



# SING

**SING SEATTLE 2018**

**Summer internship for INDigenous peoples in Genomics**

**July 22-28, 2018**

**Seattle, Washington**

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UNIVERSITY *of* WASHINGTON

## Faculty:

### Matthew Zach Anderson



Matt is an assistant professor at The Ohio State University with a joint appointment in the Microbiology Department in the College of Arts and Sciences and the Department of Microbial Infection and Immunity in the College of Medicine. He completed his Ph.D. in the Genetics Department at Stanford University followed by postdoctoral positions in Judith Berman's lab at the University of Minnesota and Richard Bennett's lab at Brown University. His research interests center on the evolution of eukaryotic microbes that are relevant to human health. A large contingent within his lab investigates how genetic variability contributes to phenotypic diversity in the most clinically relevant fungal pathogen to humans, *Candida albicans*. Another major focus of his lab is to describe and understand how the eukaryome, the eukaryotic microbes living on or within their host, contribute to health.

### Jessica Dawn Bardill



Jessica Bardill, PhD, is an Assistant Professor in the Department of English at Concordia University. She previously served as an Assistant Professor of Native American Literature at East Carolina University, was a Chancellor's Postdoctoral Fellow in American Indian Studies at the University of Illinois, and a Lecturer in the Thinking Matters Program at Stanford University. Alongside a range of literatures from Indigenous communities, she engages with the possibilities of biological sciences and policy, with particular emphasis on genetics and genomics by, for, and with Indigenous peoples. Since 2011, she has helped to lead the Summer internship for Indigenous peoples in Genomics (SING) program in the U.S. as well as in Aotearoa in 2016, and is working with collaborators at the University of Alberta and Simon Fraser University to expand SING to Canada in 2018. She is a contributor to the *American Indian and Alaska Native Genetics Resource Guide* of the National Congress of American Indians, and

has published work in *Science*, *International Indigenous Policy Journal*, the *Handbook of Biology and Society*, and *American Journal of Bioethics*. She received her BA in English and biology from Emory University and her PhD in English from Duke University.

### Lemanuel L. Bitsoi



LeManuel Lee Bitsóí (Diné), EdD, is a critical ethnographer and bioethicist who currently serves as Chief Diversity Officer for Stony Brook University, where he leads efforts to institutionalize diversity, equity and inclusion for all campuses of the University. Prior to Stony Brook, Dr. Bitsóí served in administrative and faculty positions at Harvard, Dartmouth, Georgetown and Rush University Medical Center in Chicago. Dr. Bitsóí serves on several national boards and associations, including the National Advisory Council for the National Conference on Race and Ethnicity and the National Research Advisory Council for the U.S. Department of Veterans Affairs. Dr. Bitsóí earned a bachelor of science degree with honors from the University of New Mexico (1995) and a master of education degree from Harvard University (1998). Dr. Bitsóí earned

a doctorate from the University of Pennsylvania (2007) where his research focused on access and equity issues for Native Americans in higher education, a subject upon which he continues to publish. Dr. Bitsóí has devoted his career to broadening the participation of underrepresented, underserved and unmentioned students to become scientists, researchers and scientifically-informed community members. Dr. Bitsóí has been honored and recognized for his diversity and inclusion work by various organizations including the Navajo Nation and Harvard Medical School.

### **Deborah Bolnick**



Deborah is an Associate Professor of Anthropology at the University of Connecticut. Her research uses DNA from ancient and contemporary peoples, in conjunction with other lines of evidence, to help reconstruct population histories in the Americas. Deborah works closely with Indigenous partners in the southern United States, and she explores how sociopolitical forces, historical events, and social inequities shape human genetic and epigenetic diversity, as well as human biology more broadly. She also studies the methods and applications of genetic ancestry testing, and how ancestry tests influence and are influenced by contemporary understandings of race, ethnicity, gender, and identity. Through her work, Deborah strives to help integrate intersectional, historically marginalized, and decolonial perspectives into science. She received her Ph.D. in Anthropology from the University of California at Davis, and has been a SING faculty member since 2013.

### **Katrina G. Claw**



Katrina (Diné) is a postdoctoral research fellow at the University of Washington in the Department of Pharmaceutics. Dr. Claw also works with the Northwest-Alaska Pharmacogenomics Research Network. Dr. Claw is a 2015 Ford Foundation postdoctoral research fellow and currently a Ruth L. Kirschstein National Research Service Award (NRSA F32) recipient. She obtained her BS in biology and BA in anthropology at Arizona State University; her PhD in genome sciences at the University of Washington in Seattle, WA in 2013, where she was also a National Science Foundation pre-doctoral fellow. Her research interests include human genetics/genomics, pharmacogenomics, and the ethical, social, and legal (ELSI) implications of genomic research with American Indian/Alaska Native (AI/AN) and other indigenous populations around the world. Dr. Claw's current projects focus on hepatic variation, tobacco/nicotine pharmacogenomics, and the perspectives of genetic research in American Indian communities. She is Diné (Navajo) and grew up on the Navajo Nation in Many Farms, Arizona. In her spare time, she enjoys reading, backpacking adventures, and traveling. Ahéhee'.

### **Michael DeGiorgio**



Mike is an Assistant Professor in the Departments of Biology and Statistics at Pennsylvania State University. He completed a Ph.D. in Bioinformatics at the University of Michigan. He was subsequently a National Science Foundation postdoctoral fellow at the University of California at Berkeley, and is currently an Alfred P. Sloan Foundation research fellow. His research is in biological data science with applications to evolutionary genetics questions. Specifically, his interests include human evolutionary genetics, statistical population genetics, and mathematical phylogenetics.

### **Keolu Fox**



Keolu Fox (Kānaka Maoli) is a University of California Chancellors Postdoctoral Fellow at the University of California San Diego (UCSD), School of Medicine and the Salk Biological Research Institute. His work focuses on using genome technologies to investigate the molecular events involved in metabolic disease. His research interests include genome sequencing technology, genome editing, and Indigenizing biomedical research.

### **Francine Gachupin**



Francine C. Gachupin, PhD, MPH, is Associate Professor, Department of Family and Community Medicine, College of Medicine, University of Arizona. Dr. Gachupin is a tribal member of the Pueblo of Jemez in New Mexico. She received her Doctorate from the University of New Mexico and her Master of Public Health in Epidemiology from the University of Washington. Her doctoral dissertation was on population genetics of Athabascan-speaking populations in the American Southwest. She currently studies chronic diseases and related behavioral risk factors. She has worked at four separate tribal based epidemiology centers – Portland Area, Aberdeen Area, Albuquerque Area and Navajo Area. She is well known for her expertise in human subjects protection. She was former Chair of the Portland Area Indian Health Service (IHS) Institutional Review Board (IRB), former co-Chair of the National IHS IRB, former member of the Secretary's Advisory Committee on Human Research Protections (SACHRP), and former Manager of the University of New Mexico IRB. She currently serves on both the UA and Montana Wyoming Tribal Leaders IRBs.

### **Nanibaa' Garrison**



Dr. Garrison is a faculty member in the Treuman Katz Center of Pediatric Bioethics at Seattle Children's Research Institute, and an assistant professor of Pediatrics in the Division of Bioethics at the University of Washington. Dr. Garrison earned her Ph.D. in the Department of Genetics at Stanford University and completed a postdoctoral fellowship at the Stanford Center for Biomedical Ethics and the Center for Integration of Research on Genetics & Ethics at Stanford University. Dr. Garrison's research focuses on the ethical, social, and cultural implications of genetic and genomic research in Indigenous communities. She is the recipient of an NIH K01 career development award to explore perspectives of tribal leaders, physicians, scientists, and policy makers on genetic research with tribes. Using community based research approaches, she engages with tribal communities to develop policies and guidance for tribes. Dr. Garrison has been a faculty member with the Summer internship for INdigenous peoples in Genomics since it began in 2010.



### **Māui Hudson**



Associate Professor Maui Hudson (Whakatohea, Ngaruahine, Te Mahurehure) is an interdisciplinary researcher, based in the Faculty of Maori and Indigenous Studies at the University of Waikato. He works at the interface of mātāuranga Māori and Science and has worked in variety of areas including traditional Māori healing, Maori entities and the innovation sector, as well as genomic research and biobanking with Maori. He led the project that developed the Te Mata Ira Guidelines for Genomic Research with Maori and the He Tangata Kei

Tua Guidelines for Biobanking with Maori. He is part of the Senior Leadership Team for Genomics Aotearoa and leads a new project to develop Guidelines for Genomic Research on Taonga Species (indigenous flora and fauna).

### **Emilia Huerta-Sanchez**



Emilia is an Assistant Professor in the Department of Ecology and Evolutionary Biology at Brown University, and before that she was an Assistant Professor at the University of California Merced. She received her PhD in Applied Mathematics from Cornell University under the supervision of Carlos Bustamante and Rick Durrett. During her PhD work, she modeled evolutionary processes using stochastic models. After her PhD, she was a VIGRE Visiting Assistant Professor in the Department of Statistics at the University of California Berkeley for one year, and after that she joined the laboratory of Rasmus Nielsen as an NSF postdoctoral fellow. Her current research interests involve detecting and characterizing natural selection in human populations, estimating human demographic histories and improving methods for the analysis of next generation sequencing data.

### **Ripan Malhi**



Ripan is Richard and Margaret Romano Professor at the University of Illinois at Urbana-Champaign with affiliations in Anthropology, Animal Biology, and the Carl R. Woese Institute for Genomic Biology. His research interests include using DNA analysis to infer the evolutionary history of Native Americans. Prior to his position at UIUC, he co-founded and served as the CEO of Trace Genetics, Inc., a biotechnology company located in the greater San Francisco area. Ripan received his Ph.D. in Anthropology from the University of California at Davis.

### **Angela Neller**



Angela Neller is the Curator for the Wanapum Heritage Center in Washington State. She has 29 years of experience managing archaeological, ethnographic, and archival collections. Angela provides technical expertise in repatriation matters to the Wanapum Band of Priest Rapids, a non-federally recognized Indian Group. As a Native Hawaiian, Angela is interested in the relationship of material culture and history to the identity of native peoples. She values objects as touchstones to generations past as they help to inform the present and future.

### Pilar Ossorio



Pilar N. Ossorio, Ph.D., JD, Professor of Law and Bioethics at the University of Wisconsin, is co-director of the Neurobiology and Law Program at UW, leads the ethics program at the UW-associated Morgridge Institute for Research, leads the ethics core of UW's Big Data 2 Knowledge Center, and directs UW's Research Ethics Consultation Service. She has served on numerous advisory committees for the National Institutes of Health, the FDA, the National Academies, Health Canada, and the White House.

### Kim Margaret TallBear



Kim TallBear is Canada Research Chair in Indigenous Peoples, Technoscience & Environment, Faculty of Native Studies, University of Alberta. She is the author of *Native American DNA: Tribal Belonging and the False Promise of Genetic Science*. She founded the Indigenous Science, Technology, and Society research group at the University of Alberta, which is working with scholars across Canada and globally to foreground self-determined Indigenous involvement in scientific research and technology development projects. Dr. TallBear is an organizer and faculty member for SING Canada, which will be held July 29-Aug 4, 2018 at Simon Fraser University in Vancouver. Building on lessons learned about how settler states engage in biological colonialism, Dr. TallBear also studies the colonization of Indigenous sexuality, including

compulsory monogamy. She combines anthropological approaches with community-based research, arts-based research, and performance. She co-produces the Edmonton decolonial sexy storytelling show, *Tipi Confessions*, modeled on the popular Austin, Texas show, *Bedpost Confessions*. *Tipi Confessions* has also appeared in Ottawa, Saskatoon, and Vancouver. Shows are planned for Toronto, Seattle, and New Zealand. Dr. TallBear is a citizen of the Sisseton-Wahpeton Oyate. Follow her work and that of her research group at [www.IndigenousSTS.com](http://www.IndigenousSTS.com). She also blogs at [www.criticalpolyamorist.com](http://www.criticalpolyamorist.com). You can follow her on Twitter @KimTallBear and @CriticalPoly.

### Maile Taulii



Dr. Maile Taulii received her PhD in Health Services, with an emphasis in Public Health Informatics and Public Health Genetics from the University of Washington, where she also completed her Master's degree in Public Health. A primary research focus for Dr. Taulii is the utility and validity of health information for racial minorities. Her research is related to perceptions of bio-banking for research among Native Hawaiians. Dr. Taulii is an Assistant Professor of Native Hawaiian and Indigenous Health at the University of Hawaii where she brings cultural, ethical, and community-oriented perspectives to the instruction of public health.

In 2016, Dr. Taulii was awarded the University of Hawaii, Board of Regents Excellence in Teaching Award. Dr. Taulii's federal commitments include serving as a member of the National Advisory Committee on Racial, Ethnic, and Other Populations, US Census Bureau.

## Phillip Wilcox



Dr. Phillip Wilcox is an indigenous Māori researcher from Aotearoa/New Zealand (NZ) who works in genomics of human health and various NZ-relevant agronomic species, as well as developing culturally-informed guidelines and processes for engaging Māori communities in technologies such as genetic modification and genomics. He received his PhD from North Carolina State University in 1995, after which he returned to NZ. In 2001 he started the Te Arotūruki initiative, which developed processes for scientists to engage with Māori communities regarding genetic modification. His current research projects are mostly Māori-focused, including working with his tribe, Ngāti Rakaipaaka, in a health-related genetics project. He currently teaches statistics and quantitative genetics at the University of Otago in New Zealand. He is also involved in the recently established Genomics Aotearoa initiative, which is developing an

indigenous genomics platform and includes (a) culturally informed guidelines for genomics research on indigenous NZ biota, (b) a variome resource for Māori and other Polynesians for application in health, and (c) Māori-informed breeding objectives in livestock breeding.

## Joe Yracheta



Joseph Yracheta is an Indigenous American and a working researcher at the Lakota community-based company called Missouri Breaks Industries Research, Inc. (MBIRI). Currently enrolled in the DrPH program at Johns-Hopkins, he studies the intersection of Environmental Health and Genomics. He graduated from the University of Washington with a Master's of Pharmaceutics in 2014. He also graduated with a B.S. from Loyola University-Chicago and began his science career at the University of Wisconsin-Madison. Mr. Yracheta feels that in the burgeoning field of Precision Health and Genomics, all Amerindigenous people must engage to ensure return of economic, educational and health benefit. He feels that the most important outcome of his work would be to encourage & support the sustainability of Indigenous culture and sovereignty via the STEM fields. Mr. Yracheta's origins are from Mexico (P'urhepecha and

Tarahumara Indians). His wife and children are enrolled members of the Cheyenne River Sioux Tribe (CRST).

## Teaching Assistants:

### Sam Archer



Sam Archer is a graduate student in Dr. Deborah Bolnick's lab, studying anthropological genetics, epigenetics, and feminist and queer science studies. She is currently writing her master's thesis on critical indigenous, feminist, and queer perspectives on ancient DNA and bioarchaeological technologies. She received a bachelor's degree in anthropology, women's and gender studies, and religious studies in 2014 from the University of Texas at Austin. After completing her master's degree at UT-Austin this August, she will begin the PhD program in anthropology at the University of Connecticut.

### Rene Begay



Rene Begay is Diné (Navajo) from Salina Springs, Arizona. Her maternal clan is Big Water, born for Red Bottom People Clan, her maternal grandfather's clan is Red Running into Water and her paternal grandfather's clan is Towering House. She received her B.S. in Biology in 2012 from the University of Arizona in Tucson, AZ. She obtained her M.S. degree in Clinical Science at the University of Colorado Anschutz Medical Campus in Aurora, Colorado. Her research focused on characterizing family cardiac clinical characteristics and seeking novel dilated cardiomyopathy gene variants in large family cohorts using next-generation sequencing. Followed recapitulating the human phenotype in zebrafish models. Currently, she is a Professional Research Assistant at the Centers for American Indian and Alaska Native Health (CAIANH) in Aurora, CO working in public health areas of early childhood programs, health services research, substance use, and health prevention outreach in Denver, CO. Her ultimate goal is to become a physician-scientist studying cardiovascular disease and genetics.



## Participants:

### Cecelia Ann Brooks



Cecelia is a member of the Maliseet community of St. Mary's and comes from a family of mixed indigenous heritage. Cecelia completed her B.Sc. in Chemistry then worked as the manager of organic extractions department of an environmental laboratory before moving onto managing a municipal water and wastewater laboratory. Cecelia served as the Science Director for the Maliseet Nation Conservation Council where she began the process of working with Elders and Land Users to develop an Indigenous Knowledge Study Guide. In 2010 Cecelia began

working for the New Brunswick Chief as the Director of Research and Indigenous knowledge and continued her work developing an IK Study Guide. The New Brunswick Mi'gmaq Indigenous Knowledge Study Guide (NBMIKS) was developed through extensive engagement with Elders and Knowledge Holders from both the Maliseet and Mi'gmaq communities over the course of 4 years. She has recently taken on the role as the chair of the Mi'gmawé'l T'plutaqnn Repatriation Committee. She applies her entrepreneurial skills to her family run Non-Timber Product Company (Soul Flower Herbals) where they produce body care and wellness products using extracts from NB forests and fields. Soul Flower Herbals has been at the farmers' market in Fredericton for 11 years.

### Karen Carlson



Karen obtained her B.S. in Biological Sciences with honors at the University of Alaska Anchorage in 2015. During her time as an undergrad, she was involved in the Alaska Oregon Research Training Alliance summer program at the University of Oregon studying the gut microbes in zebrafish and successfully completed an honor's thesis in Dr. Jonathan Stycek's lab focusing on the intracellular pH of goldfish ventricular cardiomyocytes after exposure to extracellular acidosis. She was able to succeed through the support and encouragement of her mentors. Her interest in research led her to pursue a Master's at UAA studying the gut microbial community of arctic ground squirrels in Dr. Khrystine Duddleston's lab. Although, her interest in her area of study goes beyond what a Master's degree requires; therefore, to go into the depth of knowledge that she desires, she is currently in the process of switching from her Master's to a PhD program at the University of Alaska Fairbanks. When she is not busy in the lab, she enjoys spending time with friends and her son.

### Jocelyn Chee-Santiago



'Galaa bi, ne xquenda bidiba ra' ti bidaani', I am Binnizá (the cloud people/zapoteco). I was born in Union Hidalgo, a small town located in Oaxaca, in the Southwestern Mexico. I work as a volunteer in Galeria Gubidxa in Union Hidalgo during holidays There I work with kids about literature, and a Little bit of Science.

I am a member of the Undergraduate program in Genomic Sciences, at UNAM. I am currently working in my thesis Project which is focused in the History and development of Human Population Genetics in Mexico. In my thesis, I work with the terms: mestizaje and 'Mexico', and the impact of Genetics in the conception of that words.

### **Mariah Christopherson**



My name is Mariah Christopherson. I am 22. I am from Sisseton, SD, which is located within the Lake Traverse Reservation. I grew up in the country with my parents and four siblings. My family is very important to me, and I cherish the time I spend with them. I love spending time outdoors, especially camping, paddle boarding, and playing with my chocolate lab puppy. I also enjoy both reading and listening to books, as well as doing craft projects. I recently graduated this May from the University of Minnesota-Morris, with my Bachelors of Arts in biology and psychology. While at UMM, I worked as a Native American peer mentor to help first year Native students adjust to college. I am currently applying to Physician Assistant programs in the hopes of getting becoming a PA for an Indian Health Service clinic or hospital. While I am applying for school, I am working as an ER tech/CNA in a local hospital, and as a direct support professional for an adult foster care home for adults with mental illness.

### **Demetria S. Clichee**



Demetria Clichee graduated as Salutatorian in 2013 from Navajo Pine High School located in Navajo, New Mexico. Her academic performance and athletic ability landed her a full ride scholarship to Northern New Mexico College where she graduated in May 2017 with a Bachelor of Science degree in Biology while also completing her four years of collegiate basketball. She graduated with Magna Cum Laude honors and was awarded the 2016 NAIA Scholar Athlete Award based on her performance on and off the court. She spent her undergrad summers conducting research at the University of North Texas Health Science Center and the University of Arizona. In August 2017, she joined the Infectious Disease Prevention Team as a Research Program Assistant at Johns Hopkins Center for American Indian Health located in Fort Defiance, AZ. She works closely with the Navajo community assisting with the RSV-M-301, 10 Year Follow-Up of RSV-Related Asthma and Active Bacterial Surveillance studies. Her ultimate goal in life is to create opportunities for others to live a well-

balanced life and reduce the health disparities that exist within Navajo communities.

### **Noah Collins**



Noah Collins (Nvwatohiyadv) is from Verdigris, Oklahoma and is son to Susy Collins (White Mountain Apache) and Todd Collins (Cherokee Nation). Noah was raised on a ranch which has been in his family since land allotment from the Trail of Tears. Noah is pursuing his bachelor's and master's degrees in Biological Anthropology at the University of Oklahoma with the majority of his research focusing on Native American Health Disparities, precision medicine, genomics, and the human microbiomes. He was recently named as one of the top 10 seniors at the University of Oklahoma and Mr. Native American OU. Noah also enjoys outdoors activities such as rock climbing, backpacking, and cycling. Noah has a passion for maintaining traditional skills and lifeways through the use of modern science and technology.

### Krishna Hernandez



Krishna J. Hernández is a Mexica/Yoeme (Yaqui) and Bisayan Indígena scholar, raised on Tongva land in Los Angeles, California, whose work reflects her commitment to community-centered scholarship and politically-engaged interventions. She is a Ph.D. Candidate and Teaching Fellow in the Department of Anthropology at the University of California, Santa Cruz (UCSC), and is the recipient of fellowships from the National Science Foundation, UCSC Graduate Division, UCSC Department of Anthropology, and UCSC Science and Justice Research Center. Her forthcoming dissertation, “Agents of Pollination: Indigenous Bodies & Lives, and U.S. Agriculture Technosciences,” is concerned with Indigeneity and materialisms, (de)colonization and settler colonialism, and collaboration as healing. Hernández researches human-insect relations in food and agricultural systems, more-than-human socialities, foodways, and environmental change in which she employs a critical Indigenous feminist lens toward more-than-human personhood. She currently works and thinks with desert pollinators in the ‘borderlands’ of California and Arizona—primarily with bees and moths.

### Anezka Hoskin



Ko Titirangi tōku maunga,  
ko Uawa tōku awa,  
ko Hauiti tōku marae,  
ko Te Aitanga a Hauiti tōku hapu,  
ko Ngati Porou me Ngati Kahu ōku iwi.  
Titirangi is my mountain,  
Uawa is my river,  
Hauiti is my meeting place,  
Te Aitanga a Hauiti is my sub-tribe,  
Ngati Porou and Ngati Kahu are my tribes.  
Ko Anezka Hoskin ahau.

I am Anezka Hoskin. I am 22 years old and currently living in Dunedin, New Zealand. I graduated with a Bachelor of Science, genetics from Massey University (Auckland) and now I am at the University of Otago completing a Master of Science, genetics. Māori people suffer disproportionately from metabolic diseases and I am passionate about using genetics to solve issues that my people endure today. My Master's research aims to investigate the genetics of diseases such as, gout and type 2 diabetes in my tribe Ngati Porou. As a young Māori scientist I am dedicated to exploring the space between science and indigenous knowledge forms. I want to expand my understanding and ability to incorporate indigenous knowledge into my thought patterns, lab workflow and data analysis.



### **Jordan Housiaux**



Jordan Aria Housiaux (Te Ati Awa ki Whakarongotai, Ngāti Rauakawa, Ngāti Toa, Te Āti Haunui-a-Pāpārangi) is a marine-freshwater researcher and educator with a particular interest in marine megafauna and population connectivity. Her current research explores the interface between indigenous knowledge and western science and how these knowledge systems can be applied during whale stranding events.

### **Lloyd David Irvine**



I have been active in leadership and education on the Flathead Reservation most of my life. I grew up in Arlee, MT and served in the Navy in Vietnam. After receiving my BA from the University of Montana-Northern in education, I moved back to the reservation working for the Confederated Salish and Kootenai Tribes (CSKT) in education. I assisted in establishing Two Eagle River School (a Tribal alternative high school) and worked there as an instructor. I was also part of a program to establish both the Salish and Kootenai Culture Committees. I worked for a couple years as the Assistant Director of the Tribal Health Department. For more than 25 years, I served as an elected representative to the CSKT Tribal Council. During that time, I served on many boards, teams, and councils in different areas like energy resource, gaming, education, highway development, and economic

development. I have also served on committees for the Affiliated Tribes of Northwest Indians. In 2016, I was asked to serve on the Community Pharmacogenetics Advisory Council (CPAC), a CSKT community advisory board for pharmacogenetics and precision medicine research with the University of Montana.

### **Sergio Ita**



I am a husband and father of three children (twin daughters and a son). I am originally from Santa Fe, New Mexico. After completing high school, I joined the United States Marine Corps serving as an Avionics technician for five years. I then stayed in the San Diego region and began my studies at Palomar Community College before completing my Bachelor's degree at California State University San Marcos. In 2009, I was accepted into the Virology Program at Harvard Medical School. I carried out research focusing on the viral immune evasion mechanisms of SIV, specifically adaptations in SIV Envelope leading to antibody escape. After completing my PhD, I was awarded a NIH K12 IRACDA (Institutional Research and Academic Career Development Award) Postdoctoral Fellowship through the

University of California, San Diego and my current appointment is in the Center for AIDS Research, where I carry out research investigating drug resistance using high resolution sequencing technologies. Throughout my career I have been an advocate for increasing diversity in STEM, addressing the need for equity within education and fighting for equality within our society and institutions, including the rights of women, indigenous, people of color, and other disadvantaged groups.



### **Ursula Knoki-Wilson**



Ursula serves as Community Relations Liaison Officer for the Chinle Service Unit, Office of the Chief Executive Officer (CEO). She has also served as Director of Nurse Midwifery Service within the Department of OB/GYN at Chinle Comprehensive Health Care Facility and as the IHS Chief Clinical Consultant for Advance Practice Nurses. She has worked many years in promoting the integration of Navajo cultural concepts into health care practice for health professionals. Ms. Knoki-Wilson is currently a member of the Navajo Nation Human Research Review Board whose function is to review and approve all human research activities done on the Navajo Nation.

### **Amber Rayne Laughter**



Hello, my name is Amber Laughter. I am of the red-running-into-water clan, born for the Bitter water clan, my maternal grandfather is of the edge water clan and my paternal grandfathered is of the Ute clan. In this way, I am a Navajo woman. I am from Shonto, AZ. I was born and spent my most of childhood on the Navajo reservation, during my adolescent years I used education as a means to venture out into the world. I graduated from Flagstaff High School and moved to Utah to pursue a degree in nursing which didn't exactly turn out as I had planned so I moved back home to Shonto briefly, before I decided to continue my education at Dine College in Tsaile, AZ. It was there that rediscovered my passion for science and was introduced to research by my chemistry professor who eventually became my mentor. I transferred to Northern Arizona University, earning a

Bachelor's of Science in Chemistry and Biomedical science.

### **Esmeralda Marlene Lopez**



My name is Esmeralda Marlene Lopez, I am Mixteca from San Sebastian del Monte and San Juan Huastepc (Oaxaca, Mexico). I was born and raised in Yakima, Washington. I earned a Bachelor's of Arts in Health and Human Biology and Ethnic Studies at Brown University, then completed a Master's of Arts in Medical Sciences at Heritage University. Currently, I serve as the Front Office Coordinator at the Union Gospel Mission Medical Care Center, the largest-serving free medical clinic in the state of Washington. I plan to attend medical school and practice in marginalized and underserved communities.

### **Alexandria Marie McLearen**



My name is Alexandria McLearen, I am from Anchorage, AK. My family is from the village of Chevak, AK, and I am Cup'ik. In December 2017, I graduated from the University of Alaska Anchorage with my Bachelor of Science in Natural Sciences, and minors in Alaska Native Studies, and Psychology. I focused my educational experience on the human sciences, Alaska's political and educational impacts on the Alaska Native peoples, and community-based research in the field of psychology. My career goal is to be a physician in rural Alaska, to advocate for, provide for, and protect the people who raised me and gave me these opportunities.

### Karen Miernyk



In 1993 I began my career at the Arctic Investigations Program (AIP) in Alaska. AIP is a field station of the U.S. Centers for Disease Control and Prevention. Our mission is the prevention of infectious diseases in people of the Arctic and sub-Arctic with a special emphasis on diseases of high incidence and concern among northern indigenous peoples. In collaboration with partners across the U.S. and the circumpolar north, we conduct infectious disease surveillance, evaluate prevention services, and conduct applied research.

My work priorities involve the molecular epidemiology of *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Neisseria meningitidis*. I am also interested in chronic diseases caused by *Helicobacter pylori* as well as infections caused by climate-sensitive and zoonotic pathogens.

When I am not working, I enjoy beer and wine tasting with friends and family and spending time outdoors with my husband, two stepchildren, and two dogs.

### Amber Rae Nashoba



Chahta sia. I am Choctaw. Growing up, I lived all over the country before graduating from East High in Anchorage, Alaska. I went to college in Wisconsin to be closer to my grandmother. As an undergraduate I worked with fish through the US Fish and Wildlife Service and the Great Lakes Indian Fish and Wildlife Commission. Working with walleye and sturgeon reminded me of all the times I spent putting away fish for the winter with my family in Alaska. During this time, I joined the American Indian Science and Engineering Society; the community support I received from AISES was crucial to

completing my graduate degrees. After finishing my doctorate, I worked on marsh grass genomics at a university in Boston, and then on stickleback minnow genomics with Dr. Kat Milligan-Myhre at the University of Alaska, Anchorage. At present, my work at UC Santa Barbara is focused on using quantitative genetics to learn about the ability of wild populations to adapt to climate change. Being Choctaw and part of the wider Native community has been at the center of my motivation and is the source of my inspiration.

### Nina Nez



Nina Nez is a recent college graduate and is working to make her imprint into the Equine Industry, more specifically the Horse Racing Industry. She is currently working with a horse trainer at Arapahoe Park Race Track, while overshadowing the track veterinarian. She received her B.S. in Animal Science with an Emphasis in Equine from the University of Arizona this past May. The next step in her educational career is attending veterinary school to become an equine veterinarian. Nina is determined to provide better access to veterinary services to her tribe across the Navajo reservation.

### **Angelica Celeste Phillips**



Angelica Phillips is Yup'ik Eskimo, and was born and raised in Bethel, Alaska. Angelica is a Program Coordinator for Southcentral Foundation (SCF) Research Department. SCF is a tribally owned and operated healthcare organization that provides primary, specialty, behavioral, and cultural services to Alaska Native and American Indian people in the Anchorage, Alaska area. She works with Native investigators and other staff on multiple health research projects. Angelica also, assists with other office duties, but finds fulfillment in meeting with research participants and working in the lab processing blood and urine specimen. She enjoys hiking, networking, and learning more about her native culture.

### **Megan Renee Rorison**



I am a senior undergraduate student attending Arizona State University pursuing a degree in Biomedical Informatics. For the past two years, I have been working as an annotator and research assistant on Zodo, a bioinformatics system that utilizes Natural Language Processing to improve virus location data for phylogeography. I'm also conducting research and building a pipeline for extracting publicly available data to analyze and discover new approaches and compounds to cancer therapies. In my career, I plan to pursue bioinformatics with an emphasis on data analysis and trend prediction in relation to genomic data. More specifically, I plan to focus on population health and behavioral health in underrepresented populations.

### **Kyle Wark**



Kyle Wark was born and raised in Hoonah, Alaska. His mother's family is Tlingit (Deisheetaan Raven/Beaver clan), and his father is non-Native from Seattle (later adopted into the Chookaneidi Eagle/Wolf clan). He became an anthropologist to study his Tlingit people, and has primarily researched the impacts of colonization on Alaska Native health and wellbeing. He received a Master's in Eastern Classics from St. John's College (Santa Fe campus) in 2007, and a Master's in Anthropology from the University of Alaska Anchorage in 2014. Kyle joined Southcentral Foundation in July 2017, and will be working on projects related to genomics, genetics, and social determinants of health. He has lived in Anchorage since 2008, and enjoys reading, playing Go (an ancient Chinese strategy game), picking berries, and spending time with his family.

### **Paulo Preston Wolcuff**



My name is Paulo Wolcuff and I'm from Palmer Alaska. I'm an Aleut and my family is from Kodiak and Chignik, Alaska. I have worked in the native community most for my life. I have coached native youth olympics and would travel to the middle and high schools to put on demos and boost participation in the games. I have also worked at the Alaska Native Medical Center for 12 years doing clinical chemistry in the laboratory. Recently I have been working with the research department to build my knowledge base and to be active in research on Alaska Natives in my community.



### **Jonathan Daniel Yellowhair**



Jonathan is a second year M.S student in Georgia State University's Clinical Mental Health Counseling program in Atlanta, Ga. After his service in the United States Marine Corps, Jonathan earned a B.A in International Affairs and B.S in Applied Indigenous Studies at Northern Arizona University in his hometown of Flagstaff, Az. Currently entering his Practicum/Internship at Decatur High School, Jonathan aims to alleviate anxiety for young men re-integrating into high schools from detention centers, alternative schools, and probation periods while simultaneously increasing the retention rate of these students through counseling initiatives and filial therapy. As a Pat Tillman Foundation Scholar and National Board for Certified Counselors Minority Addictions Fellow, Jonathan advocates for the recognition of Indigenous mental health disparities on a national platform. Upon, graduation, Jonathan aspires to attain a PH.D. in Clinical Psychology while developing therapeutic practices and initiatives consolidated towards tribal members to combat

mental health stigmas on Indigenous reservations.

### **Lizzie Wade**



Lizzie Wade is a contributing correspondent for Science magazine, based in Mexico City. She covers archaeology, anthropology, and Latin America, and frequently writes about ancient DNA. Lizzie is attending SING this year as part of her reporting for a feature story on the SING program, indigenous science, and efforts to decolonize scientific research.

Lizzie studied comparative literature at Barnard College and graduated in 2008. During her undergraduate studies, she stumbled into an internship in the communications office at Fermilab, a particle physics laboratory, and discovered a passion for science writing. She later studied translation theory at the National Autonomous University of Mexico as a Fulbright scholar. After returning from the Fulbright, Lizzie was a reporting fellow at Wired and a news intern at Science. She headed back to Mexico as a correspondent for Science in 2013 and has lived in Mexico City ever since. Her work has also appeared in Wired, Aeon, Slate, Archaeology,

and the California Sunday Magazine, among others. She is fluent in Spanish.