REVOLUTIONIZING TUMOR TREATMENT

DR. ERIC HOLLAND IS LEADING FRED HUTCH TOWARD PRECISE NEW THERAPIES FOR SOME OF THE DEADLIEST SOLID TUMORS
FROM THE DIRECTOR

PURSUING THE NEXT GENERATION OF SOLID TUMOR THERAPIES

One of my most important responsibilities is hiring faculty who can make an impact on human health. This requires both high scientific and leadership standards. This was the task when my colleagues and I started looking for a new director of the Human Biology Division: We wanted someone who could help make Fred Hutchinson Cancer Research Center as well known for solid tumor research as it is for its work on blood cancers. When we met Dr. Eric Holland, we knew he was the type of person who could achieve this goal.

Holland, who came this summer to Fred Hutch from Memorial Sloan-Kettering Cancer Center, is a renowned researcher pursuing new therapies for the deadliest brain tumors. He’s also a top neurosurgeon, which makes him the rare person who can juggle two of medicine’s most complicated areas.

At Memorial Sloan-Kettering, Holland built a world-class brain cancer program and secured almost $50 million in federal funding to support it. His success was partly due to his unique approach – he broke down the barriers between disciplines by encouraging everyone from surgeons to mathematicians to work together toward cures.

Now Holland is bringing his model to the Hutch and the University of Washington, where he will head the Nancy and Buster Alvord Brain Tumor Center. He wants to quickly transform brain tumor treatment at Seattle Cancer Care Alliance and UW Medicine. To do this, he launched the Brain Tumor Profiling Initiative, a UW-Hutch collaboration that is building one of the world’s largest brain tumor databases.

The database will contain complete genetic profiles of thousands of patients’ brain tumors and detailed records of how each patient was treated and how they responded. New patients will have their tumor profiled, allowing doctors to compare that tumor to others in the database. Then they can select the most effective treatment.

This tailored approach could ultimately improve treatment for patients worldwide.

Holland also has ambitious plans to lead his Hutch and UW colleagues toward new therapies for solid tumors that affect not just the brain, but also the breast, colon, head and neck, lung and other areas. He recently unveiled the Solid Tumor Translational Research Network, which focuses on eight different tumor sites and brings together investigators and clinicians from Fred Hutch, UW Medicine, SCCA and Seattle Children’s.

Holland’s projects are all part of the Hutch’s ongoing push to develop the next generation of lifesaving therapies. We can’t do this without private donations, which help us recruit researchers like Holland and his team, and give them the tools they need for success. Thank you for your support.

Dr. Larry Corey
President and Director

Dr. Larry Corey
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Fred Hutch researchers uncovered a previously unknown way that influenza infects cells – a finding that ultimately may have implications for immunity against the flu.

Influenza viruses have two main proteins on their surface that allow them to do their dirty work: a protein called hemagglutinin helps viruses break into cells, while a protein called neuraminidase allows viruses to break out again to spread the infection.

In a paper in the Journal of Virology, Dr. Jesse Bloom and Kathryn Hooper, a graduate research assistant in Bloom’s lab in the Basic Sciences Division, describe a surprising new twist: an influenza virus that instead uses neuraminidase to attach to cells.

It’s not clear what this means for human influenza, but Bloom and Hooper have shown that neuraminidase is present in human versions of the virus.

“This was not a mutation we expected to find in the lab, let alone in viruses that have infected humans,” Hooper said. “It suggests there is influenza circulating in nature that may be infecting cells by a mechanism that has been overlooked.”

Understanding these types of variations, which could enable the virus to escape from certain antibodies, may help researchers learn how to better spark immunity against influenza.

Identifying genes linked to esophageal cancer

This year, esophageal cancer will strike nearly 18,000 Americans and kill more than 15,000. The number of people diagnosed with esophageal cancer has been rising in recent years, and a link has been shown between the disease and increasingly common health problems like obesity and reflux. Now, Dr. Tom Vaughan and his colleagues have added to evidence that heredity also plays a key role.

In a paper in Nature Genetics, Vaughan and Dr. David Whiteman identified four genetic variants associated with increased risk of esophageal cancer and its precursor, Barrett’s esophagus. Vaughan is an epidemiologist in Fred Hutch’s Public Health Sciences Division and Whiteman heads the Cancer Control Group at Australia’s QIMR (formerly known as the Queensland Institute for Medical Research).

The researchers identified genetic variants at three locations – on chromosomes 3, 9 and 19 – as being significantly associated with esophageal adenocarcinoma and Barrett’s esophagus. They found that a genetic variant on chromosome 16, which had been previously linked to Barrett’s esophagus, is also associated with an increased risk of esophageal adenocarcinoma.

These findings could contribute to the development of new screening tools to identify those at highest risk of esophageal cancer and Barrett’s esophagus, particularly when combined with established risk factors such as obesity.

“Down the line, we anticipate … this will lead to better and earlier treatments,” Vaughan said.
Fish schooling may shed light on human behavior

How and why fish swim in schools has long fascinated biologists looking to understand social behavior in many animals – including people.

A study led by Dr. Anna Greenwood found that two key components of schooling – the tendency to school and how well fish do it – map to different genomic regions in a fish called the threespine stickleback. This discovery could be a step toward understanding how genes drive human social behavior.

“Some of the same brain regions and neurological chemicals that control human social behavior are probably involved in fish social behavior as well,” said Greenwood, a staff scientist in Fred Hutch's Human Biology Division.

Research on fish schooling may seem an odd fit for a cancer research center, but Greenwood said natural genetic variation can influence not just behavior but also susceptibility to illness and disease.

“If we can understand … the genes that tend to be affected during evolution in these other model systems, we can apply that to humans,” she said.

Online game offers new way to donate

A new online game serves as a creative fund-raising tool for Fred Hutchinson Cancer Research Center and five other nonprofits. The game, called “Quingo,” was launched by Seattle-based startup Game It Forward.

Quingo combines the fun of bingo with the challenge of trivia questions and is available on iTunes for the iPad, iPhone and iPod Touch.

Downloading and playing Quingo is free, but users can buy additional time and pay for extra in-game options. A portion of the money players spend, along with revenue generated from in-game ads, is donated to charity. Quingo players can select one of six nonprofits to play for, including Fred Hutch.

“Quingo is a really innovative way to connect people with our lifesaving work,” said Fred Hutch’s Vice President for Development Susan Dolbert. “We are delighted to partner with Game It Forward and work together to have fun and support research to save lives.”

Game donations support one of five projects at Fred Hutch including: optides research through Project Violet, one day of breast cancer research, hot lunches for Hutch School students, teacher training through the Science Education Partnership and patient housing at Pete Gross House.

To download Quingo, visit iTunes or fredhutch.org/quingo

Obliteride registration opens Jan. 6

The second annual Obliteride bicycling event will take place Aug. 8-10. Registration opens on Jan. 6.

Nearly 700 riders participated in last summer's inaugural event, which raised $1.9 million to support Fred Hutchinson Cancer Research Center's lifesaving work. Thanks to sponsors like University Village, every dollar goes directly to cancer research.

“Our first Obliteride was such a magical weekend of community, hope, summer, celebration, and cycling, that we hope many more people can enjoy it with us in 2014,” said Amy Lavin, Obliteride’s executive director.

Learn more at obliterate.org
Q&A

Can Coffee Reduce Cancer Risk?

A new study led by Dr. Janet Stanford, published in Cancer Causes & Control, revealed that drinking coffee can prevent prostate cancer from recurring and progressing in some men. It’s one of the first times researchers have made this connection, and the study is part of an emerging effort to pinpoint whether coffee and caffeine can reduce risk for a variety of cancers. Stanford sat down with Quest to discuss her team’s findings – and what they mean for men wondering whether to pour themselves another cup.

BY KRISTEN WOODWARD
Q: Is there a link between drinking coffee and developing prostate cancer?
A: This study didn’t look at the risk of developing prostate cancer. It took a large cohort of men who were previously diagnosed with prostate cancer and followed them to see whether their pattern of coffee or tea consumption – or both – related to their risk of having their prostate cancer relapse or progress.

We found that about 60 percent of men in the study consumed at least one cup of coffee per day, and 14 percent consumed four or more cups per day. The men who consumed at least one cup per day had a 56 percent reduced risk of prostate cancer recurrence or progression compared to men who consumed one or fewer cups per week. The effect was a bit stronger among men who drank four or more cups a day, who had a 59 percent lower risk of cancer recurrence.

Q: Does this mean prostate cancer survivors should be heavy coffee drinkers?
A: Not necessarily. In fact, we observed a significant decline in risk of recurrence in men who drank just one cup a day. So a man would not need to drink a large number of cups of coffee per day to benefit from its potential chemopreventive effects.

Q: How does tea consumption influence the risk of prostate cancer recurrence?
A: For tea consumption, we found no association with prostate cancer recurrence. Tea has a much lower level of caffeine than coffee, for one thing, and it also has different chemical components that do not overlap with those found in coffee.

Q: How do you explain coffee’s preventive effect on prostate cancer recurrence?
A: Caffeine and other chemical components of coffee have been shown to reduce cancer-cell proliferation and metastasis as well as enhance cancer-cell death. Also, some substances in coffee have anti-inflammatory and antioxidant effects, which would in theory be beneficial in terms of chemoprevention activity. There are also some compounds in coffee that may alter DNA methylation, a biochemical change that may influence cancer-associated genes. Thus, there are several potential biological mechanisms by which coffee might have health benefits for secondary prevention of prostate cancer.

Q: Were there any potential negative health effects among men who drank four or more cups of coffee per day, such as high blood pressure?
A: We couldn’t determine those types of associations in this study. One would need to carefully measure blood pressure, for example, before and after coffee consumption. However, coffee consumption for some men may not be recommended based on their medical history. Men with high cholesterol, high blood pressure or cardiac arrhythmias may be advised by their physicians not to consume excessive amounts of coffee.

Q: Have other studies shown a link between coffee and reduced risk of cancer recurrence?
A: Some studies of brain and ovarian cancer have found an association between coffee consumption and reduced risk of developing cancer, but few studies have evaluated coffee in relation to the cancer coming back or progressing. A recent large study from Harvard found a 60 percent reduction in the risk of developing metastatic or lethal prostate cancer associated with coffee consumption. So, the evidence is accumulating that there may be benefits from coffee drinking.

Q: Could drinking coffee prevent prostate cancer in the first place?
A: I don’t believe that there have been human trials of coffee as a primary preventive agent for prostate cancer. That would be something of interest, because the literature on coffee consumption related to risk of developing prostate cancer is mixed. Some studies have shown a beneficial effect and some, including one from our research group, have shown no association. But more and more we’re finding that factors involved in developing cancer are not necessarily involved in encouraging or preventing the cancer from recurring or progressing.

Q: Based on your study, what would you tell men about coffee and prostate cancer?
A: Well, I think if a man has been diagnosed with prostate cancer and he’s a coffee drinker, then he should continue with his usual coffee consumption. A daily cup of coffee may offer some health benefits in terms of preventing or delaying prostate cancer recurrence or progression. More studies are clearly needed, but at this point I’d suggest that a small amount of coffee for most men is not going to be harmful and may provide some benefit.

Write to Kristen Woodward at kwoodwar@fhcrc.org
DR. ERIC HOLLAND IS A WORLD-RENNOWNED BRAIN CANCER RESEARCHER, A TOP NEUROSURGEON AND THE IDEAL PERSON TO LEAD FRED HUTCH TOWARD PRECISE NEW TUMOR THERAPIES.
Dr. Eric Holland aims to do something that hasn’t happened in more than a half century: Find a better strategy for treating the deadliest brain tumors.

Holland specializes in glioblastoma, a brain cancer that spreads quickly and is notorious for its ability to weave inside brain tissue. That makes it almost impossible for surgeons to completely remove the tumors, called gliomas. The best available treatment – an aggressive combination of surgery, chemotherapy and radiation – can cause brain damage, yet the tumors almost always come back within months.

Holland, 54, has dedicated his career to finding more effective therapies with fewer side effects. At Memorial Sloan-Kettering Cancer Center in New York, he spent 13 years building a world-renowned brain cancer program that used an innovative approach to tackle the disease’s toughest challenges. Now he’s bringing that approach to Seattle as the new director of Fred Hutchinson Cancer Research Center’s Human Biology Division and the Nancy and Buster Alvord Brain Tumor Center at the University of Washington. Holland also leads solid tumor translational research across both institutions.

His goals include changing how brain cancer is treated and guiding Hutch researchers toward new therapies for solid tumors that affect many other organs including the breast, colon and pancreas.

“We were looking for someone who could help us revolutionize solid tumor treatment,” said Dr. Larry Corey, Fred Hutch’s president and director. “And we knew that, absolutely, Eric was the one.”

TURNING DISCOVERIES INTO REAL-WORLD THERAPIES

What sets Holland apart is his ability to turn scientific discoveries into real-world therapies that improve patients’ lives. This translational process can take years and cost millions of dollars, and it is fraught with potential pitfalls and dead ends.

CONTINUED >
“A lot of people are [either] great basic scientists or great clinicians,” said Dr. Andy Koff, who worked under Holland at Memorial Sloan-Kettering. “Eric … actually fused basic research and clinical practice.”

At Memorial Sloan-Kettering, Holland took a unique approach to brain cancer by integrating people from disciplines who typically don’t work together. He invited basic scientists, clinical researchers, surgeons, mathematicians, computational biologists and other specialists to collaborate on solutions. And he developed tools to accelerate their progress.

Holland created a mouse model that lets researchers pinpoint where gliomas form and understand how they affect surrounding cells. The model gives researchers a powerful platform for testing drugs that could eradicate the tumors or slow their growth.

For instance, Holland’s team used the model to identify the genetic pathways that drive glioma formation. Then, in preclinical studies, they showed that particular drugs could block that pathway. Now Holland’s colleagues are leading phase 1 clinical trials to find out whether the drugs could improve outcomes for children with solid tumors.

“The model dramatically improves our ability to zero in on how drugs affect gliomas,” Holland said, “and it’s being used by researchers around the world.”

**PRECISION BRAIN CANCER TREATMENT**

Holland arrived in Seattle with an ambitious goal: quickly transform brain cancer treatment across Seattle Cancer Care Alliance and UW Medicine. To accomplish this, he launched the Brain Tumor Profiling Initiative, a collaboration between Fred Hutch and UW Medicine that will help doctors better tailor their treatments.

The initiative builds on Holland’s work at Memorial Sloan-Kettering, where he created the world’s most comprehensive brain tumor database. Based on tumor samples from hundreds of patients, the database contains a complete genetic profile of each tumor, plus details on how each patient was treated and how they responded. Holland is building a similar database in Seattle using several thousand tissue samples collected by UW’s Department of Neurological Surgery.

The goal is for every new patient to have his or her tumor profiled. Doctors can then compare that profile to other tumors in the database and select the most effective therapy. Holland believes this approach can eventually be used to improve treatment for patients worldwide.

“This is personalized medicine – making decisions that are tailored to the tumor,” Holland said.

**GOAL: REVOLUTIONIZE SOLID TUMOR TREATMENT**

Luring Holland away from Memorial Sloan-Kettering wasn’t easy. He landed around $50 million in federal funding for its brain cancer center and built a faculty of more than 70 people. Moving to Seattle also meant uprooting his family, which includes his wife, Dimitria, and their school-aged sons Nikolas and Alexander. Ultimately, he was drawn by the opportunity to apply his brain cancer approach to many different solid tumors and 11 members of his team followed him to Seattle.

John Gallagher and his wife, Meredith, at their son Jedd’s first birthday party.

“WE WERE LOOKING FOR SOMEONE WHO COULD HELP US REVOLUTIONIZE SOLID TUMOR TREATMENT AND WE KNEW THAT, ABSOLUTELY, ERIC WAS THE ONE.”

– Dr. Larry Corey, Fred Hutch president and director

“HE ALWAYS GAVE ME HOPE”:

John Gallagher remembers the visceral terror he felt before his first brain surgery: It was like he was on an airplane headed for a fatal crash.

Gallagher, a veterinarian who lives in Darien, Conn., was diagnosed a decade ago with melanoma that had spread to various parts of his brain. He was told he had a 3 percent chance of surviving more than four years.

His surgeon, Dr. Eric Holland, helped him decide on a course of treatment. Gallagher received chemotherapy and radiation, but the tumors kept growing. He underwent six brain surgeries to remove the cancer each time
“The Hutch’s science is first-rate and they outlined a compelling vision,” Holland said. “It was an offer I couldn’t refuse.”

He is building on a strong foundation. Human Biology Division researchers investigate how cancer and other diseases impact the body, and pursue the development of therapies that reduce that impact. The Hutch has received three prestigious National Cancer Institute Specialized Programs of Research Excellence, or SPORE, grants for its work on breast, ovarian and prostate cancers. And researchers like Dr. Peter Nelson – who is developing tailored treatments for advanced prostate cancer – are already at the forefront of precision oncology.

In August, Holland’s team launched the Solid Tumor Translational Research (STTR) effort, which brings together investigators and clinicians from Fred Hutch, UW Medicine and SCCA. STTR is on a mission to develop precision treatments for tumors affecting the brain, breast, colon, head and neck, lung, ovary, pancreas and prostate. Holland plans to bolster research in these areas until they are all substantial enough to earn SPORE grants, which help researchers translate discoveries into therapies.

STTR sets the stage for the type of collaborations that flourished under Holland in New York. These will provide insights into how to improve treatment for many tumors and will lead to discoveries that can then be applied back to brain cancer. It’s the best shot at making headway against the disease.

“It will take collaborations with computer scientists, software programmers, nanotechnology engineers and others to make the next level of discoveries,” said Desert Horse-Grant, who directs STTR’s strategy and operations. “If we can integrate disciplines and feed the information into high-powered computers, it could lead to the breakthroughs that have eluded us.”

COMBINING RESEARCH AND NEUROSURGERY

As if running the Fred Hutch Human Biology Division, UW’s Alvord Brain Tumor Center and STTR weren’t challenging enough, Holland also performs brain surgeries and is a UW professor of neurological surgery. People advised Holland against juggling both surgery and research when he was in medical school. It was too difficult, they told him, and too demanding.

He has spent his life proving them wrong – just ask John Gallagher, a 40-year-old veterinarian in Darien, Conn. who was diagnosed 10 years ago with melanoma that had spread to his brain. Holland performed six surgeries to remove the cancer each time it recurred, and Gallagher has been cancer-free for five years.

“He was just spot on,” Gallagher said. “He knew exactly what to do.”

It’s these survival stories that explain why Holland insists on staying involved in patient care.

“I love surgery – operating on someone lets you directly improve their life,” Holland said, “and I love research because it’s a chance to have an impact on many, many more people.”

HOW DR. ERIC HOLLAND HELPED JOHN GALLAGHER SURVIVE BRAIN CANCER.

Gallagher recalls calling Holland’s office after his first surgery to ask a question. To his surprise, Holland himself picked up the phone.

“That’s not something common for a busy surgeon to do,” Gallagher said. “That speaks volumes about the type of guy he is. He’s not just a surgeon – he’s a wonderful doctor. He’s a good person.”

Gallagher celebrated the birth of his first child in May and his 40th birthday in June. He’s been cancer-free for five years and says Holland is the reason he’s alive today.

“He never suggested that things weren’t going to work out,” he said. “He always gave me hope.”

NEW RESEARCH NETWORK PURSUES TUMOR CURES

Last summer, Dr. Eric Holland launched the Solid Tumor Translational Research (STTR) network to pursue new therapies for tumors affecting nearly a dozen major organs. The network’s goal is to translate new discoveries into lifesaving treatments – a process that can cost millions of dollars and is fraught with pitfalls.

STTR builds on the collaborative approach that Holland used at Memorial Sloan-Kettering Cancer Center, where he invited everyone from surgeons to mathematicians to work together toward cures. The network includes researchers from Fred Hutch, UW Medicine, Seattle Cancer Care Alliance and Seattle Children’s.

To learn more, visit STTRCancer.org
Miriam Bangisa, 58, is a traditional healer in Cape Town. Healers like Bangisa provide an important bridge between HIV Vaccine Trials Network sites and surrounding areas, informing local residents about what the HVTN does and advising it on how to be sensitive to local culture and politics.

The new Cape Town lab opening coincided with an HIV conference, co-hosted by the HVTN and the South African Medical Research Council. Dr. Larry Corey (left), Fred Hutch president and director, addressed the conference and described the massive endeavor to develop an HIV vaccine. Research Council President Salim S. Abdool Karim (right) told the audience that the end of AIDS is possible.
Researchers from Fred Hutchinson Cancer Research Center are gearing up to launch the most ambitious HIV vaccine trials ever in South Africa, which has the world’s highest HIV infection rate.

Learn more at fredHutch.org/southafrica

In October, Fred Hutch opened the Cape Town HIV Vaccine Trials Network (HVTN) Immunology Laboratory, which will analyze trial participants’ blood samples. The HVTN is partnering with the South African government as it expands HIV research.

Likhapa Monica Faku, 24, has felt AIDS’ toll first hand, losing an uncle and a close friend. She’s fighting back by participating in an HIV vaccine trial. Developing a vaccine in South Africa requires recruiting thousands of participants who don’t have the disease. Faku, who is on an HVTN community advisory board, said being in the trial makes her better equipped to educate others.
When Alan Schulkin was diagnosed with acute myeloid leukemia, or AML, his doctors gave him one shot at a cure: a bone marrow transplant at Fred Hutchinson Cancer Research Center.

The treatment eradicated Schulkin’s cancer but took a brutal toll. He endured side effects including liver and gastrointestinal problems, and also suffered graft-versus-host disease, or GVHD, a life-threatening condition that strikes when donated immune cells attack a patient’s body. Making matters worse, the drug Schulkin took to fend off GVHD left him so weak he couldn’t stand up without help and had to use hiking poles to walk.

Dr. Fred Appelbaum, who oversaw Schulkin’s care, has spent the past 35 years developing therapies that could help AML patients escape these side effects and potentially avoid transplants altogether.

“We’re working toward a future where we’ll be able to get most AML patients into complete remission and keep them there with therapies that are much less toxic than a total transplant,” Appelbaum said.

**PRECISION THERAPIES FOR AML**

In 1970, Appelbaum was in medical school when he ran across Dr. E. Donnall Thomas’ first article describing bone marrow transplantation. Thomas pioneered the revolutionary technique, which transformed leukemia from an incurable condition into a disease with survival rates as high as 90 percent.

“I read that article and the treatment seemed like a miracle,” Appelbaum said. “I decided that’s what I wanted to do with my career.”

Seven years later, Appelbaum was researching marrow transplantation at the National Institutes of Health when Thomas called to offer him a job at Fred Hutch. Appelbaum’s initial assignment was to lead the first-ever study showing transplants were more effective than standard chemotherapy in AML patients. Fully 60 percent of transplant patients were cured versus 25 percent for those who received chemotherapy alone. Still, too many patients were dying.
“I started asking how we could improve transplantation’s results and if there might be alternatives that had fewer side effects,” Appelbaum said.

In the early ’80s, Appelbaum and his colleagues spearheaded new, more precise therapies that can disable leukemia cells without damaging the tissues around them. The therapies rely on antibodies that are genetically engineered to zero in on and attach to leukemia cells. Appelbaum and his colleagues bind radioactive or poisonous molecules to these antibodies, which then deliver the cell-killing payload directly to leukemia cells. One poisonous molecule induced complete remission in 30 percent of patients who were not candidates for conventional chemotherapy.

Now Appelbaum is investigating another potential game-changer: a drug that could cripple AML cells by blocking how they absorb cholesterol, which the cells use to repair themselves. In a phase 2 study, the drug showed a 65 percent response rate when given to patients along with chemotherapy. It is now headed for phase 3 trials that examine whether it’s effective in more people.

IMPROVING THE TRANSPLANT PROCESS

Transplants may always be necessary for some patients, in part because some leukemia cells are hard targets even for the most precise therapies.

One arm of Appelbaum’s research aims to improve the transplant process. Members of his team are using genetic tests to identify the best matches between patients and bone marrow donors who aren’t related to them. This could help more patients find donors and could reduce a patient’s odds of contracting GVHD.

Appelbaum is also trying to change the AML treatment protocol so patients undergo a full spectrum of genetic tests as soon as they’re diagnosed. These tests help match patients with potential bone marrow donors. Right now, patients only get the tests if chemotherapy doesn’t eliminate their cancer, but that’s often too late.

“Fewer than 10 percent of patients who need transplants early in their course get them in time,” Appelbaum said.

Schulkin, now 58, has been cancer-free for almost four years and biked 50 miles in support of the Hutch’s Obliteride fundraiser in August. He keeps a keen interest in Appelbaum’s research.

“It’s really great to know he’s at the Hutch working on this disease so future patients will have an easier time,” he said.

A NEW CHALLENGE

Appelbaum, 67, was recently elected to the Institute of Medicine – one of his field’s highest honors – and named executive vice president and deputy director of the Hutch. He’ll continue leading innovative research and is now even more involved in shaping Fred Hutch’s strategic direction – and in helping the Hutch find creative new ways to fund its work.

“Most of our funding is federal and that’s proving risky for growth,” he said.

Appelbaum is grateful for the opportunity to advance an institution that has been so pivotal to his career.

“The Hutch is exactly – and I mean exactly – the right environment for me,” he said. “I couldn’t have accomplished anything like I have without the help of my amazing colleagues here. This is my dream job.”

Write to Andy Koopmans at akoopman@fhcrc.org
Lynn Lippert was diagnosed with breast cancer after a routine mammogram in 1997. She underwent a lumpectomy, radiation and chemotherapy. Then, just three years later, Lippert’s doctor discovered a tumor in her other breast. She opted for a double mastectomy to remove the tumor and reduce the risk of future cancer. The strategy was effective, and Lippert and her partner, Sal Jepson, celebrated by traveling the world and climbing Mount Kilimanjaro, Africa’s highest peak.

“Almost a year to the day from my last chemo treatment, we were standing on the summit,” Lippert said. “That was a very sweet and emotional moment. Coming down, I felt like I was getting on with my life.”

Unfortunately, her battle wasn’t over. In 2009, Lippert felt pain in her pelvis – the original cancer had metastasized to her bones. She caught it early enough to send it into remission.

Now 71 years old, Lippert celebrates her three-time survival by making contributions to cancer research. She’s summited dozens of mountains, including 16 to raise funds through Fred Hutchinson Cancer Research Center’s Climb to Fight Breast Cancer. For those climbs, she carries a banner with the names of more than 1,000 people touched by cancer.
“It’s a symbol that there’s just way too much cancer in the world,” she said.

It’s also a symbol of hope, which Lippert and Jepson know a lot about. During Lippert’s cancer ordeals, the couple stayed active and committed to enjoying life.

“Lynn has a very powerful story to show you can thrive and survive and have a wonderful life in spite of cancer,” Jepson said. “I think her story is compelling to those who have the diagnosis and think life is over. It’s not over until it’s over.”

Lippert completed her first Climb to Fight Breast Cancer peak in 2005 and climbed her most recent one – Mount Olympus in Washington state – in August, on her 71st birthday. She has used the climbs to raise more than $200,000. This incredible amount of support inspired Lippert and Jepson to establish a $50,000 endowment in 2012 to fund Fred Hutch’s breast cancer research. They added another $50,000 this year.

“We have a vested interest in finding a cure and are impressed and intrigued with Hutch pilot projects, which need funding but aren’t quite ready for large National Institutes of Health grants,” Jepson said. “We truly believe one of those brilliant researchers will be the one to make a breakthrough and find a cure.”

Landro and Salomon see the endowment as a way to give back for all she received as a patient. She also gives back in her professional life. Landro wrote a book titled “Survivor: Taking Control of Your Fight Against Cancer” and launched a Wall Street Journal column called “The Informed Patient,” which helps readers navigate the health care system.

As a well-known journalist, Landro regularly gets emails from cancer patients who need advice. When your life is at stake, she said, “You call in every chip you have, but sometimes it’s hard to get connected to the right people.”

She finds it gratifying to point others toward resources that help patients assemble their own teams — teams that may one day celebrate milestones like the one that brought Landro back to her team at Fred Hutch.

BYLUNDS FUEL CROWDFUNDING PUSH
BY ANDREA DETTER

When Gary Bylund met Dr. Bonnie McGregor, their impromptu discussion sparked an innovative experiment: Fred Hutchinson Cancer Research Center’s first crowdfunding campaign.

Bylund, a longtime Fred Hutch supporter, was impressed by McGregor’s passion for developing an online program to support ovarian cancer survivors. He also saw that she was concerned about landing funding for work that was too novel to qualify for a federal grant. They hit upon crowdfunding, which uses the Internet to help people pool donations to support a project.

“Sounds like something we should do at the Hutch,” Bylund told McGregor.

They set out to test the idea, fueled by a generous pledge from Bylund and his wife, Catherine. McGregor launched her campaign on Indiegogo.com last May and in 40 days her crowd raised more than $12,000, surpassing her $10,000 goal. The funds gave McGregor seed money to create an online stress-reduction program for ovarian cancer survivors, with the goal of improving their quality of life.

It’s an example of how the Bylunds create opportunities for others to support Fred Hutch. They host an annual Fourth of July auction that raises tens of thousands of dollars for Fred Hutch, and they’re charter members of President’s Circle — donors who give at least $10,000 annually.

Their relationships with scientists and benefactors who share their passion for lifesaving research makes giving to the Hutch special for the Bylunds.

“We’re in this fight together,” Catherine Bylund said. “I really like that. I can wrap my arms around it and get behind it.”

GET INVOLVED

Read more benefactor stories online at fredhutch.org/quest
Learn how you can support research at fredhutch.org/howtohelp

LAURA LANDRO USES ENDOWMENT TO CELEBRATE SURVIVAL
BY ANDREA DETTER

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“Once you have a relationship with someplace like the Hutch,” Landro said, “you don’t want to lose it. Ever.”

To support Fred Hutch’s pursuit of cancer breakthroughs, Landro and her husband, Rick Salomon, established an endowment for leukemia research in 1997. The endowment’s funds help Hutch researchers improve transplantation, including refining mini-transplants, which involve much smaller doses of radiation than traditional transplants. Mini-transplants can be used for patients who might not be able to withstand the conventional procedure and could reduce transplants’ side effects on children.

Landro and Salomon see the endowment as special for the Bylunds.

“Bylund said. “I really like that. I can wrap my arms around it and get behind it.”

When Gary Bylund met Dr. Bonnie McGregor, their impromptu discussion sparked an innovative experiment: Fred Hutchinson Cancer Research Center’s first crowdfunding campaign.

Bylund, a longtime Fred Hutch supporter, was impressed by McGregor’s passion for developing an online program to support ovarian cancer survivors. He also saw that she was concerned about landing funding for work that was too novel to qualify for a federal grant. They hit upon crowdfunding, which uses the Internet to help people pool donations to support a project.

“Sounds like something we should do at the Hutch,” Bylund told McGregor.

They set out to test the idea, fueled by a generous pledge from Bylund and his wife, Catherine. McGregor launched her campaign on Indiegogo.com last May and in 40 days her crowd raised more than $12,000, surpassing her $10,000 goal. The funds gave McGregor seed money to create an online stress-reduction program for ovarian cancer survivors, with the goal of improving their quality of life.

It’s an example of how the Bylunds create opportunities for others to support Fred Hutch. They host an annual Fourth of July auction that raises tens of thousands of dollars for Fred Hutch, and they’re charter members of President’s Circle — donors who give at least $10,000 annually.

Their relationships with scientists and benefactors who share their passion for lifesaving research makes giving to the Hutch special for the Bylunds.

“We’re in this fight together,” Catherine Bylund said. “I really like that. I can wrap my arms around it and get behind it.”

GET INVOLVED

Read more benefactor stories online at fredhutch.org/quest
Learn how you can support research at fredhutch.org/howtohelp

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Landro and Salomon see the endowment as a way to give back for all she received as a patient. She also gives back in her professional life. Landro wrote a book titled “Survivor: Taking Control of Your Fight Against Cancer” and launched a Wall Street Journal column called “The Informed Patient,” which helps readers navigate the health care system.

As a well-known journalist, Landro regularly gets emails from cancer patients who need advice. When your life is at stake, she said, “You call in every chip you have, but sometimes it’s hard to get connected to the right people.”

She finds it gratifying to point others toward resources that help patients assemble their own teams — teams that may one day celebrate milestones like the one that brought Landro back to her team at Fred Hutch.
PATIENT PROFILE

Behind project violet

The girl who helped inspire new ‘citizen science’ at Fred Hutch

“I said that more than likely this tumor would take her life,” said Olson. “But we don’t know when and we don’t know how.”

Violet’s directness didn’t surprise Jess O’Dell or her husband, Jeramie, who remember how Violet met life head on – and tried to improve the world. That’s why she decided to donate the tissue from her tumor to help doctors improve treatment.

It’s also why, her parents say, she would be proud of Project Violet, a crowdfunded endeavor Olson started to explore potential new therapies.

While Violet’s life is having an impact on science, her mom remembers her as her bright and joyful little girl.

“She had a shine on her,” she said. “Even adults who didn’t like kids – they all loved Violet.”

Jeramie O’Dell said Violet always wanted to help with projects around their home in Sequim, Wash. The first sign that something was wrong came when she kept forgetting to feed their dogs.

Not long after, her parents noticed personality changes. Then Violet began falling asleep in her fifth grade class. After she started mumbling her words, her parents took her to a host of specialists. An MRI revealed Violet’s malignant tumor.

“My heart stopped but I had to keep calm,” Jess O’Dell said. “Violet knew if Mom could be brave, she could too. Later we knew it was OK to be scared too. There’s no place to go but forward.”

Making the most of the time they had

Violet started radiation within days of her diagnosis. After what Jess O’Dell calls “the period of false hope,” the tumor began growing again. Violet decided to stop treatment after that appointment with Olson – and then the O’Dells set about making the most of the time they had.

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“It was amazing and beautiful,” remembers her mom.

“What are the possibilities of now?”

A year later, Jess O’Dell still finds herself grappling to understand her place in the world. But most days she feels joy, even as she misses her daughter.

“I’ve gone from focusing on ‘What do I do now?’ to ‘What are the possibilities of now?’” she said.

Asked how her daughter would feel about Project Violet, Jess O’Dell doesn’t have to think. “If it was the sick Violet at the end of her life, she would do what we called ‘happy hands’, she said. “If it was the healthy Violet, she’d laugh and say, ‘Yeah, I’m rad!’”

Write to Linda Dahlstrom at ldahlstr@fhcrc.org
Learn more at projectviolet.org
Join us on Safeco Field for the 2014 Hutch Award® Luncheon.

Hall of Famer Rod Carew will give the keynote address and we’ll celebrate the presentation of the 49th annual Hutch Award® to Raúl Ibañez, a Major League Baseball player who best exemplifies the honor, courage and dedication of our namesake, Fred Hutchinson.

Guests make a donation of $150 or more to benefit research at Fred Hutch.

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ROD CAREW
KEYNOTE SPEAKER

FRED HUTCHINSON
CANCER RESEARCH CENTER
“Every day is precious.” — CHARLIE BURGESS

When Charlie Burgess was diagnosed with glioblastoma, an aggressive brain cancer, in July 2009, he believed time was running out. He assembled a team of advisers who supported his decision to enter a radical clinical trial led by Dr. Hans-Peter Kiem at Fred Hutch. The trial called for protecting healthy cells with a gene therapy while attacking cancer cells with a powerful type of chemotherapy. Burgess made it through the rigorous therapy with the encouragement of his Fred Hutch team, family and friends. Now more than four years later, Burgess is cancer free. “I’m just deeply appreciative that I have been a part of this research.”

To support Fred Hutch’s research in solid tumor cancers, including brain cancer, donate through the enclosed envelope or visit fredhutch.org/questdonate.