Tribal Colleges Consortium on Genomics Training (TCCGT)

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Understanding Genomics as an Strategy for Sovereignty

Indigenizing Genomics
PREVIOUS MEETINGS AND PRESENTATIONS

• Summer 2016, NHGRI hosted the Short Course in Genomics at NIH campus in Bethesda MD. Participants included faculty from K-12, community colleges and tribal colleges.

• In November 3, 2016. First Americans Land-Grant Consortium (FALCON) in Albuquerque, NM.


• November 3, 2017. TCCGT workshop at FALCON preconference.

• June 28-29, 2018. NHGRI/TCCGT workshop at NIH, Bethesda.

• September 27-28, 2018. Workshop to discuss genomics curricula in Tribal colleges. University of Colorado
November 3, 2017. TCCGT workshop at FALCON preconference.
WHY TRIBAL COLLEGES?

• Most tribal colleges are integrated to tribal communities and responds to community needs.

• First step for full degree and research careers for tribal students.

• Tribal colleges’ goal is to reinforce identity and sovereignty at the same time providing career opportunities to tribal students.

• Forum to discuss ethical and cultural issues regarding DNA and biotechnology.
WHY A CONSORTIUM?

• Tribal colleges constitute a priority for the dissemination of the benefits of genomic tools for tribal communities and for a solid training of future university professionals and researchers.

• Genomics training can be aligned to tribal pragmatism, cultural believes, strengthen identity and ideals of tribal sovereignty, which are cultivated in tribal colleges.

• The consortium will support existing educational resources such as the NHGRI’s Short Course in Genomics, Summer internship for INdigenous peoples in Genomics (SING), and the American Indian and Native Alaska Genetics Resource Center (NCAI-AINAGRC) to train tribal college students.
OVERAL GOAL

• Tribal Colleges Consortium on Genomics Training (TCCGT) will develop a network of 1994 Land Grant tribal colleges and universities in collaboration with agencies and institutions.

• The purpose of this network is the advancing of genomics education taking in account indigenous values.
Tribal Colleges Consortium on Genomics Training (TCCGT)

Diné College
Frederick Boyd, Ph.D., Science Faculty.

Northwest Indian College
Rachel Arnold, Ph.D., Science Faculty.

Sitting Bull College
Francis Onduso, Ph.D., Ecology Faculty.

Tohono O'odham Community College
Adrian Quijada, Ph.D., Science Faculty.

Turtle Mountain Community College
Krystal Tsosie, MPH, MA, Research Co-Investigator.

United Tribes Technical College
Mandy Guinn Ph.D., Science Faculty.
Northwest Indian College (10K)

This project will incorporate two MINion handheld DNA sequencers into classrooms and/or capstone projects at Northwest Indian College, enabling students to directly engage in the DNA sequencing process and work with bioinformatics data.
United Tribes Technical College (10K)

United Tribes Technical College will develop a seminar series that will draw genomics speakers from outside the region. This would offer students an opportunity to meet the speaker and also offer faculty the opportunity to explore collaborative endeavors with other researchers.
TCCGT/NHGRI supported projects

Turtle Mountain Community College (10K)

Turtle Mountain Community College in collaboration with other TCUs and institutions will develop online curricular materials for teaching genomics at remote Tribal colleges that are culturally-relevant to indigenous peoples.

In addition, the workshop group will elaborate a plan of action to assess the scope of genomics in STEM education in the 1994 Land Grant 32 tribal colleges.
Survey of Available Genomics Courses at Tribal Colleges and Universities (TCUs)

Kylene G. Martell; Raeanne C. Henry; Krystal S. Tsosie
1) Turtle Mountain Community College, Belcourt, ND.
2) Vanderbilt University, Nashville, TN

Abstract

Background and Objectives

Results

Table 1: Courses and degree offerings at 36 TCUs

Conclusions

References

Kylene G. Martell and Raeanne C. Henry (TMCC) presenting poster on genomics education at TCUs (INBRE 2018)
Tribal Colleges Consortium on Genomics Training

OFFERS

GENETICS COURSE

OFFERS BIO OR LIFE SCIENCE DEGREE

Tohono O’odham (AS)
Sitting Bull (AS)
Blackfeet Community (AS)
Fort Peck Community (AS)
College of Menominee (AS)
Sinte Gleska (AS)
Oglala Lakota (AS)

Haskell Indian Nations
United Tribes Technical
Lac Courte Oreilles

Diné College (BS)
Salish Kootenai (BS)
Navajo Technical (BS)
Northwest Indian (AS)
HEATMAP BASED ON FALL 2017 ENROLLMENT

darker red indicates higher enrollment
IMMEDIATE GOALS

The First Americans Land-Grant Consortium (FALCON)
14th Annual Conference
November 2-5, 2018, Minneapolis.

TCCGT concept paper for Tribal College Journal

Research paper assessing the scope of genomics in STEM education in the 1994 Land Grant TCUs.


TCCGT Governance Meeting. Spring 2019

Culturally Sensitive Native Data Science Undergraduate Research Experiences (CUREs).
Summer 2019