

# NDSU INBRE MONTHLY UPDATE

Year 2/ November 2015



## NOVEMBER HIGHLIGHTS

TRIBAL AIR QUALITY SAMPLING

NDSU INBRE TRAVELS TO DENVER FOR THE 11<sup>TH</sup> ANNUAL FALCON CONFERENCE

SURP PLANNING PROGRESSES

STUDENT SPOTLIGHT

SOCIAL MEDIA ANNOUNCEMENTS

## STUDENTS CONTINUE AIR QUALITY SAMPLES

Particulate matter sampling on the Tribal Air Quality (TAQ) study has continued on for the students at Nueta-Hidatsa-Sahnish College (NHSC). The team of students include: Eugenia Kirk, Ashley Hall, James Medeiros, Lee Voigt, Flo Laducer, Cocoa Cummings, and Caley Fox. The TAQ team collected their second round of samples this month. As winter approaches, the cooler temperatures tamper with the validity of the particulate matter samples. Sampling will cease during the winter months. In the meantime, the winter months will be used to conduct the analysis.

NHSC has partnered with NDSU Faculty and Staff to conduct the analysis. An NDSU senior is assisting the TAQ team in portions of the analysis by weighing the sampled filters using a microbalance scale. The microbalance scale is used in the analysis for its constant condition that provides reliable and accurate measurements of particulate matter captured in the filters. Through weighing and a series of calculations, the TAQ team at NHSC can determine what components are in their samples. In addition to these calculations, the TAQ team is looking to use the Scanning Electron Microscope (SEM) and X-ray diffraction analysis techniques to further support their findings in the initial analysis.

The TAQ team at NHSC are gaining experience, first-hand, of using research to foster air quality education and awareness in their community. Once the weather begins to warm back up, the students will resume with the next round of sampling. We look forward to the results to be determined in the spring!

## FALCON 2015 CONFERENCE

Pearl Walker-Swaney, Vanessa Tibbitts, and Allison Goldenstein traveled to Denver on November 6<sup>th</sup> for the 2015 First Americans Land Grant Consortium (FALCON) Conference. They presented oral and poster presentations on the results of the 2015 Summer Undergraduate Research Program (SURP), which was held this past summer at NDSU and UND. This conference gave NDSU INBRE team members an opportunity to listen to: student research from tribal colleges across the country, words of advice from the Little Big Horn College President, collaborating with water quality experts and programs, tribal college faculty presentations on engaging students in research and STEM, and funding opportunities through the National Institute of Food and Agriculture (NIFA).

Keynote speaker Dr. Sonny Ramaswamy, director of the National Institute of Food and Agriculture (NIFA), discussed the importance of agriculture, healthcare, environmental systems, and other disciplines. He emphasized how each of these arenas must work together to better our world i.e. including the lens of public health. The team also had the opportunity to attend workshops. Dr. Teresa Trumbly Lamsam offered a presentation titled, "What Social Media Skills Can Do for Outreach and Promotion". The INBRE team learned tips and tricks to enhance their social media presence. Other workshops included "Bares Bones of Extension" and "Building Research Capacity".

## STUDENT OPPORTUNITIES

### NIH Undergraduate Scholarship Program

- Offers scholarships to students from disadvantaged backgrounds
- Paid research support
- Will pay up to \$20,000 per academic year in tuition, educational expenses, and reasonable living expenses
- Deadline: March, 14, 2016
- More information at: <https://www.training.nih.gov/programs/ugsp>

### ND EPSCoR Graduate Student Research Assistantship

- Available to American Indian students who have participated in the Nurturing American Tribal Undergraduate Research and Education (NATURE) program
- Monthly stipend of \$1,620
- More information at: <http://www.ndepscor.nodak.edu/about/index.htm>

### Americans for Indian Opportunity Ambassadors Program

- More information at: <http://www.aio.org/>

### Science, Mathematics & Research for Transformation

- Stipend of \$25,000 to \$38,000 depending on degree pursuing
- Summer research internships
- Employment placement after graduation
- More information at: <https://smart.asee.org/>

### We R Native: Make a Difference in Your Community

- Have an idea to make a difference?
- Apply for up to a \$475 grant
- More information at: <http://wernative.org/MakingDifference.aspx>

### Mickey Leland Energy Fellowship

- 10 week summer program
- Gain knowledge from the Office of Fossil Energy
- Deadline: December 21, 2015
- More information at: <http://orise.orau.gov/mllef/>

### The Science and Engineering Apprenticeship Program

- Research opportunity with the Department of Navy
- Deadline: December 4, 2015
- More information at: <http://seap.asee.org/>

### Champions of Change

- Sponsored by the Center for Native American Youth
- Looking for young Native Americans who are creating positive change in Indian Country
- Deadline: January 11, 2016
- More information at: [http://cnay.org/Online\\_Application.html](http://cnay.org/Online_Application.html)

### December Deadline Scholarships!

- <http://jlvcollegecounseling.com/2015/10/27/scholarships-with-december-2015-deadlines/>

Some profound words on education from the Little Big Horn College President, David Yarlott (Crow):

“Sometimes, in an informal setting, we learn the most.”

He was talking about his dissertation project in which he interviewed elders in his community on indigenous knowledge. One of these elders was his grandmother. It was during these conversations with the elders, in non-classroom settings, where he learned valuable information about the relationship between stories, songs, ceremony, and respect for oneself. He stated this relationship like so,

“Thank the plants for helping you, praying for them to come back again and not consuming or using them entirely. By having respect for the plants, you have respect for yourself.”

He went on to say how this relates to the future generations of tribal communities—youth and identity. David relayed this information to the foster the learning of youth and the future generation by supporting the learning that can be accomplished in informal settings, recognizing where we fit into the bigger picture of ecology, and how tribal colleges are the entities opening the doors for students to impact their communities. He ended his talk with the following quote,

“Tribal colleges and universities are planting resiliency seeds for the future...the mission of them is simple, to succeed.”



David Yarlott, Little Big Horn College President.  
Photo courtesy of Pearl Walker-Swaney, 2015.

## SURP PLANNING PROGRESSES

The SURP planning committee has decided on a tentative agenda for the 2016 program. Modeling the program after an NSF funded Research Experience for Undergraduates (REUs), is going to be the desired structure for SURP 2016 (see model below). These modifications will help to engage the students more about developing research skills and will be fit into a 2 week program. The tentative activities in this year's program will include: journal club, research ethics/topics, indigenous research methodologies, research careers/grad school 101, research 101, professional development, research proposal workshops, luncheon & research seminar, lab tours, assigned labs, team building, and presentations from TCU representatives.

### ASM Undergraduate Research Fellowship (URF)

- Seeks highly competitive students who wish to pursue graduate careers (Ph.D or MD/Ph.D) in microbiology
- Will have the opportunity to conduct full time research at their home institutions
- Deadline: February 1, 2016
- More information at:  
<http://www.asm.org/index.php/fellowships-2/25-education/students/7827-asm-undergraduate-research-fellowship-asm-urf>

### Colleges Scholarships and Graduate Fellowships

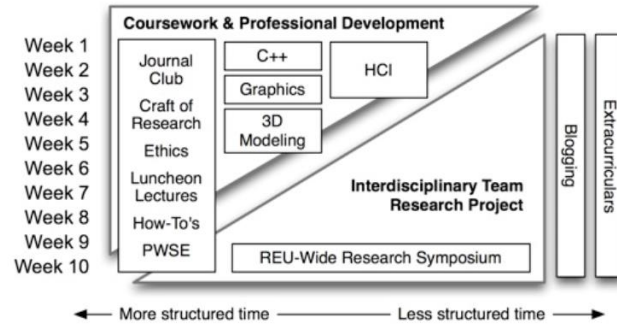
- Wide variety of scholarships for multiple academic backgrounds
- More information at:  
<https://www.fatomei.com/rss.xml>

### Graduate Horizons Workshop

- 4 day workshop for Native college students
- Prepares students for graduate school
- Partners with 45 universities and graduate/professional programs
- Deadline: February 3, 2016
- More information at:  
<http://www.graduatehorizons.org/apply>

### Maternal Child Health Careers/Research Initiatives for Student Enhancement-Undergraduate Program (MCHC/RISE-UP).

- 10-week summer public health leadership program
- For undergraduates in their senior or junior year
- Deadline: January 31, 2016
- More information at:  
<http://www.kennedykrieger.org/professional-training/professional-training-programs/riase-programs/mche-riase-up>



University – SPIRE-EIT, 2015)

(Iowa State

The SURP team has also investigated ideal dates for the 2016 program. Tentatively, the dates will be May 15–28<sup>th</sup>, 2016. Hosting the program at a time that doesn't conflict with Summer Semester classes or other REUs are items that the SURP team considered in choosing dates. More program information to come soon.

### STUDENT SPOTLIGHT – DERECK STONEFISH



Dereck Stonefish is the NDSU American Indian Public Health Resource Center (AIPHRC) Research Project Manager. Dereck has been involved in research for a number of years. He graduated with a bachelor's degree from SBC including Environmental Science and several associates' degrees. He was an intern with NASA at Goddard Space Flight Center in Greenbelt Maryland studying climate change and reindeer husbandry and at the

University of Minnesota's Materials Research Science and Engineering Center (MRSEC). He started his research career as an

undergrad at Sitting Bull College while doing coursework in the environmental science program. When asked about his start in research he said, "I was so interested in science that when I was approached to apply for an internship I did just that." His first internship, with MRSEC, he studied microscopy and thin films. He examined naturally occurring crystalline structures at  $10^{-6}$  and learned to use state of the art Environmental Scanning Electron Microscope (ESEM) and other instruments that are not accessible to many undergraduates at a tribal college. But this research experience is not the only reason Dereck was drawn to science. At a young age, he found a passion for science.

When he was young he knew he wanted to be a scientist. He was naturally inquisitive, which his mother supported. When he was interested in an animal she would help him locate the species in an encyclopedia so he could learn more about it. He reflected on an experience that led him to a passion for science. "When I was 11 I found a raccoon that had recently been hit by a car and the cubs were in the tree crying. I tried to call animal control in the city where I lived and they told me, "They will either die or survive, nature should run its course." I decided to take the surviving baby home with me. My mom was again supportive, and got me a baby bottle to feed it with warm cow milk. My dog at the time, Peaches, began to nurse the cub and kept it alive. It was then I learned that surrogate mothers could adopt other animals. I wanted to know how nature worked; that single experience led me toward science, animals, biology and ecology."

These experiences have carried Dereck to where he is today. He works as the AIPHRC Research Project Manager engaging and investigating the research capacity of North Dakota tribes. If there are research needs, he provides support and technical assistance in the construction and editing of research documentation such as data sharing agreements,

## GRANT OPPORTUNITIES

Walmart Foundation: Community Grant Program Deadline:  
December 31, 2015

- Provides grants to local organizations
- More information at:  
<http://giving.walmart.com/apply-for-grants/local-giving>

MCH Grant Deadline: January 15, 2015

- More information at:  
<http://www.ndhealth.gov/FamilyHealth/MCH-Grant-Application.htm>

## FACULTY AND STAFF ACHIEVEMENTS

- Dereck Stonefish and Pearl Walker-Swaney presented at the North Dakota Human Rights Coalition Annual Summit November 14, 2016.
- Pearl Walker-Swaney, MPH, will be attending the first session of the Bush Foundation Native Nation Rebuilders Program- Cohort 7 in December 2015.
- Dr. Paul Carson, MD, was awarded funding from Otto Bremer to operate the Center for Immunization Research and Education. More info at:  
<https://www.ndsu.edu/centers/immunize/>

research agendas, compliance sections of IRBs (Institutional Review Boards), or grant writing. As the Research Project Manager, he also does tribal engagement to re-establish working relationships between tribes and the state to advocate for further health resources to be available to the tribal communities of North Dakota.

Aside from academia, he and his wife, Patty Stonefish, founded Arming Sisters Reawakening Warriors (ASRW), which is targeted toward self-healing and is a program that can be brought to any community. They use Martial Arts as a way to re-empower and reawaken the spirit to feel empowered. The course itself teaches you how to gain control of a harmful physical situation using a joint lock or pressure point. They instruct using lectures and open forums to have participants start thinking of how to apply these physical techniques for practical purposes. They believe that our

tribes and nations can be healed through self-healing. He states, "With true commitment from within, the curriculum addresses self-healing in multiple facets." For more information on ASRW, go to [www.asrw.co](http://www.asrw.co)

Though he still has a passion for science, his focus has shifted towards public health, specifically tribal health. He strongly believes that education opens doors for our people and that can start at tribal colleges, hence, a growing interest he has to give back to the community as an educator. Someday, he hopes to teach science or science related courses and blend it with his passion of healing our communities. Keep your eye out for Dereck Stonefish, as he continues to work and give back to our communities!

## SOCIAL MEDIA ANNOUNCEMENTS

With new tips gained from FALCON, the INBRE team hopes to expand the reach of their Facebook and Twitter pages. Please keep checking these pages for more great updates! INBRE now has a student opportunities page featured on the INBRE website! This section will be updated monthly to ensure that interested students have sufficient time to apply for these programs. The student opportunities page can be found at this address:

[https://www.ndsu.edu/publichealth/inbre/inbre\\_student\\_op/](https://www.ndsu.edu/publichealth/inbre/inbre_student_op/)

**Facebook address:** <https://www.facebook.com/groups/ndsuinbre/>

**Twitter handle:** @nsduinbre

If you would like to submit an opportunity, story for student spotlight, or have suggestions on what to include in the next monthly update, please contact us!

WE VALUE YOUR INPUT!

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