant along with its partners Dine College, CCC and NAU. The grant requires that each student be a representative of a Native American tribe.

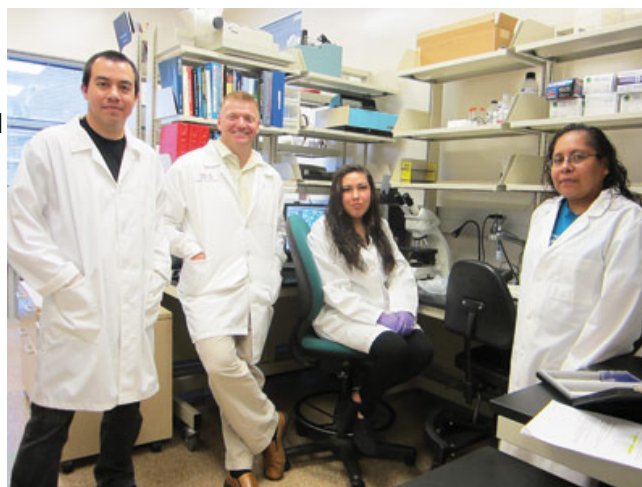
The students' mentor, Aaron Tabor, does research at Development Engineering Sciences (DES), a client of the Northern Arizona Center for Entrepreneurship and Technology (NACET) in Flagstaff. He studies platelet rich plasma (PRP). Essentially, he is hoping to find a way to take one's own blood cells and place the PRP on wounds to expedite wound healing. Hornsby, Bradley and Miller are involved in a pre-clinical model, meaning they take purchased blood from an outside company and run that blood through tests where it is concentrated down to a specific cell found in the blood, its platelet. In the lab the students learn how to make PRP, how to begin testing it and look for ways to use it in the human setting eventually.

"One of the advantages of PRP really is that it entails taking someone's own blood, their own cells and using it to heal their own tissue," Tabor said. "The idea would be it's completely free of some of the immune issues you might see with a transplant of organs or a transplant of tissue. The compatibility would be 100 percent if you're using you own cells, assuming there are no infections."

The students meet weekly with Tabor. They go on field trips, participate in conferences and complete laboratory work. And like a job they are paid with the grant money.

"We do a lot of community outreach," Miller said.

Currently the students are trying to fundraise for their travel expenses to attend a conference in Alaska May 31 through June 7 called Topics in Family Medicine, Hematology and Oncology. The conference is part of a program called University at Sea and takes place on an Alaskan cruise ship. Tabor said the conference fits into the students' project, which is blood research.



Pictured from left: Adam Bradley, Aaron Tabor, Brittney Hornsby and Eleanor Miller take a break from their reserach in the NACET lab. Katherine Locke/NHO

The Dean of Arts and Sciences at CCC, Dr. Ingrid Lee, approved the conference and Bradley said she supports the students' efforts.

The conference supports each of the students' individual goals for their future study.

Hornsby wants to study pediatrics but she said the program has further focused her goals, one of which is to work at St. Jude's Children's Research Hospital in Memphis, Tenn.

"After being in the lab and doing hands on research, I found interest in both cancer and infectious disease research," Hornsby said. "[The program] definitely benefits me going into nursing school or even just later on in life by knowing what I am doing instead of having to be trained and start from scratch. I definitely have an advantage."

Miller said she wants to study forensic science. She said knowing a lot of the people murdered on the Hopi reservation influenced her decision along with the time it takes someone to come investigate.

"Right now the Hopi reservation does not have any kind of people out there to do murders and there are murders out there that have not been solved," Miller said. "I want to be the first one to get someone out there for my people."

Bradley has varied interests and he has yet to choose just one. But he said his passion is science. Last summer he worked with the bio and thematic department where he used a computer process to analyze data. He learned how to program but the department studies infectious diseases and sequences entire genome of a disease, bacteria or even humans.

"When you sequence an entire genome your data is so huge," Bradley said. "They compare it to a reference they have. They use the computer software they have to try to locate mutations...it shows the relationship between these generations of infectious diseases so they can find out how they are spreading, where they're coming from and their resistance to treatments."

Tabor said each student has a lot of independence in the program. It is the student's responsibility to put into the program what they want and need to get out of it. That includes professional development, meeting with the community and fundraising for their conference.

"We give them the flexibility, we teach them a basic skill set but allow them to build on that," Tabor said. "In their own realm, all of them have contributed to this program significantly. I really want them to see the successes of their own invested work."

Hornsby said that independence and the other tasks of the program do not mean that school does not take a priority.

"It is education first," she said.

The students' advisor in the TRIO program at CCC is Paula Pluta.

"Without her we wouldn't have been so successful in getting where we are," Miller said.

Hornsby said support from the community is important.

"We are grateful for everything and we plan to give back when we reach our goals," Hornsby said. "We want to serve as motivation for everybody else out there. If we can do it anybody else can. You just have to have self-discipline, dedication and motivation."

After the conference the students will present on everything they learned and how they applied it in the lab in Flagstaff.

The students and Tabor would like to thank Dr. Robert Keller, president of DES, for the opportunity to use

the laboratory space at NACET.

More information about donating or sponsoring the students is available by visiting the Coconino Community College's Foundation page at <http://www.coconinofoundation.org/planned-giving.html>.

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