

# BRENDEN-COLSON CENTER FOR PANCREATIC CARE



The Brenden-Colson Center for Pancreatic Care is a patient-centric research hub for programs that focus on three main areas essential for alleviating suffering from pancreatic diseases: Earlier Detection, Advanced Therapy, and Patient Resilience.

Our Newsletter serves as a way for us to stay connected, share community events, and provide updates on the successes and progress the Center is making.

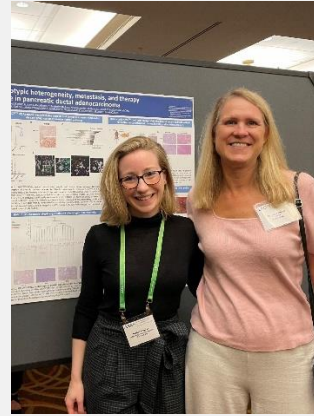
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## In the news this month:

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**Meet Isabel English (and Save the Date for her Defense!)**

Born and raised in Portland, PhD candidate Isabel English grew up loving science and medicine. Curious about infectious diseases, she attended a lecture at OHSU during high school. At this event, she was approached by an associate professor who was curious about what had motivated a high schooler to attend this talk. As a result of this interaction, Isabel started a summer internship in Dr. Brian Druker's laboratory at the Knight Cancer Institute, under Dr. Elie Traer. Seven and a half years later, having earned a bachelor's and master's degrees elsewhere, she moved back to Portland to start her PhD in the lab of the very same professor who had helped Isabel get her first internship— Dr. Rosie Sears.



In the past twelve years, Isabel trained in four unique academic research labs in two countries, developing a broad background in biomedical research with specific training and expertise in kinase signaling, microfluidics, imaging, and *in vivo* and *in vitro* models of disease. As her summer internship turned into full-time employment as a research assistant in Drs. Brian Druker and Jeffrey Tyner's lab, Isabel contributed to research on mechanisms of CML resistance to imatinib. She also helped to improve the patient sample processing protocols for the Beat AML Master Clinical Trial, the first collaborative precision medicine clinical trial in a blood cancer.

Encouraged by her time in the Druker/Tyner group, she chose to pursue a master's degree in biological research at the Sorbonne University - Sciences. Isabel joined the lab of Dr. Anne Eichmann at the Paris Center for Cardiovascular Research, studying the interplay of blood flow and key pathways in endothelial cell physiology that are dysregulated in arteriovenous malformations.

In 2018, Isabel joined Dr. Rosalie Sears' lab at OHSU as a PhD student. Now, she will be defending her thesis this month! Her doctoral work focuses on how cancer cell-intrinsic Myc drives tumor microenvironmental changes in both primary and metastatic pancreatic lesions. In order to better model this disease and study how Myc regulates the tumor microenvironment, Isabel helped develop two innovative models: a genetically engineered mouse model that recapitulates human pancreatic cancer, and a 3D bioprinter system that allows for spatially-defined multi-cellular tissues. Isabel seeks to continue to innovate in the field of cancer modeling, directly impacting patient care.

### **Isabel's Thesis Defense: May 19th**

Isabel English, Cancer Biology

"Bridging the gap between pre-clinical models and clinical trials using a novel MYC-driven mouse model of pancreatic cancer and 3D-bioprinting"

**Time:** May 19th, 2023, 10:00AM

**Location:** RLSB 3A003B

**Fun Fact:** Isabel is an amazing baker and loves to hike, travel, and volunteer!

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## Swati Mishra Joins IPITA Young Investigator Committee



Congratulations to Swati Mishra, PhD, for a successful application to the [Young Investigator Committee](#) (YIC) of the International Pancreas and Islet Transplant Association (IPITA)!

The mission of the YIC is to encourage the active engagement of trainee members and facilitate interactions between trainee and senior members to advance clinical and basic research and activities in the field of islet and pancreas transplantation.

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## Congratulations to the BCCPC Pilot Grant Awardees!

The BCCPC put forth a funding opportunity to support innovative translational research related to pancreatic cancer and other pancreatic diseases. Projects are funded for one year, and will advance one or more critical areas essential for alleviating suffering from pancreatic diseases: Earlier Detection, Advanced Therapy, and Patient Resilience.

**Please give a big congratulations to our awardees:**

- **Robert Eil:** Investigating tumor intrinsic HuR's function in mediating anti-tumor immunity in PDAC
- **Martina Ralle:** Cu Chelation as a Treatment Strategy of Pancreatic Cancer
- **Lei Wang:** Developing small molecule probes to improve pancreatic cancer

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## BCCPC Receives Funding for Pancreatic Cancer Detection Consortium

The BCCPC recently received notice of U01 funding to establish a Pancreatic Cancer Detection Consortium (PCDC) Research Unit in collaboration with 6 Universities/Institutes across the country. The objective of the PCDC is to develop and test new molecular and imaging biomarkers for early detection of pancreatic cancer and its precursor lesions to identify high-risk individuals eligible for early intervention.

The OHSU Research Unit proposed to: (1) Define barriers to and enhance participation of underrepresented groups in PDAC screening, (2) Complete phase 2 biomarker studies of novel blood- and imaging-based tests, and (3) Measure temporal dynamics of plasma & imaging biomarkers in phase 3 longitudinal study.

Two complementary approaches to screening were proposed. First, a novel extracellular vesicle-based assay that can be obtained rapidly and with very low blood volumes. And second, magnetic resonance fingerprinting, a modified standard magnetic resonance imaging technique that can detect subtle evidence of focal fibroinflammatory changes in the pancreas, a common feature of pancreatic intraepithelial neoplasia.

The OHSU Research Unit will collaborate with the PCDC Consortium by sharing existing resources from the Oregon Pancreas Tissue Registry (> 3,700 patients enrolled), the OHSU High Risk Pancreatic Cancer Screening clinic (> 750 unique patients who have completed at least one screening test), and through OHSU's involvement in the PRECEDE consortium.



In addition, our team includes experts in implementation science who have designed and activated the Healthy Oregon Project, an app-based platform that allows at-home acquisition of genetic data through mail-in kits and population-based interaction to find and interact with high-risk individuals. The implementation work specifically involves community outreach to understand barriers to screening for underrepresented populations and underserved communities, in order to increase availability and participation in screening across Oregon to improve patient outcomes.

We are excited for the future of PCDC and the opportunities it will provide our patients!

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## Strong Turnout for "Team OHSU" at PurpleStride 2023!

A big thank you to everyone who supported Team OHSU at the annual PanCAN PurpleStride fundraiser to end pancreatic cancer.

It was a beautiful day to walk alongside fellow researchers, clinicians, survivor, patients, caregivers, and community members to honor everyone affected by pancreatic cancer. **Our team of 45 participants raised \$3,646 to fight pancreatic cancer** on all fronts— through research, clinical initiatives, patient services, advocacy and nationwide volunteer support.

### **Don't stop now!**

You can still get involved by [donating to our team](#) (you have until June 30th!) and [becoming a PanCAN Volunteer!](#)

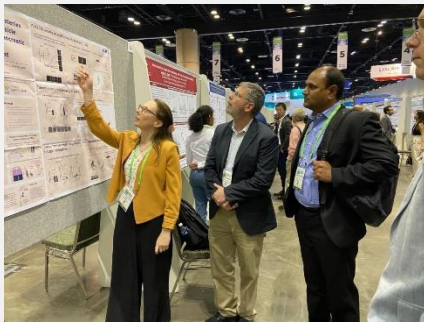


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## The BCCPC at AACR Annual Meeting 2023

Last month, many of our researchers flew to Orlando, Florida to learn, network, and be inspired at the AACR Annual Meeting.

The Brenden-Colson Center for Pancreatic Care had an amazing showing, with **19 poster presentations, 6 talks, and faculty chairing 5 sessions.** To celebrate this success, we moved last month's BCCPC Happy Hour to Orlando so that those at AACR could feel our support!



A major reason for the success of the conference was due to the outgoing AACR President, our very own Lisa Coussens, M.D. (h.c.), Ph.D., FAACR. Celebrating her accomplishments, there will be a reception to honor her AACR leadership.

Reception for Lisa Coussens— all are welcome!

**Time:** Tuesday, May 23<sup>rd</sup> from 4-6pm

**Location:** KCRB First Floor Riverside Lobby

## Upcoming Events

### Pancreas Research Monthly

Join us this month for the BCCPC Pancreas Research Series. Robert Eil, MD, Assistant Professor of Surgery, Division of Surgical Oncology in OHSU's School of Medicine will be presenting on "Targeting T cell Ion Transport to Advance Cancer Immunotherapy".

*Light breakfast and beverages will be provided!*

**Date:** Friday, May 12, 2023

**Time:** 9:00AM-10:00AM

**Location:** RPV(Rood Family Pavilion) Room B (1215) and C (1205) & [WEBEX](#)





## Isabel English Thesis Defense

"Bridging the gap between pre-clinical models and clinical trials using a novel MYC-driven mouse model of pancreatic cancer and 3D-bioprinting"

**Time:** May 19th, 2023, 10:00AM

**Location:** RLSB 3A003B

## BCCPC Happy Hour

Come join us for your favorite beverage and a chance to catch up outside of work!

**Date:** Thursday, May 25, 2023

**Time:** 4:00PM-5:00PM

**Location:** Elephants



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## Recent BCCPC Publications

Pancreatic tumors are characterized by dense collagen and heterogeneous stroma that contribute to the chemoresistant nature of pancreatic cancer cells. Grace McCarthy, PhD showed for the first time that "[Deletion of the mRNA stability factor ELAVL1 \(HuR\) in pancreatic cancer cells disrupts the tumor microenvironment integrity.](#)" Specifically, tumor-intrinsic loss of HuR resulted in decreased collagen, stromal cells, and signaling molecules involved in cell-cell communication, stromal activation and extracellular matrix organization. This work identified platelet-derived growth factor AA, a known chemoattractant and activator of fibroblasts, as a novel HuR target. Moreover, HuR-deficient pancreatic tumors were more sensitive to gemcitabine, as compared to HuR-proficient tumors. This work identifies an axis of HuR biology that could be exploited to improve standard-of-care chemotherapy.

Investigating novel ways to deliver treatments to pancreatic tumors, Grace McCarthy PhD teamed with [Code Biotherapeutics](#) in evaluating the effectiveness of their 3DNA® Nanocarrier (3DNA) platform to deliver siRNAs directly to pancreatic tumors. In a paper entitled, "[A Novel 3DNA® Nanocarrier effectively delivers payloads to pancreatic tumors.](#)" the team identified that conjugation of folic acid to the 3DNA significantly increased delivery specifically to tumor-bearing pancreases. Delivery of siLuciferase by folic acid-conjugated 3DNA in an orthotopic model of luciferase-expressing pancreatic tumors showed significant and prolonged suppression of luciferase protein expression and activity. These data progress 3DNA technology as a reliable and effective treatment delivery platform for targeted therapeutic approaches in pancreatic cancer.

In the article "[Neoadjuvant therapy does not impact the biliary microbiome in patients with pancreatic cancer.](#)" Shay Behrens, MD and Thomas Sutton, MD sought to explore the impact of neoadjuvant therapy on the biliary microbiome and surgical site infection risk in patients undergoing resection. They found that biliary stenting increased surgical site infection, while neoadjuvant therapy has no impact on infections in patients who underwent surgical removal of a pancreatic tumor.

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## Conferences for Your Calendar

[The Stroma in Pancreatic Cancer Think Tank 2023](#): May 24, 2023

[AACR Special Conference: Pancreatic Cancer](#): September 27-30, 2023

[Cancer Cachexia Conference](#): September 28-30, 2023

BCCPC CME Conference on Pancreatic Cancer: November 10, 2023

[American Pancreatic Association Annual Meeting](#): November 15-18, 2023

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**PANCREATIC CARE**