

Oakland University student to present research at endocrine conference

Katie Aleck, an undergraduate student at Oakland University whose research into the potential health risks of chemical compound Bisphenol-S (BPS) could contribute to understanding the effects of endocrine or hormone disrupting compounds on breast cancer treatment and prevention, has been selected to make an oral presentation on April 1 at the **ENDO 2017** conference in Orlando, Fla.

“The oral sections are reserved for the highest-scoring abstracts (research summary) – only six are selected from a large number of abstracts submitted in the category; most of the presentations are given by Ph.D., M.D. and doctoral students,” said **Sumi Dinda**, Ph.D., an associate professor of biomedical diagnostic and therapeutic sciences in the School of Health Sciences.

“For Katie to be selected as an undergraduate student demonstrates the strong foundation of undergraduate research, quality of the scientific research and strong mentorship the School of Health Sciences and my Biomedical Sciences laboratory strive to provide.”

Aleck, a Rochester resident, said she was “surprised and highly honored” to be asked to present her research at the upcoming conference.

“The opportunity to present my research on an international level is one that I am very grateful to be offered,” she said. “Since my overall career goals are in the field of cancer research, this opportunity aids me in my path to accomplishing this goal.”

According to Aleck, the study focuses on the effects of BPS – comparable to Bisphenol-A commonly found in plastic substitutes, paper currency and most products marked “BPA free” – alone and in combination with hormones and anti-hormones, to examine estrogen receptors, which interfere with the normal hormonal activity in the body, and the BRCA1 gene, which produces tumor suppressor proteins humans, in specific breast cancer cells.

“Generally, bisphenols have been shown to disrupt proper estrogen receptor alpha (ERα) functioning in breast cancer cells,” Aleck said. “Given that a mutated BRCA1 gene will likely develop into hereditary breast cancer in 55 percent to 65 percent of people, determining the BPS’s effect on estrogen receptors in both genes is essential.”

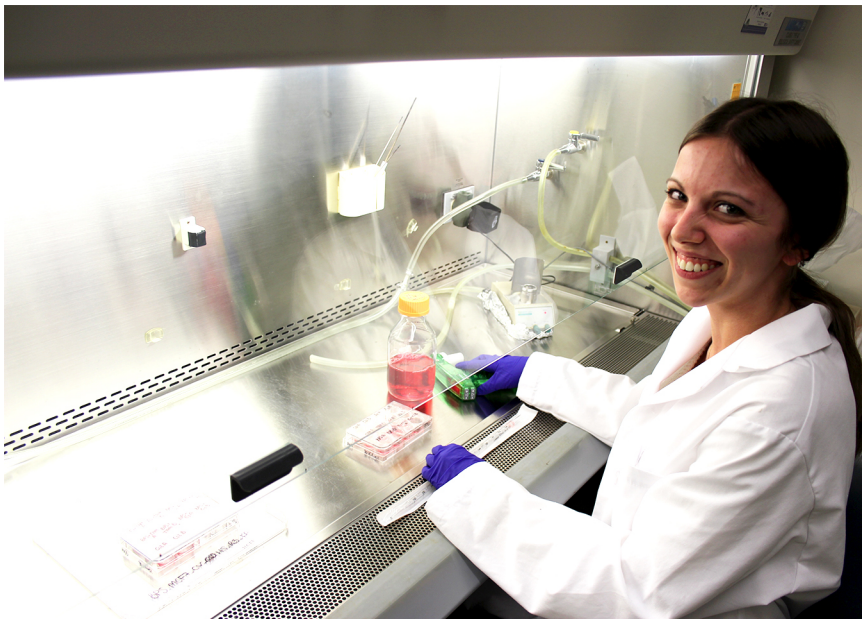
According to Aleck, the results of the study have shown similar protein expression as estrogen, in estrogen receptors and BRCA1 when treated with BPS.

“Despite the hope of a safer substitute, studies have shown that BPS exhibits similar estrogenic activity compared to its analogue BPA, due to their structural commonalities,” she said. “The potency of the endocrine disrupting abilities of BPS compared to BPA could show whether is a suitable alternative to BPA in many everyday products.”

Aleck said she’s looking forward to sharing her research with her colleagues at the ENDO 2017 conference, which is expected to be attended by over 7,000 experts in endocrine science and technology.

“I am truly looking forward to this experience and the opportunity to share my research as well as meet other individuals from around the world to learn from their experiences,” she said.

For more information about the study and ENDO 2017, visit the Endocrine Society’s **website**.



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