



**XAVIER**  
UNIVERSITY *of* LOUISIANA

contact: Richard Tucker (504) 520-5425

## **FOR IMMEDIATE RELEASE**

### **Xavier University Study of a 'Super Cocktail' Demonstrates Significant Killing Effects of Cancer Cells without Affecting Normal Cells**

NEW ORLEANS - The latest findings in a study conducted in the Ireland Lab at Xavier University of Louisiana demonstrate that a newly developed 'super cocktail' of six phytochemicals can kill BRCA1 mutated breast cancer cells and inhibit "mammary tumorsphere" (also called mammospheres) formation. Significantly, this effect has been achieved at bioavailable/bioachievable levels.

Participating researchers are Dr. Shubha Ireland (Professor of Biology, Xavier) in collaboration with Dr. Madhwa HG Raj (Professor, LSU Health Sciences) and Dr. Shailaja Raj, MD (Protegene Corporation, Metairie, LA).

The latest findings build on previous research conducted in the Ireland Lab and published in the Journal of Cancer (vol.4, pp.703-715, November 2013), which found that the cocktail showed 100% killing of triple-negative breast cancer cells without any adverse effects on normal (non-cancer) cells. These results, along with genetic/molecular data were the impetus for development of "Breast Safeguard-Susthana" by the Protegene Corporation ([www.protegenecorporation.com](http://www.protegenecorporation.com)).

#### **About BRCA1**

Women carrying BRCA1 mutation almost certainly get breast cancer and ovarian cancer, for which there is currently no known treatment other than radical mastectomy followed by chemo and radiation therapy. Celebrities including Angelina Jolie and other public figures have undergone bilateral mastectomies because they carried this mutation.

#### **About the 'Super Cocktail'**

This super cocktail was developed to simultaneously inhibit characteristics common to several cancers, namely cell proliferation to form tumors, cell survival by immortalization and metastasis resulting in spreading of the cancer to other organs. In fact, the Ireland Lab's current studies are demonstrating that it indeed works against prostate and lung cancer cells in addition to the hormone-sensitive triple negative and BRCA1 mutated human breast cancer cells. Further, this super cocktail is unleashing 'programmed cell death' (also called as apoptosis) in the cancer cells specifically, without affecting normal (non-cancerous) mammary epithelial cells, mesenchymal stem cells and fibroblasts.

#### **What's next**

These reproducible and significant findings have set the foundation for in vivo studies of the super cocktail which is the active component of the Breast Safeguard-Susthana of the Protegene Corporation. More than 750 women (with and without breast cancer) have used the super cocktail without reporting a single adverse reaction or side effect. Currently this product is being made available as a nutritional supplement for breast health support to women.

These exciting data were presented under 'late breaking abstracts' at the meeting of the American Association for Cancer Research (AACR) on April 4, 2017 in Washington D.C.

This ongoing research includes participation by Xavier undergraduate students and is funded by:

- The Louisiana Cancer Research Consortium (LCRC)
- Dr. Ireland's Xavier Eminent Scholar XXXVIII Professorship through the Louisiana Board of Regents funding

### **Comments from Dr. Shuba Ireland**

- "There are several breakthrough points here. The fact that our super cocktail is a mixture of natural compounds from dietetic plants and herbs and is completely non-toxic to normal cells, but exclusively kills cancer cells. It is completely effective only in combination and not individually because by including them in this mixture we have made them active at bioavailable levels, that is levels that can be achieved in human blood circulation after oral intake. We have targeted characteristics common to a number of cancers namely a) cell proliferation leading to tumor formation, b) cell survival, since cancer cells become immortal and do not easily die, unlike normal cells c) metastasis or ability of cancer cells to spread from one organ to others. We are also actively inducing 'programmed cell death' or apoptosis of cancer cells selectively, by this super cocktail. Finally, the latest data (presented at the AACR meeting which we will be publishing soon) shows that the super cocktail is effective in not just breast but also prostate and lung cancers."
- "Based on these studies, conducted here at Xavier, we plan to follow two paths: a) study the molecular/genetic mechanisms that underlie these highly significant anti-cancer effects and b) conduct 'in-vivo' (animal) studies to confirm these effects so that we can move towards clinical trials stage."
- "In the meantime, based on these exciting results and taking into account that our super cocktail components are all dietetic compounds and are being used individually in nutritional supplements already, it has been developed as "a nutritional supplement for breast health support" under the trade name "Breast Safeguard-Susthana" by Dr. Shailaja Raj MD (our collaborator) from Protegene Corporation. To date, more than 750 women (both normal and women with breast cancer) have been using for over two years without a single report of toxic side effects and many are in remission and no longer need chemotherapy and radiation therapy (commonly used to treat breast cancer, but also have severe side effects including nausea and anemia)."
- "In summary, we believe that our super cocktail has the potential to serve both as a prophylactic agent and as a cure for at least certain cancers and our research continues to provide strong evidence for our hypothesis. The in-vivo studies should start within the next few weeks and will also be conducted at Xavier."

### **About Xavier University of Louisiana**

Xavier University of Louisiana, founded in 1925 by Saint Katharine Drexel and the Sisters of the Blessed Sacrament, is the only Catholic and historically Black higher education institution in North America. The ultimate purpose of the University is to contribute to the promotion of a more just and humane society by preparing its students to assume roles of leadership and service in a global society.

Xavier ranks first nationally in the number of African-American undergraduates continuing to complete medical school and is leading the nation in bachelor's degrees granted to African Americans in the biological and biomedical sciences, the physical sciences, and physics, and in graduation of

African-Americans who go on to earn doctorates in the sciences and engineering. More at [www.xula.edu](http://www.xula.edu).