The newly created OSU Office for the Advancement of American Indians in Medicine and Science (AAIMS) is partnering with major Oklahoma tribes to actively recruit native American students in to the STEM (science, technology, engineering and medicine) fields of medical school, allied health and nursing. 

“The primary goals of the AAIMS are to recruit and retain students into our medical school and related healthcare programs to better serve native and non-native people in rural Oklahoma,” said Native American Dr. Kent S. Smith, Ph.D. “As an integral part of our commitment to train physicians, OSU Center for Health Sciences has broadly stepped up recruiting programs in rural Oklahoma. We discovered a pronounced level of interest among Native American students. We want to seize that interest, nurture it and inspire these outstanding students to pursue health-related careers.”

“The culture of these tribes is an ideal fit with the mission of the OSU College of Osteopathic Medicine to provide physicians for rural and underserved areas of Oklahoma,” said Dr. Kent Smith, Associate Dean for the Office for the Advancement of American Indians in Medicine and Science, Associate Professor of Anatomy. “If we can encourage more Native American students to pursue medicine and the sciences we are confident MANY will take that training back to serve their hometown communities.”

The AAIMS office will encourage students’ success by providing career networking and job placement. In addition, AAIMS is committed to helping medical students find medical residency opportunities in locations that will encourage and allow them to serve near their hometowns.

Nationwide, 51 percent of American Indians graduate high school. In Oklahoma, those numbers slip slightly better with a 63 percent graduation rate, but only 2.5 percent of these students enter the medical or science fields.

“We believe a lack of professional American Indian mentors in science and medicine is one of the reasons for the low interest in those areas of study. Our program is connecting excellent Native American faculty, graduate-students and tribal leaders with high school students to become those mentors,” continued Dr. Smith who is Cherokee, Chickasaw and Choctaw.

The AAIMS office is reaching out to tribal leaders to develop partnerships and programs that showcase how native culture and traditions can be woven into science and medicine teaching programs. A key goal of AAIMS is to become a resource for the tribes to help them retain health and medical citizens. The Chickasaw, Cherokee and Choctaw tribes are actively working with the AAIMS office with the hope of engaging all 39 of the federally recognized tribes in the program.

“Native American students are a rich source of healthcare professionals eager to live and work in medically underserved areas of Oklahoma populated by tribal communities,” noted Smith. “We offer students a career path that allows them to serve their tribes in meaningful ways and remain close to their hometowns.”

The Native Explorer program summer internship program at OSU Center for Health Sciences is reaching out to Native American high school juniors and seniors to ignite an interest in the medical and science careers. STARS – Science Training and Research Students program – intensely exposes Native American high school students to the medical and biosciences fields and matches them with cultural mentors to guide them through the curriculum for the summer.

Cultural mentors are American Indian faculty, graduate and medical students who help interns explore pathways to medical school, biomedical research and other health related fields. 

The Native American students program combines anatomy, vertebrate paleontology, medicine, and traditional ways and culture. In a remote region of the country, a prospective future doctor or scientist carefully searches for clues of death looking for signs of disease, injury, or trauma. But instead of a scalpel, this future physician or scientist holds a small brush to gently sweep away layers of natural deposits left by millennium upon millennium of time. This classroom is far from academic halls, and libraries and instead is located in remote, desolate regions of the country. The class is OSU-CHS’s Native Explorers, the prospective future doctors and scientists are Native American students on a two-week expedition to active paleontological field sites in the western and Panhandle counties of Oklahoma, Nevada, New Mexico, Arizona, Texas or Utah.

“Native Explorers was created to intrigue American Indian students about the fields of medicine, natural sciences, and to weave American Indian cultural experience. Participating students earn three hours of geology college credit through OSU’s Outreach program. Several past participants of the Native Explorers program have completed their undergraduate degrees in STEM fields. A few of these graduates are pursuing graduate degrees in science and a few are working for tribal museums in Oklahoma and South Dakota. Before the team begins the scientific journey, they do preparatory classwork in such subjects as comparative osteology, vertebrate paleontology, paleo-histology and proper field techniques. Although each expedition merits the collection of data publishable in peer-reviewed journals, the data collected from the 2012-2013 expeditions, is being sorted and analyzed and will be published soon. Below are results that started from data collected during the 2010 and 2011 expeditions.

During the 2010 expedition to south central Utah, they collected data on observations of a unique encounter with a gopher snake (Pituophis clementsii) hunting in the nests of cliff swallows ( Petrochelidon pyrrhonota). The swallow nests occurred beneath a rocky cliff in a box canyon of Ferron Creek near the town of Ferron, Utah. The students observed the extraordinary climbing ability of the gopher snake and nest-site selection and construction ability of the swallows. See Czaplewski et al., 2012. 

The 2011 expedition to Cimarron County, Oklahoma, the team visited a rock shelter where fossil remains of late Pleistocene vertebrates were excavated from in 1940. We collected crucial data that allowed us to complete a study on these fossil vertebrates (Branta Canadensis, Mammutthus cf. M. columbi, Glyptotherium, Neotoma, Lepus, Sylvilagus, Vulpes velox, Canis latrans, Canis lupus, cf. Lynx, Equus cf. conversidens, Equus cf. noibratiensis, Camelops bextensis, Antilocapridae, and Bison). This study provided an incredibly rare record of late Pleistocene swift fox, Vulpes velox. Excavated from a mammoth task, yielded a radio-carbon, age of 23,980 ± 130 years before present. See Czaplewski and Smith 2012.

Recruitment

Program Combines Lesson in Anatomy, Vertebrate Paleontology, Medicine, and Traditional Ways and Culture

In a remote region of the country, a prospective future doctor or scientist carefully searches for clues of death looking for signs of disease, injury, or trauma. But instead of a scalpel, this future physician or scientist holds a small brush to gently sweep away layers of natural deposits left by millennium upon millennium of time. This classroom is far from academic halls, and libraries and instead is located in remote, desolate regions of the country. The class is OSU-CHS’s Native Explorers, the prospective future doctors and scientists are Native American students on a two-week expedition to active paleontological field sites in the western and Panhandle counties of Oklahoma, Nevada, New Mexico, Arizona, Texas or Utah. The program combines anatomy, paleontology and medicine with America Indian cultural experience. Participating students earn three hours of geology college credit through OSU’s Outreach program.

Several past participants of the Native Explorers program have completed their undergraduate degrees in STEM fields. A few of these graduates are pursuing graduate degrees in science and a few are working for tribal museums in Oklahoma and South Dakota. Before the team begins the scientific journey, they do preparatory classwork in such subjects as comparative osteology, vertebrate paleontology, paleo-histology and proper field techniques. Although each expedition merits the collection of data publishable in peer-reviewed journals, the data collected from the 2012-2013 expeditions, is being sorted and analyzed and will be published soon. Below are results that started from data collected during the 2010 and 2011 expeditions.

During the 2010 expedition to south central Utah, they collected data on observations of a unique encounter with a gopher snake (Pituophis clementsii) hunting in the nests of cliff swallows ( Petrochelidon pyrrhonota). The swallow nests occurred beneath a rocky cliff in a box canyon of Ferron Creek near the town of Ferron, Utah. The students observed the extraordinary climbing ability of the gopher snake and nest-site selection and construction ability of the swallows. See Czaplewski et al., 2012.

The 2011 expedition to Cimarron County, Oklahoma, the team visited a rock shelter where fossil remains of late Pleistocene vertebrates were excavated from in 1940. We collected crucial data that allowed us to complete a study on these fossil vertebrates (Branta Canadensis, Mammutthus cf. M. columbi, Glyptotherium, Neotoma, Lepus, Sylvilagus, Vulpes velox, Canis latrans, Canis lupus, cf. Lynx, Equus cf. conversidens, Equus cf. noibratiensis, Camelops bextensis, Antilocapridae, and Bison). This study provided an extremely rare record of late Pleistocene swift fox, Vulpes velox. Excavated from a mammoth task, yielded a radio-carbon, age of 23,980 ± 130 years before present. See Czaplewski and Smith 2012.