

V. Craig Jordan, OBE, Ph.D., DSc, FMedSci

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"Because of Susan G. Komen, my work has advanced at a rapid rate so that we can take ideas from the laboratory to save lives around the world." --Dr. Jordan

While Dr. V. Craig Jordan's relationship with Susan G. Komen for the Cure® began nearly twenty years ago with a research grant in 1991, his interest in cancer research started long before. His mother supported his passion from a very young age allowing Jordan to convert his bedroom into a chemistry laboratory. Thus, began his lifelong pursuit of finding out how chemistry could help people. Later, as a young man studying pharmacology at the University of Leeds, Dr. Jordan refined his goal saying, "I wanted to develop drugs to be able to treat cancer." He reports that "Everybody thought it was just a crazy idea."

It turns out that Dr. Jordan's ideas weren't crazy, though many of them were considered "high risk" at the time, and he is proud of the risks he has taken saying, "Everything that I've done in high risk has saved hundreds of thousands of women's lives." This includes transforming a failed contraceptive drug into the first effective targeted therapy for hormone sensitive breast cancer. Tamoxifen has become the gold standard for breast cancer treatment for over 20 years. He reflects that tamoxifen "...was discarded as an idea, as quite ridiculous, but we worked out the right way of using it." In a 2003 journal article, he noted that more than 400,000 women are survivors as a result of tamoxifen therapy. Further, tamoxifen has helped extend the lives of millions of women.¹

There are at least twenty generic versions of tamoxifen in use worldwide, so it is difficult to ascertain just how many women are being helped by the drug.

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However, Dr. Jordan reports that "It is clear that millions of women have benefited from tamoxifen worldwide with longer, healthier lives following a diagnosis of breast cancer."

In addition to treating women already diagnosed with breast cancer, tamoxifen actually became the very first chemo prevention drug. It was proven to reduce the risk of breast cancer incidence by approximately 50 percent in women at high risk for developing the disease.



Professional Accolades

- 1992 – Inaugural Brinker International Breast Cancer Award**
- 1997 – Laureate of the 6th Cino del Duca Award for Oncology, Paris, France**
- 1999-2004 – Inaugural Diana, Princess of Wales, Professor of Cancer Research**
- 2001 – Bristol Myesr Squibb Award and Medal for Distinguished Achievement in Cancer Research**
- 2001 – 3rd Annual Breast Cancer Award, European Institute of Oncology, Milan, Italy**
- 2002 – American Cancer Society Award for Chemoprevention and Medal of Honor**
- 2002 – Office of the Most Excellent Order of the British Empire (OBE) for services to International Breast Cancer Research (UK)**
- 2003 – Dorothy P. Landon-AACR Prize for Translational Cancer Research**
- 2006 – 3rd George and Christine Sosnovsky Award in Cancer Therapy, Royal Society of Chemistry (UK)**
- 2006 – American Cancer Society Award for Chemoprevention (ASCO)**
- 2008 – 38th David A. Karnofsky Award (ASCO)**
- 2009 – Fellow of the Academy of Medical Sciences (UK)**
- 2009 – Member of the National Academy of Sciences**
- 2011 – St. Gallen International Breast Cancer Prize, Switzerland**

¹ Nature Reviews Drug Discovery 2, 205-213 (March 2003)

Even with the life-saving properties of tamoxifen, side effects emerged, including increased risk of uterine cancer. As these side effects came to light in the 1980s, Dr. Jordan became interested in a related drug, raloxifene. After initially failing as a breast cancer treatment, Dr. Jordan and his team discovered that raloxifene could potentially prevent breast cancer in postmenopausal women without some of the drawbacks of tamoxifen.

Tamoxifen and raloxifene (which was originally approved as an osteoporosis drug), are selective estrogen-receptor modulators, or SERMs. Sometimes referred to as “designer estrogens,” SERMs behave similarly to natural estrogen in some tissues such as bone and heart. In breast tissue, however, these SERMs block the effects of estrogen that can cause cancer. Both treatments are used to prevent breast cancer in women at high risk for the disease, tamoxifen for both pre- and post-menopausal women and raloxifene for post-menopausal women only.

Despite the promising advances, Dr. Jordan realized that eventually tumors would become resistant to treatment. Komen funding supported research into how and why breast cancer becomes resistant to tamoxifen. While studying the behavior of estrogen, his team found that in some instances, estrogen actually stopped cancer, instead of causing it. He is now studying “all of the pathways of estrogen, why it sometimes causes [cancer] growth and sometimes causes death [of cancerous cells].” The inaugural recipient of the Brinker International Breast Cancer Award is confident that if we can discover the “death pathway, then we can use that as a new target for new therapies in breast cancer and maybe in cancers in general.”



As part of a long running tradition, Dr. V. Craig Jordan toasts the 2007 Brinker International Breast Cancer Award winners during the annual awards presentation. Also pictured are previous award winners (left to right) Kent Osborne, MD, (Jordan), Jay Harris, MD, Nancy Davidson, MD, Gabriel Hortabaygi, MD, Charles Loprinzi, MD.

Komen Funded Research

- 1991 - Resistance of Breast Cancer to Tamoxifen Therapy
- 1992 - Resistance of Breast Cancer to Tamoxifen Therapy
- 2010 - Molecular Modification Of The Estrogen Receptor (ER) For Estrogen Action, Antagonism And Apoptosis

V. Craig Jordan, OBE, Ph.D., Dsc, FMedSci is making an Impact.