

CENTER *for*
ALASKA
NATIVE
HEALTH
RESEARCH



NEWSLETTER

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CENTER *for* ALASKA NATIVE HEALTH RESEARCH



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Research Summaries

Researchers examine health for every season of life

Many aspects of a person's health change throughout the course of their lifetime. As CANHR enters its 15th year, its investigators lead a diversity of research projects and pilot interventions throughout the state to advance knowledge for healthy living at any age.

Prenatal Preventive Health in Interior Alaska: Impacts of Maternal Stress and Health

"Preventative health can begin before a person is even born," said Kendra Campbell, assistant professor of psychology and lead on an exploratory study on prenatal health. The pilot study, funded by the CANHR Centers of Biomedical Research Excellence Pilot Project program, looks at how stress can affect maternal and infant health. Most prenatal prevention focuses on behaviors such as substance and tobacco use, nutrition, and medical care, but less so on psychological factors such as anxiety and depression. "We will measure women's stress levels during pregnancy to understand how stress affects their baby when it is born," said Campbell. Campbell is recruiting pregnant participants from the Fairbanks area to track stress levels and other health factors before and after the birth of her baby. Stress biomarkers, which may indicate the baby's risk for illness and chronic disease, are collected at multiple points during pregnancy. The investigators are also using interviews to look at cultural-specific factors related to prenatal health. Findings from the study will contribute to developing prenatal prevention programs to promote healthy births and healthy mothers throughout and after pregnancy in Alaska Native communities. *NIH P30GM103325*

Yup'ik Pregnancy Pilot Study

Dr. Kent Thornburg of the Oregon Health & Science University (OHSU) is collaborating with CANHR investigators Bert Boyer and Scarlett Hopkins in a pilot feasibility study. The study examines how the foods a mother eats when she is pregnant affects the health of her baby. Because diets in Western Alaska have changed to include more processed foods from the store and less traditional Yup'ik foods, it is important to understand how this change in diet and access to good nutrition may affect the health of Yup'ik babies. This study will begin in May 2016 and will recruit pregnant women from the YK Delta. Researchers will track the health of the women during pregnancy, as well as the health of her infant at birth. Kerry Cobbledick and Joni Beckham, obstetric nurses at the Yukon Kuskokwim Delta Regional Hospital, will work with CANHR and OHSU investigators on this project.

Wood Smoke Intervention

The Wood Smoke Intervention led by Tony Ward and Curtis Noonan at the University of Montana, in collaboration with Bert Boyer, Scarlett Hopkins, and Kenlynn Henry in CANHR, compares strategies to reduce respiratory infections in young children exposed to wood smoke in the home. Small particles are produced by improperly burning wood and other items. Inhalation of these small particles has been linked to asthma and other respiratory diseases, particularly in young children. This project began in the winter of 2015 in two communities in the YK Delta. Families with children under the age of 5 and who regularly burn wood for heat in their homes were recruited to participate. Some families received filtration units while others received education and training about best practices for storing and burning wood to reduce the release of harmful particles into the home and surrounding environment. Families that received education also received a moisture meter to ensure that they burn dry wood that is below 20% moisture. At the end of the intervention, families that received education will also receive a filtration unit and families that originally received the filtration unit will receive the education and training. The same intervention is being repeated by partnering institutions in rural Montana communities and selected Navajo communities. *NIH 1R01ES022649-01A1*

Children's Healthy Living Program

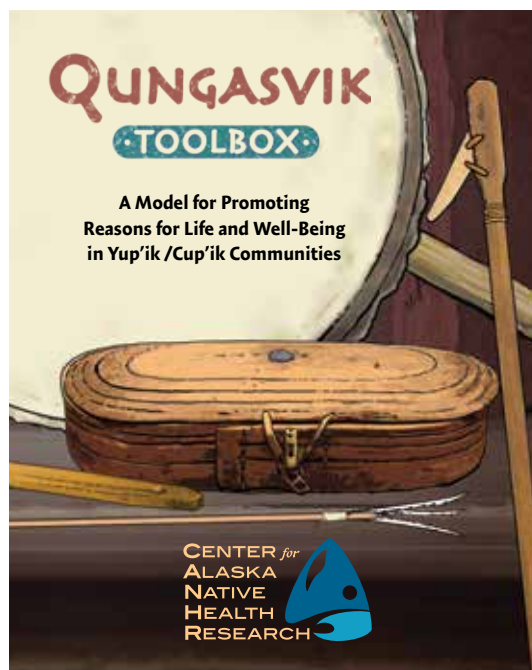
Andrea Bersamin and her team implemented the Children's Healthy Living (CHL) program in four urban centers in Alaska to understand and prevent childhood obesity by increasing access to nutritious foods and

increase physical activity among families with young children. In 2013, CHL researchers collected data from more than 600 2-8-year-olds in four major urban centers in Alaska and primarily from Head Start programs. The team found that 36.7% of children were overweight or obese, with obesity slightly more common among American Indian and Alaska Native children.

After sharing the findings, the CHL project staff worked with people, groups and organizations that already work in Fairbanks to develop intervention materials. The goal of the partnership was to build social, cultural, political, economic, and physical environments that support healthy lifestyles.

The CHL program partnered with Fairbanks Families, a community resource for families with young children, to create a comprehensive online list of recreation opportunities for preschoolers in the Fairbanks area. The program also worked with the Fairbanks Early Childhood Development Commission to organize a winter clothing and gear swap for preschoolers from low-income families so they can stay active outside when it's cold. CHL also worked with Fairbanks-area organizations to provide physical activity and nutrition training workshop for early childhood educators as well as garden-based education for preschools. The project also offers strategies for parents that can help them increase activity and improve food choices at home. Current staff include Dan Uliassi, Holly Hansel, and Julianne Power. Bret Luick and Joshua Greenberg are co-investigators. Lindy Larson, Joy Clein, Kristine Niles, and Sarah Sherman also worked on this project. *USDA 2011-68001-30335*

Protective Factors



In 2015, CANHR research scientist Jacques Philip was awarded a grant from the Mountain West Clinical Translational Infrastructure Network (CTR-IN) for qualitative data analysis and cross-cultural training at the University of Hawai'i at Manoa. Deborah Goebert, DrPH at the Department of Psychiatry, John A. Burns School of Medicine, served as his mentor in qualitative analysis of focus group data. Philip joined the Hawaii researchers on evaluating the gain in social capital of youth leaders participating in Hawaii's Caring Communities Initiative for Youth Suicide Prevention. Similar to Alaska Native prevention programs that emphasize social support from community and families, findings from the evaluation of the Hawaiian initiative emphasized the importance of trust, reciprocity and a sense of belonging and pride in the communities.

During 2015, Philip also conducted a pilot analysis of social support networks using data collected from participants of the **Qungasvik Toolbox** intervention research project, leading to an article in the Psychosocial Intervention journal, and an abstract presentation in the SUNBELT 2016 conference of the International Network of Social Network Analysis (INSNA). The team found that youth's connections to adults and connections to Elders, but not peer connections, emerged as predictors of family and community level protection. This suggests that strengthening family and community level connections are important targets for interventions that promote protective factors in youth. *Funded by NIH 2R24MD001626-PI Stacy Rasmus & James Allen*

Co-Creating a Cross-Cultural Language of Science

Like any group of people who share similar ways of viewing the world, Western-trained scientists and researchers communicate using technical language that is highly specialized and specific to their field of study. When Western-trained scientists seek to develop respectful research relationships with indigenous people, translation is important to ensure that all partners understand each other.

Translating science across cultures is not as simple as looking up words in a dictionary when technical concepts such as molecular genetics and nutritional biochemistry have only been in existence for less than a century. Indigenous peoples have benefited from local knowledge and a socioeconomic system of living that enabled generations to survive in a harsh environment and thrive with the natural resources of their homeland. Rapid changes in the environment and in the contemporary lifestyle calls for both traditional knowledge systems and Western science systems to work together.

Translational Services

Because CANHR's mission is to conduct research in partnership with communities of the Yukon Kuskokwim Delta and Alaska Native people, researchers invest in a variety of translational resources both at the Fairbanks-based center and in the field. Eliza Orr, the bilingual cultural specialist at CANHR, supports all projects with live translations at meetings, simultaneous translation during field data collection, and transcriptions of meeting recordings. Translation equipment in the form of portable audio receivers and headsets enable attendees to listen to live translation during meetings. "Some people are more comfortable speaking in Yup'ik than in English, so having the equipment gives them a choice," says Orr. This ensures that all participants are able to understand each other, regardless of language preference.

Tailoring Prescriptions

Another example of translating science across cultures can be seen in a CANHR research project that involved pharmacogenetics, which studies how differences in a person's genetics can affect how well certain medicines work. "We looked at how individuals process or

metabolize a blood thinner medication called Warfarin (also known as Coumadin)," said Bert Boyer, one of the project investigators. Warfarin is the main medication given to someone who has had a stroke. It works by preventing clots. The body metabolizes, or breaks down Warfarin, at different rates in different people. "Genetic variations mean that a person of Yup'ik heritage may

"Genetic variations mean that a person of Yup'ik heritage may break down this medication at a different rate..."



— Bert Boyer
Pharmacogenetics Investigator

break down this medication at a different rate than someone of Caucasian heritage,” said Boyer. “It is important to learn about these variations so doctors do not prescribe doses that are too high or too low.”

To communicate findings from this project, investigators Bert Boyer and Scarlett Hopkins meet regularly with a regional Community Planning Group (CPG) in Bethel. The group currently consists of eight members who represent most of the Y-K communities that participated in the pharmacogenetics project.

“We had to learn how to discuss pharmacogenetics with our communities and its relevance to daily life because the study findings are not immediately actionable,” explained Boyer. Actionable findings refer to information that a person can act on to improve their health. For example, if a person’s lab results reveal high cholesterol, he or she can take steps to lower their cholesterol. Pharmacogenetic findings, however, are not actionable by an individual person because findings contribute to a wider group of people and refer to a specific pharmaceutical product. “Working with the CPG for this project helped us to learn how to discuss pharmacogenetics and what aspects of our findings were meaningful to participants,” added Boyer.

Sharing Research

The discussions revealed that community members prefer to discuss these topics throughout the research study rather than being simply told about these findings. The CPG shared that when results could affect health care, specific efforts should be made to inform health care providers working in the Yukon Kuskokwim Health Corporation. However, returning genetic research with uncertain clinical relevance to individuals is not as useful as a continued dialogue with community members about the research process. For example, the CPG and the Ciuliat group of bi-cultural consultants were interested in the finding that type 2 diabetes rates are significantly lower among Yup’ik people than among other Alaska Native populations, despite comparable rising rates of obesity.

Dialog with communities helps strengthen trust and two-way learning. Investigators gain a better understanding of traditional methods for learning about health and the environment, and cultural traditions for communicating knowledge from one generation to the next. At the same time, community members gain a

better understanding of western scientific methods and goals for conducting genetic research.

Investigators and community members agreed that further research would be of value to better understand this finding, which could reflect differences in diet, activity levels, genetic predisposition or other factors.

A strong collaboration between investigators and the CPG has paved the way for CPG groups to continue to be a part of future CANHR studies.

Intervention Strategies

The two-way conversation of translating science for CANHR projects also applies to intervention research. “Our people have our own science, so we have to find a way to communicate Yup’ik science to the Western scientists,” said Billy Charles, co-investigator and regional coordinator for the Qungasvik project.

“CANHR’s work on the research side validates the teachings of our Elders so that Western science can recognize what we already know.”

CANHR hires local community coordinators because they play a critical role in recruiting and communicating with participants in their community about the research. Coordinators answer questions and also work with investigators to ensure that the research protocols are culturally respectful and relevant to the health concerns of communities. Co-investigators such as Billy Charles, are highly engaged in detailed

aspects of the research process. Community members are also involved in putting together manuscripts and are listed as co-authors for some papers.

Translating science across cultures is a commitment that CANHR scientists and community partners bring to the YK region that brings together local cultural expertise of the Yup’ik people alongside cutting edge techniques and knowledge from the field of biomedical research.

“CANHR’s work on the research side validates the teachings of our Elders...”

**— Billy Charles
Co-Investigator and
Regional Coordinator for
the Qungasvik Project**

healer: yungcarista, yuungcarista
healing: ~ wound tallegneq
health: be of uncertain ~ maluknarqe-; mental ~
counseling umyualiurtet qalaruciaraat
healthy: (be ~) calrite-, natlugnerite-, tarranqegg-,
yuutu-



CANHR Supports the Development and Evaluation of Interventions Designed by Yup'ik Communities

At CANHR, research takes place in long-standing partnership with communities. Many of CANHR's research projects have demonstrated the strengths of the Yup'ik lifestyle, including high levels of physical activity, nutritious local foods, and a strong orientation to traditional cultural and spiritual practices and beliefs. Community members have increasingly asked for future research to do something with these findings to tangibly improve quality of life and health. These featured interventions demonstrate how investigators have worked in partnership with communities to design innovative health interventions that are unique to the people, place, history, and contemporary health challenges.

An intervention to promote healthy foods and physical activity

CANHR researcher Scarlett Hopkins and a Community Planning Group of past study participants are culturally adapting an intervention to lower body weight in Yup'ik women. The community-led intervention will promote an active, subsistence way of life including both traditional Yup'ik foods and healthy market foods. The team is working with Beti Thompson of the Fred Hutchinson Cancer Research Center to culturally adapt an intervention she developed and has successfully used with Latino people in the Pacific Northwest. From 2013-2015, Hopkins and Eliza Orr, CANHR's Cultural Consultant, held focus groups and conducted interviews in two Yup'ik communities to determine cultural and environmental barriers and facilitators to healthy foods

and physical activity. Based on these findings, the team then created modules about the nutritional value of local Yup'ik foods and the benefits of an active subsistence lifestyle.

"The women really liked the intervention because they helped create it," said Hopkins. Ideas for the intervention included using social media, such as Facebook, to spread the word and offer support. "The group also proposed something they had done in the past that worked," said Hopkins. "It was a 'mom' patrol where the women would walk together in the evening. They could keep their community safer, enjoy each other's company, and get some physical activity." Local women are experts in their experiences and their communities, so their participation in designing the intervention is critical. "We are working together to make an existing intervention especially suited to the unique lives of Yup'ik women in today's communities," added Hopkins.

Neqa Elicarvigmun: Fish-to-School

The Neqa Elicarvigmun: Fish-to-School program was proposed when CANHR researchers learned that communities in southwest Alaska were experiencing rapid changes in diet, particularly among young people. Yup'ik youth were eating more nutrient-poor market foods and fewer nutrient-rich traditional



foods than earlier generations. To address community concerns that this dietary trend could lead to an increased risk of chronic diseases, such as obesity and diabetes, principal investigator Andrea Bersamin and research assistant Jennifer Nu worked with community members in Emmonak to design a nutrition intervention to promote the benefits of eating traditional foods at home and at school. "We greatly appreciate our partnership with the Emmonak-based work group, whose contributions greatly enhanced the design of the Fish-to-School program to be based on local values around food and fish," said Andrea Bersamin, principal investigator of the project.

*Chums 'n silvers, pinks 'n reds,
kings are big as baby beds,
If you want to grow big and strong,
eat our salmon, you can't go wrong!*

Poem by Isaiah Hootch, Malora Hunt, and their team for the Fish-to-School program's 2014 Iron Chef Contest.

The program involved sourcing salmon from the local fish processor to be served in the school lunches. Place-based, interactive lessons about the food system and the importance of local subsistence foods were also developed and taught to middle and high school students. One of these included a board game that resembled the Game of Life, but in the lifestyle of a Yup'ik community on the lower Yukon River. The game traces the flow of fish, cash, and good will through the cash-subsistence economy as the players encounter situations and make decisions that would lead to a good



life. The program also hosted three community activities throughout the year to celebrate the role of salmon in the community. These included a salmon-themed scavenger hunt, a food film festival, and an iron chef contest.

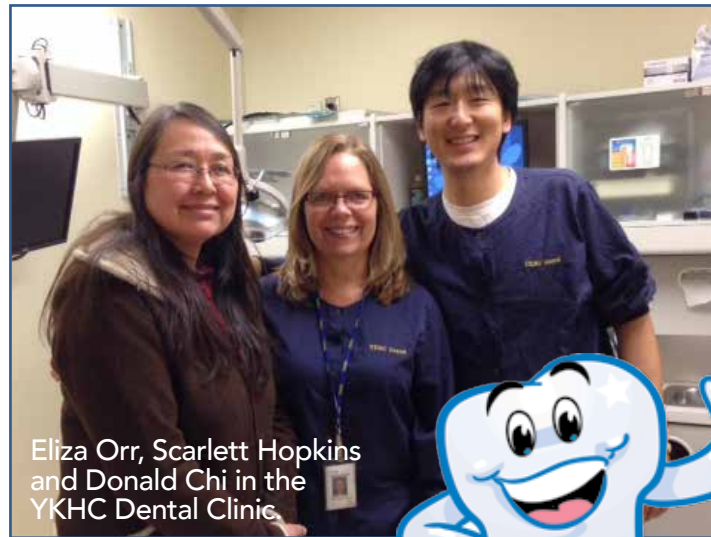
Local volunteers and team members contributed greatly to the success of the project. "Our local research assistant Joel Hunt was a valuable member of our team," said Bersamin. "As a young Yup'ik leader involved in many local cultural activities, Joel was a great role model for the students, and he helped encourage community and student participation." Many community members

volunteered for the events and the school administration and staff allowed all of the program's activities to be hosted at the school.

The intervention took place during the 2013-2014 academic school year in selected communities in the lower Yukon River region of southwest Alaska. The program received widespread support from students, staff, and community members.

At the end of the program, students expressed interest in having the program again at their school, and recommended that the program be shared with other schools in the region and around the state.

Funded by USDA 2011-69004-30218



Eliza Orr, Scarlett Hopkins and Donald Chi in the YKHC Dental Clinic.

Improving the oral health of Alaska Native (Yup'ik) children and adolescents

Dental caries (tooth decay) are a significant public health problem for Alaska Native children. To address this problem, CANHR researchers Diane O'Brien, Scarlett Hopkins, and Eliza Orr have partnered with Donald Chi, a pediatric dentist at the University of Washington, to better understand the relationship between added sugar intake and tooth decay in Yup'ik children. They conducted a project at the YKHC dental clinic in Bethel in which they measured a biomarker in hair samples that indicated the amount of sugar in a child's diet, and compared those measurements to tooth decay. Their findings showed that tooth decay increased with increased added sugar intake, and indicated that sweetened fruit drinks like Tang and Kool Aid were a big source of those sugars.

As a result of this project, these researchers, in collaboration with the Yup'ik Oral Health Community Planning Group, are designing an intervention to help parents steer their children toward healthier drink options. A grant application to support this project will be resubmitted for funding in May 2016, so stay tuned!



From the Field to the Laboratory

*CANHR researchers push the edge of biomedical science
with new questions and discoveries.*

Neqem Nallunaikuta – The Food's Marker Project

Can a hair or blood sample provide reliable “biomarkers”, or chemical traces of diet, for ongoing and future health research studies? Diane O’Brien led the project to answer this question, along with a team that included graduate student Sarah Nash, postdoctoral researcher Kyungcheol Choy, and undergraduate researcher Rebecca (Church) Wilbur. CANHR staff Bert Boyer, Scarlett Hopkins, Eliza Orr, Jynene Black, Kristine Niles, and Anna Peter Raboff also assisted with the project. The project partnered with two communities in the YK Delta and confirmed that the intake of both traditional marine foods (fish and marine mammals) and sugars could be measured from biomarkers in blood and hair. In other words, it is possible to know how much traditional food a person eats by testing hair samples. This discovery has changed how research is conducted because biomarkers can be more reliable and cost-effective than diet recalls. The biomarkers are being used in several ongoing CANHR projects to better understand how intake of traditional foods and sugars are related to health. Indeed, you are what you eat!

Funded by NIH COBRE II P20RR016430 and NIH R01DK07442

Validating Multiple Stable Isotope Measures of Diet in the NPAAS Feeding Study

Past CANHR studies validated biomarkers of fish and sugar intake, but can they be used in US populations outside of the YK Delta? Diane O’Brien worked with Johanna Lampe at the Fred Hutchinson Cancer Research Center to find out. 150 women aged 60-80 years living in Seattle, WA participated in the “Nutritional and Physical Activity Assessment” (NPAAS) Feeding Study of the Women’s Health Initiative. Each participant ate a controlled diet for two weeks so that the researchers could test relationships between known diet and biomarkers of dietary intake. If these biomarkers are valid, they will be useful tools to help researchers better understand how diet and health are related. Hee Young Yun, Jynene Black, and Lindy Larson work on this project.

Funded by NIH R21 CA182674

B-BASS: The Breath Biomarker of Added Sugar Study

The relationships between sugar intake and health are difficult to study, because sugar intake is often inaccurate on dietary questionnaires. B-BASS tested whether it was possible to detect how much sugar a person consumes by measuring a biomarker in the air a person breathes out. If researchers are correct in their hypothesis, this study would develop a new technique to measure sugar intake.

As part of the study led by Diane O'Brien, participants came into the Fairbanks CANHR clinic 5 times to eat the breakfast and lunch provided, and then they gave a breath sample every two hours during those five days. So far, researchers have found a strong relationship between sugar intake and the breath biomarker. More studies will soon follow. Jynene Black, Kristine Niles, and President's Professor Dale Schoeller assisted with this project.

Funded by NIH P30GM103325

Relationship between the traditional Alaska Native diet, obesity and Type II diabetes

Scientists think that chronic inflammation resulting from obesity might contribute to the development of Type II diabetes because body fat produces inflammatory compounds. The good news is that polyunsaturated fatty acids (PUFAs) are known to suppress chronic inflammation. PUFAs are abundant in traditional Alaska Native foods such as fish and marine mammals; however, as Alaska Native diets become more westernized, people may lose some of the potentially protective effect of PUFAs. If this continues to happen, the prevalence of Type II diabetes in Alaska Native people could further increase.

CANHR investigator Andrej Podlutzky and his lab are testing blood plasma samples from past CANHR participants for inflammatory biomarkers.

They hypothesize that high amounts of dietary PUFAs are particularly beneficial if a person is obese or overweight, by suppressing inflammation. To test this, they are investigating whether plasma samples isolated from overweight or obese people who consumed diets low in PUFAs show signals of higher inflammation and

angiogenesis than do plasma samples from overweight or obese people who consumed diets high in PUFAs. The researchers are in the process of testing this hypothesis in cell cultures treated with plasma samples. Sasha White, a UAF graduate student is leading this project.

Iqmik and Carcinogen Study

Iqmik, a combination of store-bought chewing tobacco combined with punk (tree fungus) ash, is commonly chewed by many people throughout the YK Delta. The effect of iqmik on health is both fascinating and puzzling because chewing iqmik is a cultural practice that has been used for many generations; however, iqmik contains a high concentration of chemicals that are recognized as carcinogenic (cancer-causing) by the International Agency for Cancer Research at the World Health Organization. To investigate whether iqmik causes cell damage that could lead to cancer, Andrej Podlutzky's lab is testing the effect of iqmik on bacteria, commercially available cultured human cell lines, and a small worm that is a model organism called *C. elegans*. His team of graduate and undergraduate students is working with Lena Vayndorf, an expert in *C. elegans* research.

So far, the results have shown that iqmik exposure is associated with increased mutations in bacteria, increased DNA damage to human cell lines, and decreased life span of the worms. "It's definitely harmful in the lab context," said Podlutzky. The data will be published and shared with Alaska Native communities. The next step will be to investigate whether there is a connection between iqmik chewing and high rates of colorectal cancer in the YK Delta.



Jynene Black measuring breath samples to test a new biomarker of sugars intake.

A Knowledge Sharing Network

Fred Augustine of Alakanuk, Alaska shares stories and photographs of his work as a commercial trapper. This interview took place as part of a study funded by the National Science Foundation, whose goal is to build a knowledge sharing network between Yup'ik Alaska Native communities and Siberian Eveny communities focused on community adaptations to social and climate change. The study utilizes indigenous research methodologies and is undertaken by indigenous research team made up of academic and traditional indigenous scholars.





Pictured here from left to right are Dr. Stacy Rasmus, UAF Research Associate Professor, Billy Charles, UAF Research Professional, Dr. Olga Ulturgasheva of the University of Manchester and Yup'ik Elder Fred Augustine. This photo was taken by Dr. Ulturgasheva's collaborator Sayan Ulturgashev . *NSF Grant #1207894 Developing Indigenous Research Methodologies in the Arctic: Examining the Impacts of Settlement on Socialization and Youth Experience in Alaska and Siberia. (PIs, Stacy Rasmus & Olga Ulturgasheva)*

Cross-Cultural Workshops



Bringing together indigenous circumpolar perspectives for a global conversation about survival, strength, and climate change.

The Arctic is a diverse region, with diverse peoples spread across the borders of many countries. Local and global leaders in the arctic are increasingly seeking to learn strategies for surviving and adapting to environmental and social catastrophes. By sharing local knowledge and experiences, indigenous peoples in different parts of the arctic can facilitate innovation in a rapidly changing world.

Co-investigators Stacy Rasmus and Olga Ulturgasheva at the University of Manchester in England have launched the **Community Adaptations and Knowledge Sharing in Alaska and Siberia: Utilizing Indigenous Research Methodologies Project**. Funded by the Arctic Social Sciences program at the National Science Foundation (NSF 1424042), this exciting collaboration engages indigenous youth and community members from Siberia and Alaska in a research exchange focused on adaptive community responses to changing circumpolar social and ecological conditions. This project continues the work begun by the Principal Investigators as part of an International Polar Year (IPY) collaboration and Early Concept Grant for Exploratory Research (EAGER) awards from the NSF.

The first exchange took place in fall 2015. Eveny reindeer herders from Siberia and Yup'ik community members from the Yukon Kuskokwim Delta met at the University of Alaska Fairbanks campus in September 2015 for three days. Eveny are nomadic herders in the boreal forests of central Siberia. Many of the Yup'ik community members live in coastal and river landscapes of the lower Yukon River delta. Participants shared stories of resilience to changes in the biocultural landscape and strategies for adapting to climate change. "We saw a lot of similarities between our people," said Roy Bell of Hooper Bay. "They are so close to their reindeer that they know their personalities. This reminded me of how we used to be with our dog teams." During the exchange, the Eveny people shared songs while the Yup'ik community members performed yuraq or Yup'ik singing and drumming.

"It was so interesting to hear how they use every part of the reindeer," commented Lilian Gump, of Hooper Bay. "Some parts of the reindeer are used for medicine. Our ancestors used to know about animal medicine, but we

no longer know this information." The Yup'ik participants also noticed that the Eveny did not receive government assistance, such as food stamps and TANF in the United States. Instead they did more subsistence activities. "I was surprised by how physically fit they were," observed Bell. "Even the eldest of them was faster than we were," laughed Gump. "They walked like it was nothing, and we were panting behind them."

Participants communicated through interpreters, although the youth managed to communicate using apps on their cellphones to translate between English and Russian. "We could understand some of the words," noted Jorene Joe, of Hooper Bay, who helped organize the workshop. "Some of the words, such as for tea, sugar, and flour, were the same because of the trading that went on when Russians first came to Western Alaska."

"I heard that their kids are like our kids, into alcohol and have a lot of boredom. They're more into technology," said Gump. "Not playing out as much."

"It made me wonder what they're doing to face or fix those problems and challenges," added Bell. "At the same time, I wanted to share our experiences in facing those challenges and problems."

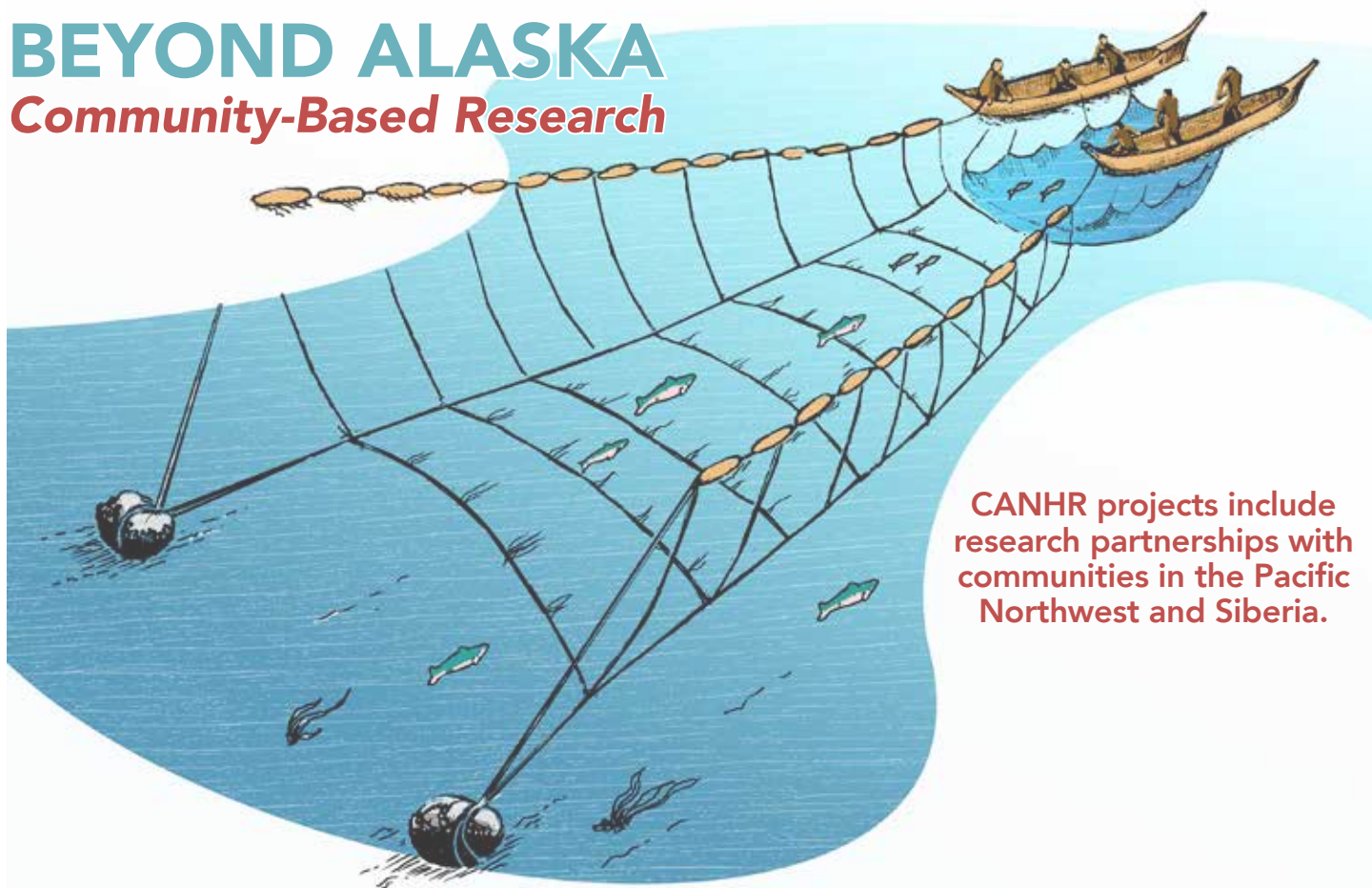
One of the goals of the project is to highlight mental health and social impacts of climate change. The project also aims to create an indigenous research exchange network between communities in Siberia and Alaska to increase the number of Arctic indigenous people involved in research and as part of scientific teams exploring the human impacts and social responses to the changing conditions in the Arctic.

"At first we saw them as strangers," said Bell, "but after hearing their stories and similarities with our histories and connection with the land bridge, it brought us closer."

"Yes, it left me wanting to know more," agreed Gump. Participants in the project will soon have an opportunity to continue these conversations and learning exchanges during future workshops and field visits to each other's communities in the YK Delta and in Siberia.

BEYOND ALASKA

Community-Based Research



CANHR projects include research partnerships with communities in the Pacific Northwest and Siberia.

Native Transformations Project: Discovering Sources of Strength and Resilience from Drug Misuse in the Pacific Northwest

This project, led by Stacy Rasmus explores strengths, protections and resilience against substance use disorder in the life histories of 62 American Indian adults from three Coast Salish communities in the Pacific Northwest. Results from the study revealed sets of key protective factors participants identified as important to their wellness and recovery. Protective factors at the community, family, individual and spiritual levels were used to develop a Reef Net Wellness Model that represents a Coast Salish-specific process of change and transformation that protects against substance misuse and leads to wellbeing. *NIH, National Institute of Drug Abuse R01DA029002*

Witnessing Our Future

Stacy Rasmus leads this project with the Northwest Indian College and Lummi Nation communities to foster culturally-based programs and events that build strengths, protections and resilience against suicide and is developing the means to identify and support (witness) at-risk youth. *Substance Abuse and Mental Health Services Administration, State Tribal Youth Suicide SM061482*

Arctic Horizons: Social Science and the High North

Arctic Horizons is a multi-institution collaboration that aims to provide the Arctic social science research community – including current and prospective contributors in the fields of indigenous science, natural science, engineering, and humanities – an opportunity to reassess the goals, potentials, and needs in the diverse disciplinary and trans-disciplinary currents of social science research in the circumpolar North for the next decade. UAF and CANHR, under the leadership of Stacy Rasmus, hosted one of the re-envisioning workshops in Fairbanks. The three-day workshop in March titled: **Indigenous Scholarship in the North: Decolonizing Methods, Models and Practices in Social Science Research** brought together nearly 50 Indigenous experts and researchers from diverse academic and cultural backgrounds to explore the role and contributions of indigenous frameworks and knowledge systems in advancing fields of science and informing global solutions. A synthesis workshop in July 2016 will combine findings from all five workshops.

For more info visit www.arctichorizons.org. National Science Foundation, NSF 1608606



CANHR Student Highlights

Congratulations to CANHR's stellar graduates for the work that they did and the work they continue to do!

Spotlight

Sarah Nash, who graduated in 2013 from UAF, is currently the Cancer Surveillance Director at the Alaska Native Tribal Health Consortium. She directs the Alaska Native Tumor Registry, and is the Principal Investigator for the Alaska Surveillance, Epidemiology and End Results (SEER) Program of the National Cancer Institute.

Tara Ford, who graduated in 2013, is currently the Community Health Services Regional Administrator at the Aleutian Pribilof Islands Association, overseeing Behavioral Health and Community Wellness programs. She is also a mentor for Addiction Technology Transfer Center Network with University of Iowa.

Troy Ritter, who graduated in 2015, is now with the Centers for Disease Control National Center for Environmental Health in Atlanta, GA. In this capacity he focuses on addressing safe drinking water issues, especially issues facing American Indian and Alaska Native people.

Dominick Lemas, who graduated in 2012, is currently a Research Assistant Professor in the Department of Health Outcomes and Policy at the University of Florida. His current research focuses on understanding of how the bacteria community in the intestines of a mother can affect the risk of children becoming obese.

Jordan Lewis, who graduated in 2009 is currently an Associate Professor of Medical Education at the University of Alaska Anchorage School of Medical Education. He was formerly with the Indigenous Wellness Research Institute at the University of Washington School of Social Work in Seattle. He continues his research on successful aging among Alaska Native Elders, focusing more specifically on Alzheimer's and Dementia in villages and how to develop education and support programs to support Elders and their loved ones. Lewis also works in the Bristol Bay and Norton Sound Southern Sub-Regions of Alaska to explore tribally-based long-term supports and services for how to support aging in place. More information about his work can be found at www.akelderare.com.

Graduates 2012-2016

Bachelors Degree

- **Bernadine Keyes**, BA in Psychology (Advisor: C. Murphrey)
- **Ashley Strauch**, BS Psychology, "Perceptions of Alcohol Use Among Alaskan College Students" (Advisor: E. Lopez and M. Skewes)
- **April Mustard**, BS Biological Sciences, "Associations between Traditional Diet and Socioeconomic Factors in a Yup'ik Population in Southwest Alaska" (Advisor: D. O'Brien)

Master's Degree

- **Shannon Busby**, MS Natural Resource Management, "Wellness through the lens of gathering, gardening, and grocery stores" (Advisor: A. Bersamin)
- **Johanna Herron**, MS Interdisciplinary Studies, "Farm to School in Alaska- Perspectives from School Food Service Professionals" (Advisor: A. Bersamin)
- **Janne Maier**, MS, Biological Sciences, "Relationships among physical activity, diet, and obesity measures during adolescence (Advisor: A. Bersamin)
- **Jennifer Nu**, MS "Exploring the connection between salmon and well-being to strengthen a food system intervention in Western Alaska" (Advisor: A. Bersamin)
- **Julianne Power**, MS Interdisciplinary Studies, "Exploring the Potential for Technology-Based Nutrition Education for Alaska Native people in remote communities (Advisor: A. Bersamin)

Doctor of Philosophy

- **Maria Bray**, PhD. Biological Sciences, "Physical Activity, Body Composition and their Associations with Health in Yup'ik People" (Advisor: B. Boyer)
- **Tara Ford**, PhD. Clinical Community Psychology: Rural Indigenous Emphasis (Advisor: S. Rasmus)
- **Dominick Lemas**, PhD. Biological Sciences, "Gene-by-Diet interactions & obesity among Yup'ik people living in Southwest Alaska" (Advisor: B. Boyer)
- **Sarah Nash**, PhD. Biological Sciences, "Developing stable isotope biomarkers of Yup'ik traditional and market foods to detect associations with chronic disease risk" (Advisor: D. O'Brien)
- **Troy Ritter**, PhD. Interdisciplinary Studies, "Assessing the impact of water distribution methods on infectious disease rates in rural, remote Alaska Native communities (Advisor: A. Bersamin)
- **Amanda Walch**, PhD. Interdisciplinary Studies, "Understanding the role of traditional food in moderating the relationship between food security and diet quality among Alaska Native WIC clients in Anchorage" (Advisor: A. Bersamin)

Current Students

- **Brittany Corbin**, BS candidate in Biological Sciences (Advisor: D. O'Brien)
- **Sarah Hartman**, BS candidate in Biological Sciences (Advisor: D. O'Brien)
- **Angelina Martushoff**, BS candidate in Biological Sciences (Advisor: A. Podlutsky)
- **Katie Roseberry**, BS candidate in Biological Sciences (Advisor: D. O'Brien)
- **Dhara Shah**, PhD. candidate in Clinical Psychology (Advisor: K. Campbell)
- **Ron Standlee-Strom**, MS, candidate in Natural Resource Management (Advisor: A. Bersamin)
- **Alexander Thompson**, BS candidate in Biological Sciences (Advisor: A. Podlutsky)
- **Sasha White**, MS candidate in Biological Sciences (Advisor: A. Podlutsky)
- **Robert Williams**, MS candidate in Biological Sciences (Advisor: A. Podlutsky)
- **Krysta Yancey**, MS candidate in Biological Sciences (Advisor: A. Podlutsky)

Collaborators, Co-Researchers, and Mentors

CANHR welcomes new president professors:

Dale Schoeller, Ph.D., Institute on Aging at the University of Madison Wisconsin

Kent Thornburg, Ph.D., The Moore Institute at the Oregon Health and Science University School of Medicine

Lisa Wexler, Ph.D., Department of Community Health Education at the University of Massachusetts Amherst School of Public Health and Health Sciences

Kirk Dombrowski, Ph.D., Department of Sociology, University of Nebraska-Lincoln

President's Professors

Melissa Austin, Ph.D.
Art Blume, Ph.D.
Wylie Burke, M.D., Ph.D.
Bruce Fowler, Ph.D.
Patrick Heagerty, Ph.D.
David Henry, Ph.D.*
John Himes, Ph.D., M.P.H.
Kim Hopper, Ph.D.
William Knowler, M.D., Ph.D., M.P.H.
Alan Kristal, Ph.D., M.P.H.
Nancy Schoenberg, Ph.D.
Lisa Rey Thomas, Ph.D.
Beti Thompson, Ph.D.
Edison Trickett, Ph.D.
Joseph Trimble, Ph.D.
Nick Wareham, M.R.C.P., Ph.D.
**in memoriam*

Alaska Advisory Committee

James Berner, M.D.
Alaska Native Tribal Health Consortium

Joseph Klejka, M.D.
Yukon-Kuskokwim Health Corporation

Simeon John
Toksook Bay

H. Sally Smith
Bristol Bay Area Health Corporation

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Health News and Tips

- **Your body needs Vitamin D** for healthy bones and for regulating hormones. Yup'ik foods high in oils, such as seal and oily fish, are amazing rich sources of Vitamin D. For those who do not eat these foods, it is important to take Vitamin D supplements with a meal that contains fat so that the body can better absorb the vitamin D.
- **Alaska's edible plants** are extremely rich in vitamins. 1 cup of Wild rhubarb, for instance, provides almost 75% of the vitamin A you need in a day. Salmonberries and wild rhubarb are high in vitamin C.
- **Your skin produces Vitamin D** in the presence of sunlight. In northern latitudes, such as Alaska, the sun is too weak in winter, so people must get vitamin D from food. Traditional Yup'ik foods are excellent sources of vitamin D. 3 oz of salmon gives you more than 50% of the vitamin D you need in a day!
- **Good news for wintertime** - cold temperatures may be good for you? A 2014 study found that being outside in cold temperatures increased human "brown fat" - a kind of natural heat pad that burns energy to make heat.
- **Burning trash**, cardboard, plastic, clothing, and non-wood items in your woodstove is dangerous and may lead to chronic respiratory problems for people inside the house and outside in the community.
- **Only burn dry, seasoned wood** with a moisture content that is less than 20%. Firewood should be dried 6-10 months before burning and stored properly so that it stays dry.
- **Ellangneq**, the process of becoming aware, and sharing qanrayutet, words to live by, are important protections for Yup'ik young people.

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