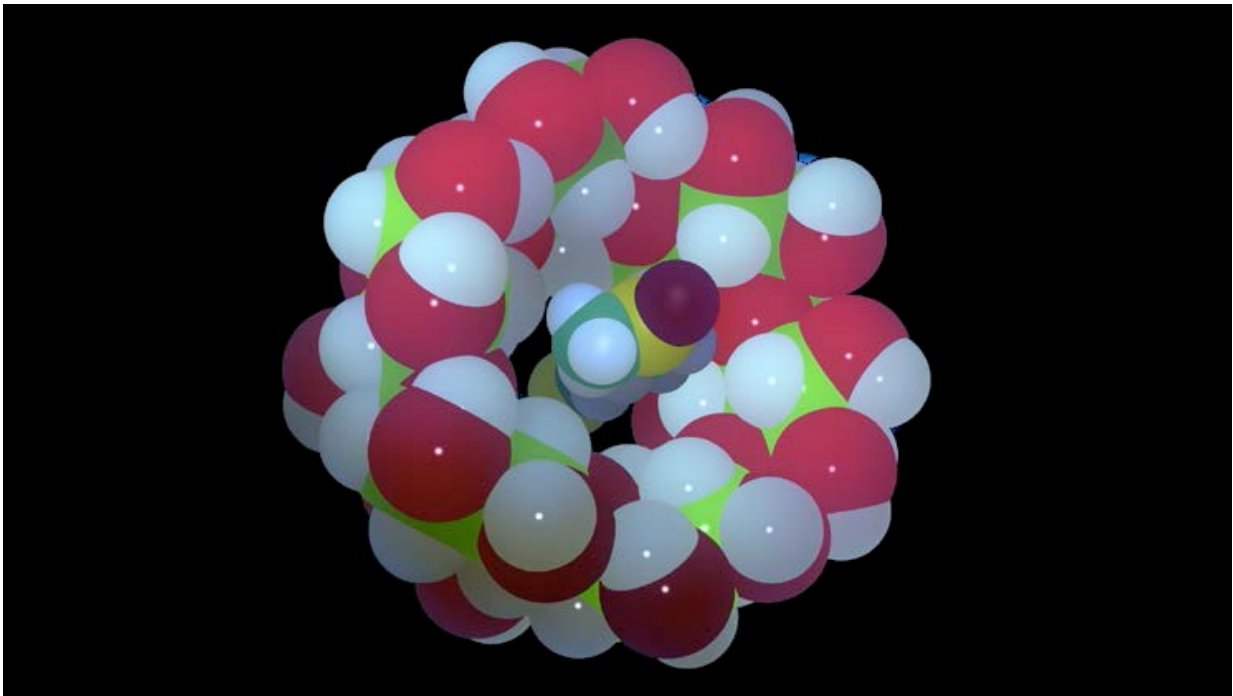


New drug combination shows promise for breaking breast cancer resistance

April 20 2015



Sulforadex. Credit: Evgen Pharma

Researchers from The University of Manchester working with drug development company Evgen Pharma, have developed a new combination of drugs which could overcome treatment resistance and relapse in breast cancer.

In research to be revealed at the American Association of Cancer

Research annual conference on Monday, the researchers show that in the most common type of breast cancer, affecting 70% of patients, the drug Sulforadex helps overcome resistance to routinely used hormonal treatments by targeting the cancer stem cell population.

While most women initially respond well to hormonal treatment with drugs such as tamoxifen, many go on to develop resistance and [relapse](#). There is evidence that this is often due to activation of the Wnt signalling pathway, a gene involved in development which fuels the growth of the tumour.

Around 70% of breast cancers express the 'estrogen receptor' (ER) and typical treatment focuses on reducing estrogen levels or blocking ER function. However, the researchers have shown that cancer stem cells which cause tumours to regrow and spread do not express the ER. Thus, these stem cells aren't inhibited by the standard treatments and have the ability to regrow the tumour.

The new combination therapy, tested in lab studies by the Manchester scientists, combines Evgen's Wnt pathway-suppressing [drug](#), Sulforadex with standard hormonal treatments. This targets both the estrogen-sensitive cells and the remaining cancer stem cells at the same time.

Dr Robert Clarke from the University's Institute of Cancer Sciences said: "The hormonal therapies we use today are very good at treating breast cancer tumours driven by estrogen.

"However, they don't completely solve the problem. This combination of drugs potentially allows us to target estrogen-sensitive cells, whilst also mopping up the cells which cause [treatment resistance](#)."

The study was carried out in lab samples of treatment resistant cells from [breast cancer patients](#). The next step will be to recruit patients for a trial

in the next few months.

Dr David Howat, Head of Research and Development at Evgen Pharma said: "We are really excited about the data presented at the AACR. Dr Rob Clarke and his excellent research team have demonstrated the efficacy of Sulforadex in patient derived cancer tissues in vitro and, importantly, in an in vivo setting.

"We now intend to extend this collaboration and advance Sulforadex into a clinical trial with [breast cancer](#) patients."

Provided by University of Manchester

Citation: New drug combination shows promise for breaking breast cancer resistance (2015, April 20) retrieved 2 February 2024 from <https://medicalxpress.com/news/2015-04-drug-combination-breast-cancer-resistance.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.