

TOMORROW'S NEWS

UPDATE ON ALBERTA'S TOMORROW PROJECT
ESTABLISHED IN 2000 TO LEARN MORE ABOUT CANCER AND CHRONIC DISEASE



ALBERTA'S
TOMORROW
PROJECT

Inspiring research for
a healthier tomorrow

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Letter from Our Scientific Director

Hello! The last year has been an exciting one for Alberta's Tomorrow Project (ATP) as we launched and wrapped up our first online follow-up questionnaire, Survey 2017. Tens of thousands of our participants embraced the opportunity to move to a digital version, which helped us reduce costs in printing, mailing, scanning and verifying paper copies. In fact, a survey filled out online takes our staff about one quarter of the time to process, compared with a paper version!

If you have received this paper newsletter, it means we do not have a current email address for you. To help us communicate more quickly and efficiently with you, please email us at tomorrow@ahs.ca with your current email and mailing addresses and full name.

For those of you who prefer not to go digital, know that we are committed to exploring new, alternative formats in the years ahead.

To the rest who ventured online, thank you for working with us to preserve precious funding dollars, thereby helping to ensure the long-term sustainability of ATP. You will see more online questionnaires coming in the future, as we try to

reach out to you for information on a more regular basis.

This past year has also seen ATP's first foray into microbiome research. More than 400 participants in southern Alberta were invited to join an international project headed by Dr. Jane Shearer, a professor in the Faculty of Kinesiology at the University of Calgary. Its aim is to explore which collections of microbes in the body are linked with ongoing health or illness. Even though participating required donating a sample of poop, and an early morning appointment to collect blood and physical measurements, our participants came through as always. Thank you! You can read more about this 'ancillary study', and other research currently underway, later in this newsletter.

Beyond our internal research projects into which aspects of lifestyle influence cancer and chronic disease risk, many other scientists in Alberta and elsewhere are using ATP data to conduct their own studies. You'll find stories about their research here, too. Many of you have told us that you believe nutrition and exercise play a big role in disease prevention. We heard you! And we're excited to tell you that our next major



*Dr. Jennifer Vena,
ATP Scientific Director*

project will involve sending out dietary and physical activity surveys to all of our participants. We hope to launch these questionnaires in 2020, and will be looking for creative ways to capture the detailed information we're always so thankful to collect from our wonderful participants.

Thank you so much for your continued participation in Alberta's Tomorrow Project, and enjoy our annual newsletter!

Best in health,

JENNIFER VENA
Scientific Director,
Alberta's Tomorrow Project



Ramona Parent-Boyd and family

ATP Participants In for the Long Run

Camrose resident Ramona Parent-Boyd didn't waver when it came to filling out ATP's follow-up Survey 2017. Not only did she sign up for the project in 2012, she encouraged her husband Malcolm to join, and roused support among friends and acquaintances in this central Alberta community to do the same.

"I did a grad school program in health promotion," she says. "I thought, we have to fill this out, this is so great because down the road they're going to have all this health information. It's a longitudinal study, it's a big questionnaire, but these long-term studies are the ones that give us so much."

Like most people, Parent-Boyd has experienced cancer within her extended family and among friends. The idea that participating in an ongoing cancer and chronic disease prevention project might

help others – and those closest to her – is an inspiring one.

"It's an area that I love and I'm pretty passionate about it. You can be helping people in the future, future generations getting more information about our health; I think it's worth it to do, even if there is no monetary attachment to any of that time we are devoting."

With two teenaged daughters, Parent-Boyd is invested in a long-term commitment to sustained health. ■

"This is a huge endeavour, so important in the research world. So it's pretty cool to be involved in a very, very small piece of it."

Why I'm Working with ATP Data

"In my research, I am exploring whether omega-3 fatty acids (found mostly in fish) reduce the risk of breast cancer, and if so, how much should be consumed.

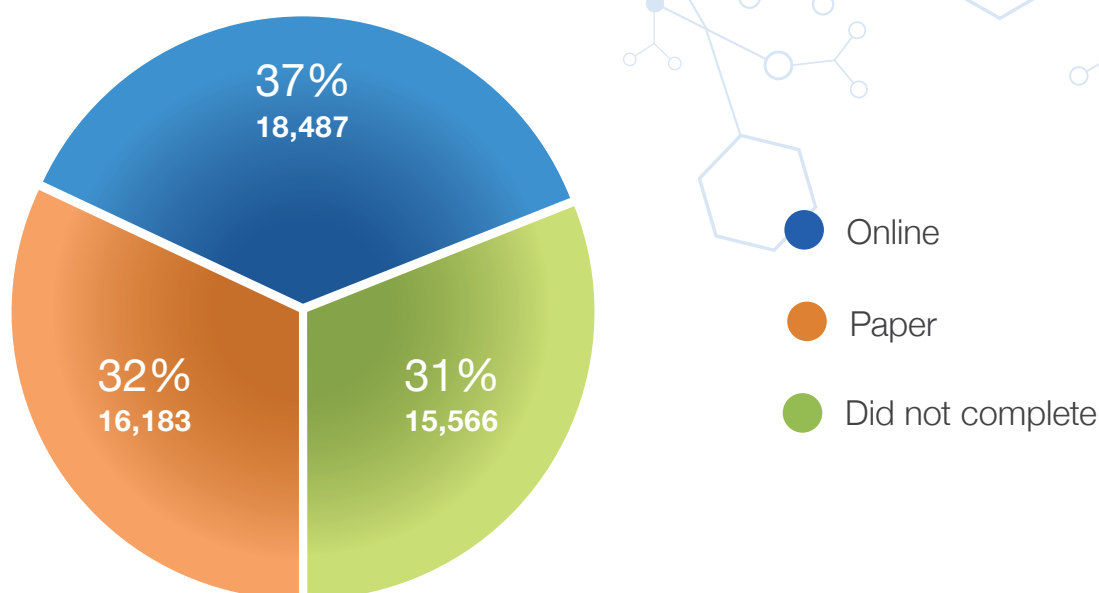
I needed to match women diagnosed with breast cancer, with those of the same age who have never been diagnosed. Because ATP participants filled out such detailed dietary surveys and gave blood samples when they were cancer-free, we have a unique opportunity to compare their diet before disease to see if these healthy fats made a difference.

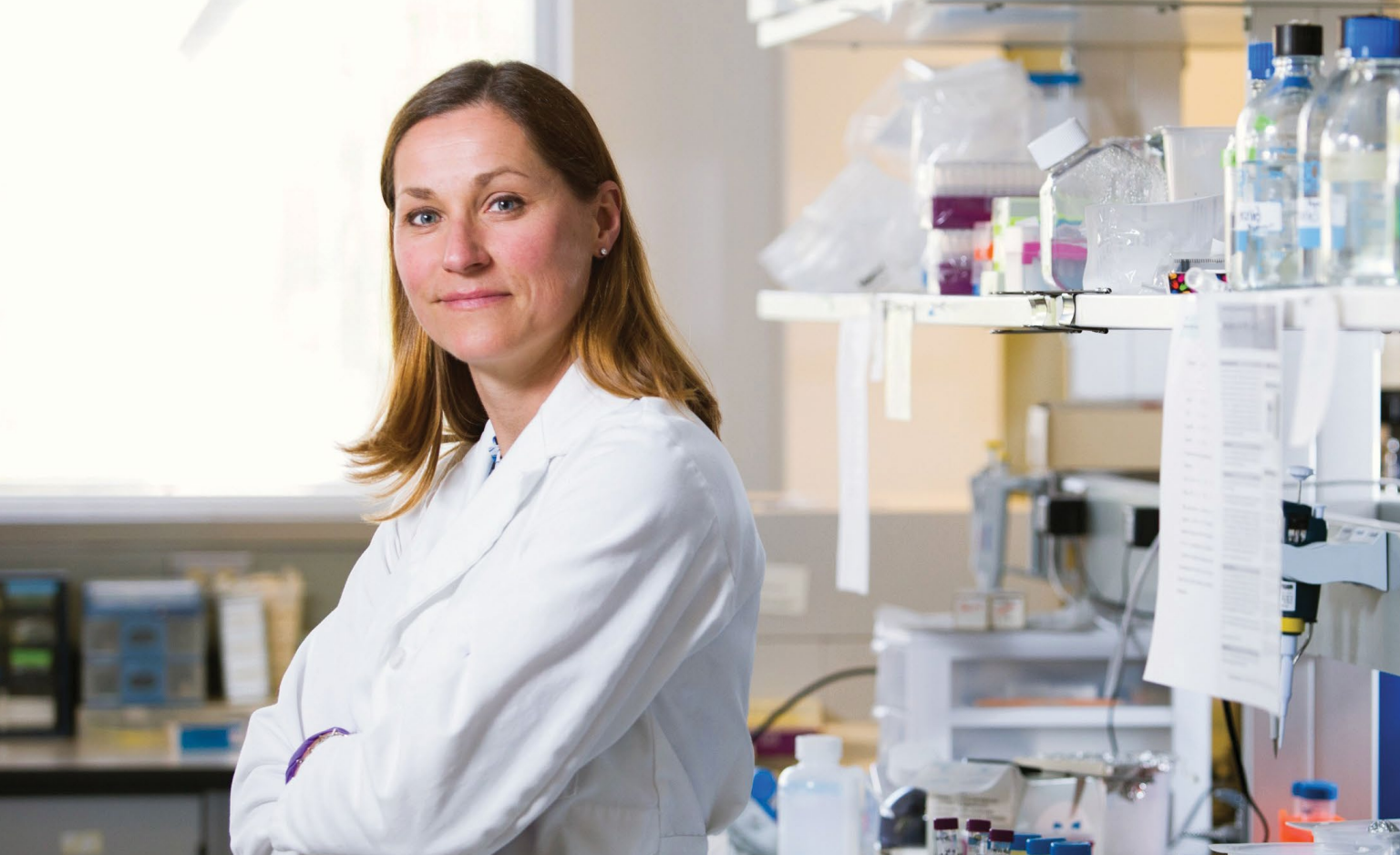
That would be almost impossible to do, without the data provided by ATP and its participants. It's an unbelievable cohort."



*Dr. Catherine Field – Professor
Agricultural Life and Environmental
Science, University of Alberta*

Survey 2017 Completions





Jane Shearer, University of Calgary (Photo by Riley Brandt)

What's the Poop on ATP's Microbiome Research?

Human poop is usually seen as nasty waste to be disposed of as quickly as possible. But a growing number of researchers believe this smelly natural resource holds valuable clues for cancer and chronic disease prevention and treatment.

In 2018, 400 Alberta's Tomorrow Project (ATP) participants cheerfully held their noses and headed to the washroom, collecting stool samples and later giving blood to support a unique international microbiome project. Called Gut Metatypes as Biomarkers for Nutrition and Health, or BioNUGUT, the study aims to explore which collections of microbes are linked

with ongoing health or illness.

Dr. Jane Shearer, Professor in the Faculty of Kinesiology at the University of Calgary, led the Canadian arm of BioNUGUT.

"We're looking at all of the bugs in people's stool, to identify which microbe species are in there and what they're doing," Shearer explains. "We want to find out which ones are contributing to health benefits, or are responsible for detrimental effects."

Our bowel movements carry by-products of the estimated 100 trillion tiny bacteria that live on and within each one of us. Though microbes are often considered a threat to our health, we cannot survive without them. They break down the food

we eat, produce nutrients and vitamins, and play a crucial role in keeping us healthy. How well or poorly they do their job, can contribute to serious conditions like cardiovascular disease, or diabetes.

The science of the microbiome – every person's individual and unique collection of bacteria – is now revealing its potential impact on everything from cancer and obesity to mental health.

Further, as bacteria in the gut break down food, they produce chemicals that can be detected in blood. Combined with individual samples, detailed dietary and lifestyle questionnaires and health records from ATP participants will help researchers discover which microbiome "signatures"



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warn of developing disease. Eventually, blood screening could suffice, eliminating the need to analyze poop at all.

Researchers like Shearer believe so-called biological markers could be used in health prevention or screening programs, as well as to monitor recovery after illness.

“If we learn that someone is at greater risk of cardiovascular

disease, we can intervene much sooner. We can also be more targeted in the treatment: more visits with health care teams, more tailored medication, and give more specific advice, such as getting a dietitian involved. The approach can be much more personalized for each patient.”

She notes her research was made possible thanks to the enthusiasm of ATP participants.

“The ability to recruit specific participants so quickly and efficiently, I could never have done that on my own,” she says. “Having a prior health background on file from past surveys they’d filled out, to know which participants had an established history of cardiovascular disease or diabetes was really unbelievable. The project is such a great resource for researchers like me.” ■

What is An Ancillary Study?

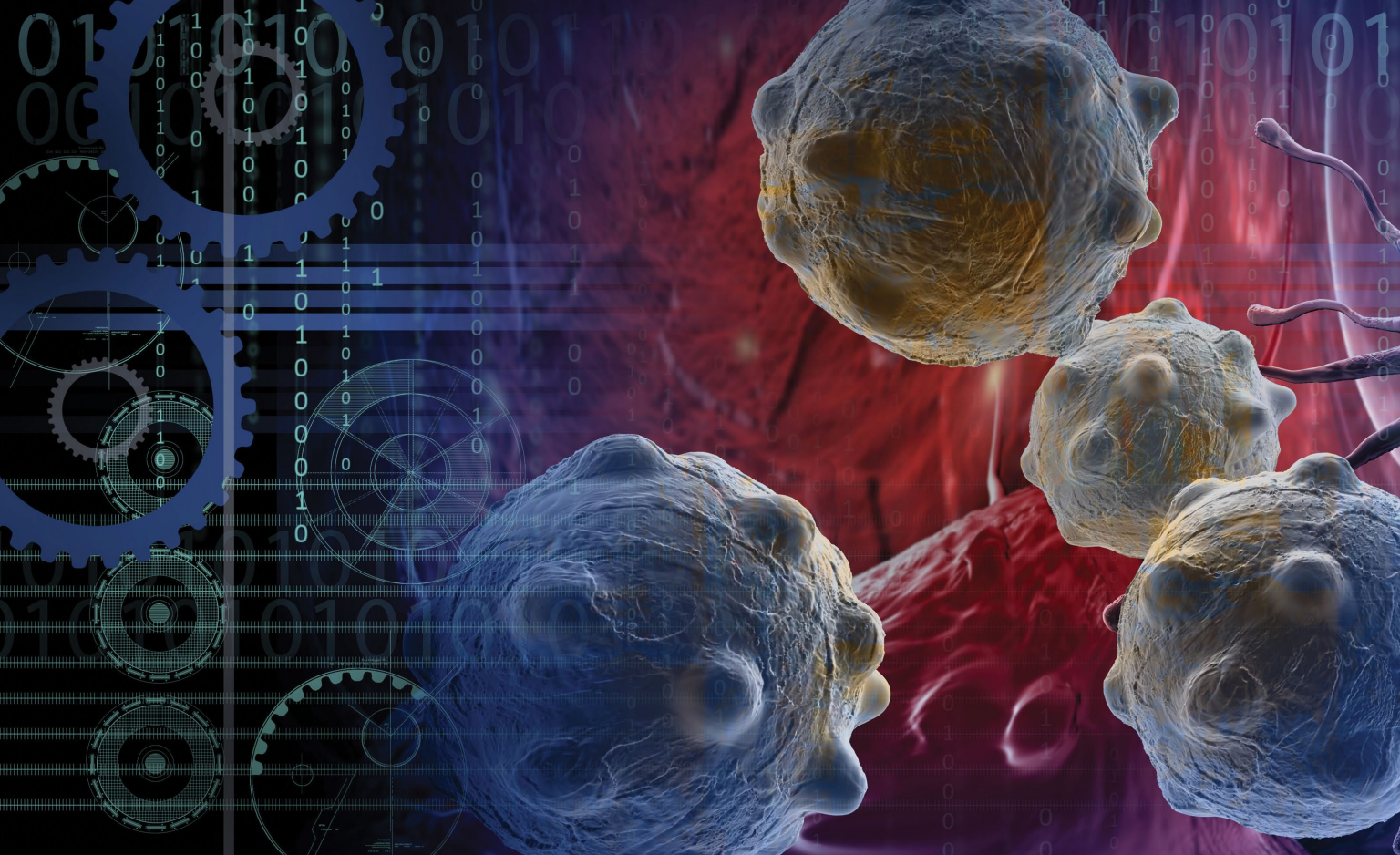
ATP’s BioNUGUT microbiome project is an example of an ancillary study. This means it was created outside of the initial mandate of ATP as a new, secondary project, and involved the collection of additional data from specific groups of ATP participants.

As ATP’s overall mission is to support research into the prevention, diagnosis and treatment of cancer and chronic diseases, we expect to support more ancillary studies in the future.

Sources:

<https://grants.nih.gov/grants/glossary.htm#AncillaryStudy>

<https://www.cancer.gov/publications/dictionaries/cancer-terms/def/ancillary-test>



Researchers in Manchester UK Using ATP Data

Alberta's Tomorrow Project (ATP) is expanding both its potential impact and geographical reach, in a new collaboration with British researchers.



*Professor Kenneth Muir,
University of Manchester*

Led by Kenneth Muir, a professor of epidemiology at the University of Manchester in the United Kingdom, the project aims to develop more accurate ways to predict which healthy women are at greatest risk for breast and ovarian cancer in the future.

Muir and colleagues have examined information from almost 275,000 women enrolled in the UK Biobank, a massive long-term study. Launched in 2006, the UK Biobank recruited half a million participants who have – just like those in ATP – provided a broad range of valuable details about what they eat, how active they are, their health history, and more.

Studies that capture similar information from their participants can work very effectively together,

because the data they hold can be compared directly.

“The ATP dataset is perfect for our purposes,” explains Dr. Muir. “The project has collected a broad range of exposures that can contribute to disease, which are all very important to us.”

For this project, Muir is using ATP data to verify whether the statistical models his team has created to predict breast and ovarian cancer risk, are accurate for women outside of the UK.

“Essentially, we are checking our test. A good prediction model should perform well in a completely different population from the one in which it was produced, which in our case is the United Kingdom. It's a crucial step. If you're going to use this model to give real women advice on which



lifestyle factors like exercise, diet, or hormone replacement therapy can help them avoid cancer, you have to know it's accurate and that it works."

Beyond examining lifestyle habits like nutrition and physical activity, both the UK Biobank and ATP have collected blood samples for genetic analysis. Some women are more vulnerable to certain cancers because of genes they carry, and many researchers

believe that cancer prevention advice can be better tailored to suit a woman's individual genetic risk. Muir's team hopes to use genetic analysis to more accurately target which drugs or behaviours will offer the best protection against cancer.

It's not just cancer risk Muir is working to predict; he also envisions more teamwork with Alberta's Tomorrow Project in the future. ■

"ATP is a fantastic resource! Ethically, legally, its procedures are very solid, and the team is very helpful and open to working together. Not only can we use it to test our prediction models, but our data from the UK Biobank could be used in the same way on ATP's behalf. We believe it could develop into a big and valuable collaboration."

PLEASE HELP US KEEP YOUR FILES UP TO DATE

Have you moved, retired, changed your email address or phone number? Take a moment to update us with your new contact information.

Staying in touch with participants is important for the project's success!

Keeping current participant contact information reduces the number of participants who are "lost to follow up."

Please take a moment to notify us with any changes or additions to your information. Even if you move outside of Alberta or Canada, you can still remain a participant!

CONTACT US

Email:
tomorrow@ahs.ca

Toll free telephone:
1(877)919.9292

Outside Canada:
1(403)955.4617 (Collect calls accepted)

Mail:
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CancerControl Alberta
1820 Richmond Road SW
Calgary AB T2T 5C7
Canada

For more information:
www.myATP.ca

We hope to correspond with more of our participants by email, if they are willing, as this saves considerable costs in printing, processing and mailing hard copies of our project updates.

Contact us



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