

“Building relationships and research-based knowledge to improve the health of Alaska Natives”

News from the CENTER for ALASKA NATIVE HEALTH RESEARCH



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An unusual scientist

Bert Boyer’s research is in rural Alaskan Yup’ik communities and his participants are real people with real problems.

But more importantly, they have real solutions, if one takes the time to listen, he’s learned.

This is different research from the mice and ground squirrels he once worked with.

“It is great being able to work with people,” said Boyer, who was named director of the Center of Alaska Native Health Research last year.

“I actually have the opportunity to see if my health research makes a difference in my lifetime.”

That Boyer is able to easily move into new scientific disciplines makes him an unusual scientist, his colleagues say. Others say his willingness to learn makes him a good fit to lead CANHR.

“He is not only an accomplished biomedical scientist in his own right, he is also dedicated to mentoring junior investigators and advancing CANHR’s tradition of using community participatory approaches to conduct meaningful research into the causes of health disparities in Alaska Native populations,” said Michael Sayre, CANHR’s program official with the National Institutes of Health’s National Center for Research Resources.

Boyer began his career at the University of Alaska Fairbanks as a molecular biologist in 1992, after finishing his postdoctoral work in molecular genetics

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Bert Boyer, CANHR director, stands besides stacked rocks called “Pretend People” by Yup’ik peoples. Photo by Scarlett Hopkins.



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Taking CANHR to 2017 and beyond: Next steps

The Center’s leadership has been working on the next phase in CANHR’s history by writing a grant to the National Institutes of Health for continued funding to 2017. This is a transitional step in the NIH National Center for Research Resources’s Centers for Biomedical Research Excellence grant series. It is CANHR’s last competitive renewal, said Bert Boyer, CANHR’s director. He’s optimistic about CANHR’s chances, but after that funding ends, the center should be sustainable on independent investigator-initiated grants he and other CANHR researchers bring in.

CANHR was founded in 2001 with \$11 million by the first COBRE grant and was meant to develop infrastructure and provide junior investigators with mentoring and project funding for five years. In 2007 CANHR received another \$11 million. The money was used to strengthen the newly developed research infrastructure, and further grow and support the Center’s investigators.

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Collaboration leads to sustainable future for CANHR

From the director's desk: Dr. Bert Boyer

It's all about building collaborative networks.

CANHR scientists have learned to grow beyond their areas of expertise; biologists and geneticists have learned the language of psychologists and social scientists and vice versa. We've all come to respect and depend on the counsel of Yup'ik elders.

This is a fulfillment of Dr. Gerald Mohatt's vision.

Now it's time to share our research progress with participants, tribal councils, and health corporations. In addition, as scientists, we must share our findings with the broader scientific community. It's our professional responsibility, and one of the ways we can demonstrate that we have made measurable progress with the funding we have been awarded.

Sharing knowledge is also important to our sustainability as a center. We are now applying for a new round of funding to keep CANHR's core functioning until 2017. What should we expect from CANHR investigators now? Several CANHR investigators are applying for funding based on the research progress they made the past five years. Their success is important for their own professional growth, but also for the growth of CANHR.

Our faculty and staff have become leaders in community-based participatory research. It is a partnership where tribal members become co-researchers, assuring findings are relevant to community needs. This type of research, by necessity, is reliant on long-term commitment, not only by scientists, but from community members themselves.

As an established CBPR center, our investigators have the opportunity to reach out and work with scientists throughout the world, to share our approach, to learn about new scientific approaches, and to reach outside their comfort zone to plan new research together that will address the health research priorities of Alaska Native people. These collaborative networks will further establish our center and lead to sustainability.

Sometimes it's tiring, with long trips away from home, to spend meaningful time in communities and to network with collaborating scientists outside Alaska. However, I believe the rewards are tremendous. New research ideas come from our ability to listen, as well as our capacity to work as a team. It's time to build teams of researchers and community members in Alaska, in addition to forming teams with scientists outside Alaska.

In our mind, CBPR is the best way to conduct human health research. In doing so, we give voice, a respected voice, to Alaska Native people who offer their most personal information for use in scientific studies, all for the betterment of others.

It is now our responsibility to share our experiences with more scientists. It's time to put our findings into practical application, to build our collaborative networks. It's our path to a sustainable future.



Bert Boyer, CANHR director, addresses the 2010 Alaska Federation of Natives delegation.

Save the date

Small Sample Methodology Conference

August 17-18, 2011

University of Alaska Fairbanks

This CANHR conference will address the methodological and statistical problems posed by small samples in research.

The conference will focus on three areas: power maximization, measurement error reduction, and mixed methods. Presentations are intended for the general research community, and will be of particular interest to all researchers who work with small populations typical in multicultural research, and in rural research.

Conference Chair: Carlotta Fok, CANHR. Co-Chairs: James Allen, CANHR; David Henry, University of Illinois at Chicago

Made possible by a grant from the National Institute on Drug Abuse, and the Office of Behavioral and Social Sciences Research

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Fairbanks, Bethel clinical remodels to start this summer

Work on the \$7.5 million remodel that will create new clinical health research facilities will begin in May at Fairbanks and in July at Bethel.

In Bethel the empty Vocational Technology Building at the UAF Kuskokwim Campus will become a 1,378 square foot clinical and nutritional assessment suite, including space for phlebotomy, physical activity measurements and other data collection.

It also will have a telehealth facility for communication between Fairbanks and Bethel. The work there should be completed by August 2012.

The space in Fairbanks will mirror the Bethel site and fill the current atrium of the Arctic Health Research Building. It will add 1,566 square feet of clinical research space.

The work should be completed by early 2012. The funding comes from an NIH, NCRG grant.

Aging, ethics, omega-3 and communication are highlights in CANHR publications

Lewis, J. (2011). **Successful aging through the eyes of Alaska Natives. What it means to be an Elder in Bristol Bay, AK.** *The Gerontologist*. Advance online publication. PMID: 21357658. doi:10.1093/geront/gnr006.

Jordan Lewis discusses what successful aging means to respected Alaska Natives elders in the Bristol Bay area. This is a novel approach, as Lewis points out, because previous aging research has been driven from a Western, or medical, approach and has focused on health status and disease as determining factors in successful aging.

Lewis concludes that the Bristol Bay elders, who are Aleut, Athabascan and Yup'ik, approach health holistically and defined four elements that brought them to respected elderhood in their communities. These are emotional wellbeing, community engagement, spirituality and physical health.

Lewis's research is one step toward gaining a better understanding of aging in Alaska, he said.

"It will be important to establish a broader understanding of elders' roles in community health



Tim Fields of Noorvik leaps to kick the seal skin ball at the World Eskimo-Indian Olympics, held in Fairbanks in July 2010. Fields won a gold medal in the contest by kicking 114 inches high in the One Foot High Kick (Canadian Style). Photo by Diana Campbell.

and provide opportunities to continue passing down their knowledge, stories, language and history," Lewis wrote. "Our Alaska Native elders continue to demonstrate resiliency, and it is the elders today who possess the knowledge that will enable Alaska Native communities to continue to thrive."

Boyer, B.B., Dillard, D., Woodahl, E.L., Whitener, R., Thummel, K.E., Burke, W. (2011). **Ethical issues in developing pharmacogenetic research partnerships with American indigenous communities.** *Clinical Pharmacology & Therapeutics*. 89 (3), 343-345. PMC3090734.

Bert Boyer and colleagues make a strong case for involving indigenous research subjects in the discourse, planning, process and dissemination of any pharmacogenetic studies impacting them.

It's a matter of justice, the authors say. The study of how drugs and genes interact is quickly growing, bringing the possibility of safely tailoring drug prescriptions to meet an individual's particular ability to metabolize them. To not identify all possible

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New findings, possible interventions, next in CANHR studies

After many years of travel, visiting and gathering information in rural Alaska communities, CANHR researchers and community partners in the four NCCR COBRE projects are busy analyzing findings and planning next steps.

Here are updates.

YUP'IK PERCEPTIONS OF NUTRITION AND HEALTH

This project's purpose was to find out what factors influence food choices and health among Yup'ik youth.



Bersamin

Andrea Bersamin, the project principal investigator, and her staff, interviewed 80 youth and parents from two communities.

Early findings show Yup'ik parents and youth believe traditional foods, such as fish, seal, wild greens and berries, underpin diet quality in their communities.

However, youth are much less likely to eat traditional foods than their parents.

It also appears that children of parents who highly value traditional foods are the ones who eat the most of those foods, Bersamin said. In order to promote healthy eating in youth, an effective intervention strategy might be best tailored toward parents. While

there is still more to piece together from the data, Bersamin and her team plan to talk with communities about what type of intervention would work best.

STRIKING A BALANCE

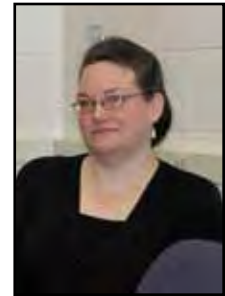
This project was driven by the question of determining the levels of nutrients and contaminants, from freshly caught to the end of a fork, that might be found in traditional Alaska Native subsistence food.

Camille Lieske, the project's postdoctoral fellow, said the team has sampled 482 items of raw and processed food. This includes 186 fish, 42 plants, 6 musk oxen, and other items, she said.

They've gotten back the mercury analysis, Lieske said, and are now working on analyses of selenium, copper, lead, cadmium and organohalogens.

The next step is to bring the initial findings back to the communities. Generally speaking, they've found it was important to look at the differences in tissue from raw and cooked foods, she said.

Lieske said the community freely shared their food for research. They also explained how it was prepared and what cultural value each food item had.



Lieske

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New President's Professors bring nutrition, multicultural and psychology expertise



Henry

David Henry, Ph.D., is an associate professor in the Department of Psychology at the University of Illinois at Chicago.

In addition to teaching psychiatry trainees and mentoring faculty in research methods, Henry is involved in research programs on community attitudes about disabilities, treatment of childhood psychopathology, prevention of antisocial behavior and school failure, and developmental and ecological risk. Email: Dhenry@psych.uic.edu



Kristal

Alan Kristal, Ph.D., is a member/associate head in the Cancer Prevention Program at the Fred Hutchinson Cancer Research Center.

His primary research interests are in nutritional epidemiology, including the etiologic relationships between diet and cancer, and implementation and evaluation of public health nutrition interventions. Email: akristal@fhcrc.org



Thomas

Lisa Rey Thomas, Ph.D., is a research scientist in the Alcohol and Drug Abuse Institute at the University of Washington. She is currently a Member-at-Large of the American Psychological Association Division 45 Executive Committee. She is co-investigator of the Healing of the Canoe project, and PI of the Tribal Healing and Wellness Conference funded by NIH/NCMHD. Email: lrthomas@u.washington.edu



Solving a puzzle: Yup'ik understandings of genetics

CANHR researchers do a good job returning clinically actionable results to participants. However, providing genetic research findings is a bit more complicated.

What's given researchers pause is trying to find the right Yup'ik words to talk about genetics. There are no commonly known words for genetics in the Yup'ik language. Part of CANHR's community-based participatory research approach is to keep participants informed, said Bert Boyer, CANHR director.

"We have a commitment to return genetic results to our research partners, but we need to know how," he said.

This need led to collaboration between Boyer and Dr. Wylie Burke at the University of Washington to search for ways to develop a communication framework that identifies appropriate communication strategies for different types of genetic and genomic research results from CANHR studies.

The project will bring \$1.8 million from NIH's National Human Genome Research for three years to the University of Alaska Fairbanks.

A Yup'ik Community Planning Group made up of community members who are active in their communities and familiar with some research projects at CANHR has



Linda Burhansstipanov, a CANHR advisor, talks about genes with the Yup'ik Community Planning Group members on the Ethics of Dissemination grant during a training in Bethel. Photo by Diana Campbell .

been formed. They meet regularly with the Ciuliat group, a group of Yup'ik professionals, to determine culturally appropriate and relevant ways to talk about genetics in their communities.

The study will use community-based participatory research methods to develop the framework, assess the portability of the framework and develop education and communication materials, including a guide and website.

CANHR researchers team up to study drug/gene interaction

The University of Alaska Fairbanks will study how the genetics and diet of Yup'ik people affect the blood-thinning properties of a common drug used by heart and stroke patients.

The research could lead to personalized drug prescriptions. The UAF Center for Alaska Native Health Research will conduct the research as part of a \$1.02 million National Institutes of Health sub-award through the University of Washington.

"We'll be looking at the genetic code that contributes to the rate the body breaks down the blood thinner warfarin," said Bert Boyer, CANHR director. "Knowing this information may eventually help physicians find a safe and effective dose."

CANHR researchers will team with UW professors Wylie Burke and Ken Thummel and others to create a Northwest-Alaska center to study pharmacogenomics—how genetics affects a person's ability to process drugs—in rural and underserved populations. UW received a five-year, \$10 million grant from the NIH Pharmacogenomics Research Network and is one of 14 awardees nationally.

Pharmacogenomics researchers are looking to identify how genes could be used to tailor drug prescriptions to make them more effective and safe.

Warfarin is a successful, but hard-to-manage, blood thinner, especially for people with limited access to health care like Alaska's Yup'ik people in the Yukon Kuskokwim delta, where the CANHR study will take place. Too much of it could cause hemorrhaging and too little leads to blood clotting and blockage, Boyer said. A patient has to be monitored closely.

Genes have a substantial effect on the way the body processes drugs, he said. Previous research in the US has documented warfarin's interaction with genes in the Caucasian population, but Alaska Native people and Native Americans have not been studied.

CANHR researchers will also look at how polyunsaturated fatty acids and vitamin K interact with warfarin among the Yup'ik people. Their marine-based diet is rich in the fatty acids, but not foods with a lot of vitamin K, which is commonly found in green, leafy vegetables. The fatty acids are believed to act as a blood-thinning agent while vitamin K encourages blood clotting, Boyer explained.

The project will also offer a chance to use natural stable isotopes to measure food intake, a tool developed by CANHR, said Diane O'Brien, a scientist at the center.



CANHR lab offers learning experience for students



Tayesia Nick extracts DNA from blood samples in Bert Boyer's lab at CANHR. Nick, from Pilot Station, was a student with RAHI II Next Step, a molecular biology program. Jynene Black, CANHR lab tech, hopes to have another student come to the lab this summer. Photo by Dwayne Alexie Myers.

Jynene Black made room in her corner of Bert Boyer's lab for a brand new high school graduate last summer.

It was part of collaboration with RAHI II Next Step, a section of the Rural Alaska Honors Institute, and meant to give high school students in-depth knowledge of molecular biology, experience in a research lab and encourage students to major and graduate in the sciences.

For three weeks Tayesia Nick, of Pilot Station, AK, extracted DNA from dried blood, plasma, sera, and red blood cells. Her experiment was to find which source gave better quality and quantity of DNA. Her theory, which Black encouraged her to develop, was that the dried blood would provide the best genetic material.

"I don't get grossed out by blood," said Nick, who wore a lab coat, gloves and goggles while working with the samples, last summer.

It turns out all of the sample types could be used, Nick concluded at the end of her study. She is now finishing her first year at the University of Alaska Fairbanks.

Black, a CANHR lab technician, said she plans to invite another RAHI II student to the lab this summer. It's a chance to introduce someone to new possibilities in biomedical research.

"You can see when the light comes on in their eyes," she said.

For more information about RAHI II visit <http://www.uaf.edu/bioprep/> or contact Amanda Meyer at (907) 474-5680

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How to have a healthy heart

Our ancestors were active and lean. They walked, hunted, gathered, chopped wood, hauled water, and played games. It is still important to be active today, every day. Physical activity helps burn body fat and calories from food. Try to be active with your family for at least 30 minutes each day. Or be active for 10 minutes, three times a day. You can do it!



Drying salmon. Photo by Bert Boyer.



The Qungasvik Projects

The Qungasvik Projects have added two more Yup'ik communities to a prevention trial to test intervention methods meant to strengthen youth against substance abuse and to find reasons for living.

The Qungasvik, (toolbox) is the intervention guidebook developed as part of the *Elluam Tungiinun* (Towards Wellness) pilot project in Alakanuk, an Alaska Native community in Southwest Alaska. The research is now called The Qungasvik Projects.

Activities from the Qungasvik work to strengthen communities, families, and individuals and build on natural supports and healing practices present in the communities. Intervention activities are based on Yup'ik values and traditions and are developed in the communities.

For instance, whale hunting teaches the importance of awareness (*ellangneq*) and taking care of each other (*llateng kellulluki*). Learning about ice conditions and safety on the river can be a lesson in preparing oneself against the dangers of substance use/abuse.

The community-based participatory research tests the program's effectiveness as an evidence-based practice.



Above: An elder mentor teaches two youth how to find and gather greens that grow right below the village by the beach. They found peppermint, wormwood (*caiggluq*), sourdock (*quagcit*) and rhubarb. These greens along with other Yup'ik foods were served during a Harvest Potluck in one of the Qungasvik Projects communities. Photo by Sarah Peterson.



Girls with harpoons chasing a whale. Photo by Sarah Peterson.



Elder teaching youth how to butcher a whale and preserve every part for future use. Photo by Sarah Peterson.





Cancer collaboration

Steve Ginnis, president of the Fairbanks Native Association, talks with Gail Denning and Ellen López. López and Denning want to start an Alaska Native collaborative cancer research program at CANHR. López is a CANHR public health researcher and Denning is one of López's students.

Ginnis has given initial support for such a project and currently López is working on securing grants to start research. *Photo by Diana Campbell.*

CANHR research yields publications continued from page 3

genetic variants found in different populations limits the provision of safe and effective drugs to the medically underserved, the authors argue.

But gaining access to an Alaska Native or American Indian community could be difficult given the "legacy of mistrust, derived from traditional research" and must be overcome. The authors cite a couple of egregious studies as examples.

The core values implicit to community-based participatory research call for scientists to make a long-term commitment to communities, to collaboratively set research priorities, build local capacity to address health priorities, return results in a culturally understandable format, and revisit communities to maintain a lasting partnership, the authors said.

West, K.M., Hopkins, S.E., Hopper, K.J., Mohatt, G.V., Boyer, B.B. (2011). **Found in translation: Decoding local understandings of genetics and heredity in a Yup'ik Eskimo community.**

Public Understanding of Science. Published online 14 March 2011. NIHMSID 289310.

Many scientific terms don't have a direct translation in Yup'ik, so providing genetic research findings to those communities in a meaningful and culturally appropriate way has been difficult, the authors report. This is detrimental to community-based participatory research, in which a key component is disseminating research. This paper offers an exploratory look at where to begin developing ways to share appropriate genetic findings with Yup'ik people.

"Our findings suggest that concepts of genetics and heredity are, indeed, discussed within the community, even if strictly comparable terms do not exist in the Yup'ik language," the authors said.

West and the authors found that the use of several Yup'ik translators, who interpreted interviews from Yup'ik to English and back again, offered suggestions of how a community

might think of genetics and heredity. Local community research assistants, health care providers, educators and elders could provide better insight on how they would discuss genetics in the community.

Researchers could better frame their findings by understanding how community members talk with each other across age and language groups, and encouraging such discussions.

"This 'co-learning process' exemplifies key principles of CBPR," the authors cite.

Makhoul, Z., Kristal, A.R., Gulati, R., Luick, B., Bersamin, A., O'Brien, D., . . . Boyer, B. (2011). **Associations of obesity with triglycerides and C-reactive protein are attenuated in adults with high red blood cell eicosapentaenoic and docosahexaenoic acids.**

European Journal of Clinical Nutrition. Early online doi:10.1038/ejcn.2011.39. NIHMSID 277749. Yup'ik Eskimos, on average eat 20 times more omega-3 fats from food than do people from the Lower 48,

Continued next page



Publications continued

the authors report in this publication.

While that's not surprising to Alaskans, what is of interest is that some of the study participants, with high levels of omega-3s in their blood and who were considered obese, had levels of blood triglycerides and inflammation, two markers of heart disease risk and possibly diabetes risk, that did not differ from those of normal weight persons. Also, Yup'ik people in the study had a significantly lower rate of type 2 diabetes, at 3.3 percent compared to Americans' overall rate at 7.7 percent.

Genetic, lifestyle and dietary factors may account for this difference, said Zeina Makhoul, the publication's lead author. "It is reasonable to ask, based on our findings, whether the lower prevalence of diabetes in this population might be attributed, at least in part, to their higher consumption of omega-3 rich foods."

The study was conducted by the Fred Hutchinson Cancer Research Center in collaboration with CANHR.



Last summer CANHR staff and faculty entered the Red Green Regatta, and sailed the S.S. No One's Ark, made of duct tape, coolers and other river-worthy materials.

The team didn't win any prizes, but plan to try again this year. Pictured from left to right floating the Chena River are Russ Mitchell, Salena Bias, Andrea Bersamin, Kristine Niles and Alison York. Not pictured is Michelle Dondanville. Photo by Diana Campbell.

An old favorite made healthier by baking



NO FRY FRYBREAD

- 2 cups flour
- 2 teaspoons baking powder
- 1/2 teaspoon salt
- 1/2 teaspoon sugar
- 1/2 cup water
- 1/2 cup nonfat or low fat milk
- 2 tablespoons salad oil

Preheat oven to 400°.

Mix dry ingredients together in a small bowl.

In a pan, mix liquid ingredients and heat until warm, not hot. Mix in into dry ingredients until dough forms. Lightly grease or spray an iron skillet or baking pan. Form dough into a ball. Place in pan and flatten. Bake at 400° for 30-40 minutes. Cut into wedges to serve.

COURTESY OF ALBERT ROMAS OF VALDEZ, ALASKA



Analyzing data and making plans *continued from page 4*

“We were phenomenally successful,” Lieske said. “But it could not have been possible without the enthusiasm and participation of those who provided samples.”

YUP'IK EXPERIENCES OF STRESS AND COPING

Inna Rivkin and her team have finished collecting information about what stresses people and how they cope in rural Western Alaska. They've visited two communities and done 113 short interviews and 60 longer, more intensive ones, she said.

They've looked at the stress portion of analyses and are learning what people say about coping.

“There is considerable trauma,” Rivkin said. “A lot of people are affected by suicides.”

Other major factors include:

- Losing loved ones
- Effects of alcohol use
- Family stress
- Worry about children in the community
- Money issues, such as expensive food and fuel
- Work issues, such as not enough jobs and lack of training

As for coping, a first understanding of the data shows that people rely on family, spirituality, and keeping busy, she said.

“What brought them hope is spirituality, subsistence activities, spending time with family, being with their kids, and helping others,” she said.

Next Rivkin, the team and the communities will explore what type of interventions might be planned to help with stress. Once again the communities will be asked for their thoughts on the best plan, she said.

“I've really been impressed with the communities and their partnership to work with us,” Rivkin said.

DISCOVERING DIETARY BIOMARKERS FOR YUP'IK SUBSISTENCE AND MARKET FOODS

Diane O'Brien is pleased that safe and naturally occurring isotope ratios can be used to identify how much traditional marine foods people are eating just by measuring blood, hair or fingernail samples.

“The measurements are extremely accurate,” she said. “Your ability to find relationships between health and diet is so much stronger with a tool like that.”

And because the measurements can be made from fingernail clippings or hair, data could be

collected from many more people, she said.

She is completing analyses on other isotopes, which should strengthen the study. Isotopes also can be used to identify who eats more commercial meat and sweetened beverages, and she hopes to better refine those analyses in the next few months.

“The next step is finding good applications for this tool,” she said.



Billy Charles, Nancy Schoenberg and others listen to Bill Knowler, CANHR President's Professor, give a talk during the Intervention Research Workshop held this spring at UAF.

Charles is the prevention trial field research coordinator for The Qungasvik Projects and Schoenberg is another President's Professor. Photo by Diana Campbell.

CANHR's future funding *continued from page 1*

That funding ends in 2012.

This next round of funding will be \$750,000 annually, half of what CANHR has been getting, Boyer said. Investigators are now expected to compete successfully for their own grants, based on their work at CANHR.

“We also have a plan to go for more big center-like grants,” Boyer said. CANHR advisors, including the President's Professors of Biomedical Research, advisory committees, tribal leaders and members, as well as highly regarded consultants, helped in developing the plan, he said.



CANHR's new director the right person for the job *continued from page 1*



Bert Boyer walks on his treadmill desk in his office, while working on his laptop computer. Photo by Diana Campbell.

at the Jackson Laboratory, Bar Harbor, Maine. Previously he earned a bachelor's degree in chemistry at Texas Tech University and a Ph.D. in physiology from Louisiana State University Medical School.

Boyer was just the person UAF was looking for, said Brian Barnes, director of the Institute of

Arctic Biology, which houses CANHR. Barnes was on the search committee that hired Boyer in 1992.

Barnes and Boyer quickly started working together on ground squirrel hibernation research. It was a leap from mice, Barnes noted, but one to which Boyer had no trouble adapting.

Many scientists focus learning within their own field of expertise during their careers, but Boyer moves beyond those boundaries, Barnes said. So Barnes was not surprised when Boyer moved into human studies, when CANHR was formed in 2001.

Boyer began his CANHR work establishing a genetics lab, and is now looking at genetics and obesity, the role of genetics in drug safety and metabolism, as well as finding ways to report findings about genetic research to Yup'ik people, all funded by several National Institutes of Health grants. These are all very different areas of research, Barnes noted.

"It's fearless of him to take retraining in different areas," he said. "He clearly does it because he wants to make a difference."

It takes a long-term commitment to conduct human research in a culturally sensitive and responsible way. The late Dr. Gerald Mohatt, former CANHR director, told Boyer the best thing he could do when visiting rural Alaska is "learn to hang out," Boyer said. After

spending at least two months a year for the last eight years visiting Yup'ik communities for research, Boyer has enjoyed many pots of coffee and tea.

"They have to know you care," Boyer said. "I will end my career returning to these communities."

His care for people and his curiosity gets him out into the communities he visits, said Scarlett Hopkins, director of CANHR's Community Engagement and Clinical Support Core. He likes to join in community activities, like Eskimo Dance or going to feasts.

"He loves traditional food," Hopkins said. "He'll eat anything."

Hopkins usually arranges and accompanies Boyer on his trips to rural Alaska. Not only does he help with data collection but he'll sweep the floor, empty the trash or the honey bucket, recalled Hopkins.

Boyer's curiosity and willingness to learn about Yup'ik peoples are good traits for CANHR's leader, said Walkie Charles, who is a member of a CANHR advisory committee called Ciuliat, a group that works with Boyer and colleagues on the return of genetic research results grant.

"I think of him as someone who respects the culture with which he works, to the degree of respect enough to learn the language and culture," Charles said. Charles also teaches a UAF Yup'ik language class that Boyer attended in the 2010 fall semester.

Boyer was the oldest member of the class but no one there knew he was the director of a multi-million dollar UAF research center until later, Charles said. When Boyer traveled to a village he knew a fellow classmate was from, he'd ask them if he could bring back anything, particularly Native food.

"Not everyone would do this," Charles said.

Boyer has a Yup'ik name, given to him, by some children in one of the communities he visits.

"They always asked, 'Kituusit? (What's your name?) Kituusit?' and I'd say 'Bert,' he said. "They'd say 'Bird?'" Now he is known as Yaqulek, which means "bird."

The elders would likely have a different name, Charles said.

"If I were to ask an elder to describe Bert, they would say he is 'yuk'egtaar,' which means, literally, 'beautiful person:' a person who lives with humility, with grace, with honor, with silent pride," Charles said.



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If you have news for the next newsletter or want to find out more about CANHR, contact Diana Campbell at (907) 474-5221 or dicampbell@alaska.edu.