

Cancer model could end animal testing

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Cancer model could end animal testing Wed 9 May 2007

JOHN VON RADOWITZ

A NEW test-tube model of breast cancer could halt painful experiments on animals, it was claimed yesterday.

Researchers at Queen Mary's School of Medicine and Dentistry in London developed the unique model, which builds a three-dimensional miniature version of breast cancer in a test tube.

Mice are commonly used when researching breast cancer treatments, with up to 400 animals experimented on in each series of tests.

Cancer cells are implanted into the animals, which then have to endure painful injections followed by the "harvesting" of tumours.

However, mouse models of cancer still differ substantially from the genuine human condition, and there has been a growing interest in developing alternatives.

The London scientists co-cultured three different types of cells from normal and cancerous breast tissue. Cancer cells were grown in a collagen gel to form three-dimensional structures that closely resemble the glandular form they take in the breast.

The way the cancer cells orientated themselves closely mirrored what is seen in human breast cancer.

The complex three-dimensional cell cultures enable researchers to find out more about the early developmental stages of the disease.

Scientists at Queen Mary's are now using them to investigate ductal carcinoma in situ, a common pre-cancerous condition that leads to 20 per cent of all breast cancers.

One discovery is that a particular type of cell from healthy breast tissue can suppress the growth of cancer.

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The research was funded by the Dr Hadwen Trust, which promotes medical research that avoids the use of animals.