



The 2019 Hunch Proposals are included on the following pages. Please review the proposals and cast your vote before January 31, 2019.

How to cast your vote:

1. Contact **Lizzie Conkle at 317-278-2120 or econkle@iu.edu**

OR

2. Check the box next to the hunch you are most passionate about and mail the completed hunch form to Lizzie Conkle at the address below:

**IU Foundation
PO Box 7072
Indianapolis, IN 46207-7072**

Hunch voting will be open until **January 31, 2019**. For questions about these projects or the voting process, please contact **Lizzie Conkle at 317-278-2120**.

LEND YOUR VOICE TO RESEARCH

100 Voices of Hope is an annual giving society which celebrates the legacy of Mary Beth Gadus and joins together donors, the Vera Bradley Foundation Center for Breast Cancer Research, the IU Melvin and Bren Simon Cancer Center and the IU School of Medicine in the fight against breast cancer.

Giving levels are based on all gifts, pledge payments and matching gifts received by the school in a calendar year. Couples are recognized jointly for their total household support.

Giving Levels include:

WHISPERS | \$1 - \$999

- Gifts of any level are welcome and can be made in honor or memory of a loved one

VOICES | \$1,000

- Gifts of \$1,000 can be made by a single donor or multiple whispers
- Voices are eligible to vote on 100 Voices of Hope hunches

SHOUTS | \$1,001 +

- Gifts of greater magnitude help fuel discovery even faster
- Shouts are eligible to vote on 100 Voices of Hope hunches and can receive multiple votes

For more information about 100 Voices of Hope or the hunch voting process, contact **Lizzie Conkle** at **econkle@iu.edu** or **317-278-2120**.

HUNCH 1: Evaluation of SMIC1007 in treatment of metastatic breast cancers

The researchers proposing this hunch focus their work on determining what drives metastatic breast cancer and developing new therapies to combat it. They were the first to identify that a particular protein (called SUMO1) drives cancer growth and have developed a potent inhibitor (SMIC1007) that turns off this protein. In cell culture, SMIC1007 inhibits the growth of multiple cancers including breast, colorectal, and lung. Hunch funding will allow this team to move SMIC1007 closer to the clinic, by testing it in two different animal models. The first model uses a breast cancer cell line that metastasizes to the lungs. In the second model, they will use tumors from actual patients growing in mice. If successful, this hunch will support a new collaborative research team in generation of preliminary data necessary for the team to apply for the Department of Defense Breast Cancer Research Program and/or NCI drug development grants. The ultimate goal of this project is to launch clinical trials of SMIC1007 treatment of metastatic breast cancers within five years.

Cast my vote for hunch #1

Print Name _____

HUNCH 2: The impact of muscle on treatment response in women with metastatic ER positive breast cancer

The majority of breast cancer deaths result from estrogen receptor (ER) positive, metastatic breast cancer (MBC), despite targeted therapies and treatment advances. Acknowledging that treatment affects a whole person rather than just a tumor, researchers have tried to determine how a woman's body composition might contribute to her response to treatment. These investigations have been limited, as weight-based measures alone do not tell the full story about a woman's body, and women with the same weight or BMI can have very different amounts of muscle or fat. This research team has a hunch that the amount of muscle in a woman's body contributes to treatment outcome. Muscle is a large, active organ that influences the physical function, quality of life, metabolism and inflammatory profile in the body. However, muscle has been understudied in women with MBC, and its impact has never been evaluated in those with ER positive metastatic disease. To investigate this question, these researchers hope to analyze CT scans of women with ER positive MBC receiving aromatase inhibitors (the most commonly prescribed drug in breast cancer) to uncover any correlations between body composition and important treatment outcomes, including survival, quality of life, pain and fatigue. Results will help clinicians optimize drug dosing and potentially explain why effective drugs stop working for some patients. The long-term goal of this project is to provide recommendations for interventions that could positively impact treatment outcomes for women with ER positive metastatic breast cancer, such as state-of-the-art personalized resistance training programs and innovative non-exertional approaches to muscle development.

Cast my vote for hunch #2

Print Name _____

HUNCH 3: Can Soft Bone Guard Hard Bone from Breast Cancer?

Why do sharks, and not whales, rarely get cancer? Is shark bone different from ours? Our bones are mostly composed of hard bone due to hard-bone making cells (called osteoblasts), while shark's bones are soft because of soft-bone making cells (called chondrocytes). Recent cell and animal studies indicate that soft-bone making cells can stop tumor growth and this team of researchers would like to determine why and how that information can be used to prevent bone metastasis in breast cancer. Humans do have soft bone in a restricted region called the growth plate, which lengthens our leg and arm bones when we are growing. Tumor does not invade into the growth plate. In this hunch, the team hopes to identify the characteristics of soft-bone making cells that suppress tumor growth using an animal model of breast cancer and bone metastasis. The goal of this project is to determine whether this factor can actually stop breast cancer metastasis and protect bone.

Cast my vote for hunch #3

Print Name _____

HUNCH 4: Can bacteria influence breast cancer progression and metastasis patterns?

There are bacteria of all types everywhere in our bodies. Bacteria were originally thought to primarily inhabit our gut and aid in digestion. They are now shown to be present in different parts of the body, including the breast, and research has determined that the type of bacteria throughout our body depends on our ethnicity. These observations raise questions about whether variations in types of bacteria in the breast might influence breast cancer initiation, progression and metastasis. In this pilot study, the research team will use next-generation sequencing to identify bacteria that inhabit the breasts of healthy women, women with high-risk of developing breast cancer, and women diagnosed with breast cancer. The results will be used to map the microbiome (bacterial population) in the breasts of women of different ancestry, living in different geographic locations. Ultimately, the goal is to identify bioactive compounds produced by bacteria that protect the breast from cancer and develop those compounds to treat and/or prevent metastatic progression of breast cancer. The team will also look at whether the same 'bad' bacteria are found at sites of metastatic breast cancer and whether pre-treatment with antibiotics increases response to therapy.

Cast my vote for hunch #4

Print Name _____