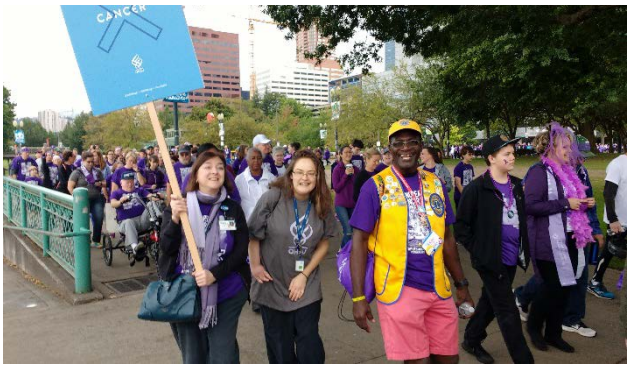
BRENDEN-COLSON CENTER FOR PANCREATIC CARE

Newsletter November 2017



FROM THE DIRECTORS

Dear Brenden-Colson Center Researchers and Supporters,

We are so very proud of all of you who contributed to and/or participated in the PanCAN Portland **Purple Stride** event this year. Forty-six people registered for "TeamOHSU," and together we raised $2,165 for pancreatic cancer research. Our team's top fundraisers were patient advocate Betty Booher, tumor registrar Kathy Mayer, and GI faculty physician Gina Vaccaro. The BCCPC co-sponsored the Stride this year with the Knight Cancer Institute and together our staff manned a booth where we gave out information about both centers' services and missions to the crowd of 1200-plus walkers. It was great talking with patients and patient family members at this high-energy event, and our purple string backpacks and brochures on our Community Registry are now out in the city letting people know about our work. Thank you for your great support of this effort.

Brett and palliative care provider Sue Best; also note the BCC purple backpack!

Researcher Asia Mitchell brought her family to walk with her

Alison Grossblatt-Wait, Trish Pruis and Betty Booher gave away 200 BCCPC backpacks!

[More photos from PanCAN.]

Rosie's son Clayton Pelz rallied the teen volunteers that kept the walk moving

Another "purple" happening will be taking place on **World Pancreatic Cancer Day, November 16**: The BCCPC will light the Morrison Bridge with dynamic purple lights in concert with cities all over the planet to draw attention to the importance of early detection and treatment of this deadly cancer. Take a moment that evening to notice the display and imagine the myriad buildings and bridges all over the world lighting up purple in unison.

November is designated as Pancreatic Cancer Awareness Month. There are many things you can do to raise awareness (PanCAN has some suggestions). To all of you working in pancreas research, and foremost from our patients and their families, we **thank you.**

Sincerely,

Brett Rosie

Brenden-Colson Center Co-Directors
Brett Sheppard, MD and Rosalie Sears, PhD

To make a year-end donation in support of the Brenden-Colson Center's programs, please use this link to visit the OHSU Foundation site. Thank you.

RESEARCH UPDATES

Evaluating Body Composition in Pancreatic Cancer Patients

Cachexia is a debilitating syndrome that affects up to 80% of pancreatic ductal adenocarcinoma (PDAC) patients, characterized by unintentional weight loss, muscle wasting, loss of appetite, and fatigue. Cachexia limits patients' ability to tolerate surgery or chemotherapy, has a profound negative impact upon quality of life, and is often the direct cause of death in cancer patients. There are currently no effective therapies to prevent or treat cachexia, at least in part because the mechanisms that cause cachexia to develop are poorly understood.

Stephanie Krasnow, PhD, recently awarded a Fellowship by the BCC, is conducting a research project with the goal of identifying molecular signals that are associated with cachexia in pancreatic cancer patients. She is evaluating the degree of muscle wasting in PDAC patients by measuring skeletal muscle mass from computed tomography ("CAT scan") images. Based upon these measurements, she assigns a muscle wasting index to each patient and examines how the progression and severity of muscle wasting relates to treatments and patient outcomes. Additionally, Dr. Krasnow will compare patients' muscle wasting indices to molecular and cellular information derived from their tumors, which will inform future studies on the signaling pathways that initiate muscle wasting.

"Cachexia is one of the most urgent issues facing pancreatic cancer patients. Understanding what's behind the onset and progression of cachexia will help us identify therapies to extend survival, improve quality of life, and promote resilience in pancreatic cancer patients."

While Dr. Krasnow's research is still in its early stages, some interesting data have begun to emerge. Her preliminary analyses have revealed that survival is improved in PDAC patients that do not have significant muscle wasting or excess fat accumulation in their muscles at the time of diagnosis. Dr. Krasnow believes that her methods for evaluating body composition are broadly applicable to other patient populations at OHSU and she is eager to collaborate with investigators on campus who are interested in cancer cachexia research.

Dr. Krasnow is presenting her findings as part of our monthly Pancreas Translational Tumor Board meetings, adding her data to the other research and clinical information collated for specific patients.

COLLABORATION UPDATES

The Brenden-Colson Center (Rosalie Sears, PhD) successfully competed for an NCI R33 grant with Ryan Kelly, PhD (PI), of the Pacific Northwest National Laboratory, titled "In-Depth Proteome Mapping of the Tumor Microenvironment with Single-Cell Resolution." Dr. Kelly's team has recently developed a breakthrough technology that enables effective analysis of as few as 10 mammalian cells with a coverage of >3000 identified proteins. The BCC will provide specimens with which to validate and optimize this platform and create in-depth proteome maps for human pancreatic ductal adenocarcinomas (PDACs) at single cell resolution. This project will not only establish an innovative measurement capability that will broadly advance cancer research, but will also provide unique molecular insights into cellular heterogeneity relevant to PDAC pathology.

BCC Program Leader **Daniel Marks, MD, PhD**, will be chairing an "Unsolved Mysteries" session at AACR 2018 in Chicago. The session will focus on cancer patient resiliency and cachexia. He has also been invited to give a plenary talk at the Keystone "Organ Crosstalk" meeting on cancer cachexia in January.

Rosalie Sears, Ph.D., has been invited to join the Advisory Board of PRECISION-Panc, a new large cancer research network in the UK. Led by researchers at the University of Glasgow (Professor Andrew Biankin) and The Beatson Institute for Cancer Research (Glasgow) in collaboration with scientists and clinicians in Cambridge, Manchester, Oxford and the Institute of Cancer Research in London, PRECISION-Panc seeks to uncover the molecular profile of individual patients with pancreatic cancer, to learn more about the disease and to pave the way for patients entering clinical trials in a way that matches their tumor biology to the type of treatment (the Brenden-Colson Center goals, on the other side of the pond). Cancer Research UK has invested £10 million in the program, which will set up three clinical trials to open this year, including one testing immunotherapy. They will be focusing on defects in the DNA damage response (DDR) pathway, which are seen in approximately 20% of patients with PDAC.

GRANT OPPORTUNITIES

PanCAN Catalyst Grant – **due December 15** – junior faculty, $500K, 3 years
PanCAN Translational Research Grant – **due January 15** - $500K, 2 years
CRUK-OHSU Spark Award – **due January 16** - $20K, 1 year
CRUK-OHSU Project Award – **due January 16** - $300K, 2 years
National Pancreas Foundation – **due January 31** - $50K (no indirects), 1 year
PLAN AHEAD: Lustgarten Foundation and Hirshberg Foundation have grants due in August

CONGRATULATIONS

A number of BCC physicians were recognized by their peers in the tri-county area in Portland Monthly's 2017 list of Top Doctors: **Gene Bakis, M.D.** and **Brintha Enestvedt, M.D., M.B.A.** (Gastroenterology); **Brett Sheppard, M.D.,** and **Erin Gilbert, M.D.** (Surgery); and **Gina Vaccaro, M.D.** (Hematology and Oncology).

BCC Islet Cell Lab Director **Craig Dorrell, PhD,** has received new grant funding (Markus Grompe, PI) from the Helmsley Charitable Trust to study the role of alpha cell heterogeneity in type 1 diabetes (T1D). In this disease, pancreatic islet beta cells are destroyed entirely, but alpha cells are also impaired, leading to increased risk of life-threatening hypoglycemic events. This study, the first to examine the function of alpha cell subtypes and their role in T1D, will characterize their function and gene expression in T1D islets.

UPCOMING SEMINARS

The BCCPC is proud to announce three prominent pancreas physician-scientists have accepted our invitation to visit us and tell us about their work:

Andrew D. Rhim, MD
"From Human to Mouse and Back Again: Early Dissemination and Endogenous Deaminases in Pancreatic Cancer"
Asst Professor of Internal Medicine (Gastroenterology, Hepatology & Nutrition), and Assoc. Director for Translational Research, Ahmed Center for Pancreatic Cancer Research, U.T.M.D. Anderson Cancer Center
Friday, December 15th 11:00am CHH 3181 (Room 1B)
(co-hosted with the Dept of Biomedical Engineering)
Dr. Rhim studies a class of endogenous enzymes called deaminases that create mutations and other alterations in both DNA and RNA and are hyperactive in multiple cancers.

Wantong Yao, PhD
Postdoctoral Fellow, Genomic Medicine, MD Anderson Cancer Center
Friday, January 19th 1:30pm HRC 14D03
Dr. Yao studies oncogenes in pancreatic cancer, and was recently awarded a PanCAN Pathway to Leadership grant.

Aida Habtezion, MD, MSc
Associate Professor of Medicine (Gastroenterology and Hepatology), Stanford University School of Medicine
Friday, February 9th 9:00am CHH 3181 (Room 1B)
Dr. Habtezion has spearheaded new research that provides insight into the molecular pathway that leads to chronic **pancreatitis**, and her lab studies the inflammatory responses associated with this debilitating disease.

Dr. Vickie Baracos
Professor of Oncology, Division of Palliative Care Medicine
Cross Cancer Institute and University of Alberta, Edmonton, Canada
Friday, March 9th 9:00am CHH 3181 (Room 1B)
Dr. Baracos is an expert in the underlying causes of muscle wasting in cancer patients, and studies the roles in **cachexia** of tumor progression, therapeutic drugs, and a putative muscle proteolysis-inducing factor.