

# Quest for better breast cancer drugs

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Breast cancer sufferers could eventually benefit from high-tuned, tailor-made drug treatments that minimize side effects as a result of a joint initiative between computer scientists in Edinburgh and cellular biologists in Japan.

The five-year project, which involves the University of Edinburgh and the Riken Genomic Research Centre in Japan, will initially look at why particular treatments for breast cancer work in some patients and not in others.

It will use advanced computer systems set up at the University of Edinburgh's School of Informatics to run programmes incorporating expertise from cellular biologists in Japan to better understand the make-up of particular drugs and why their effectiveness differs among patients.

It is hoped that the database, which will use clinical information from patients at the Edinburgh Breast Unit and Cancer Research Centre, will be able to narrow down the different types of drugs that should be prescribed to individual patients and what types of combination therapy would have the best outcome.

The database could also provide information for creating new drugs, with computer modelling becoming an integral part of medical research.

Igor Goryanin, director of the Edinburgh Centre for Bioinformatics, based at the University, said: "The computer systems will help the

biologist to understand the function of the organisms and, with this knowledge, we will be able to predict more accurately which new and existing drugs work and why.

“We would hope to further our research further and look at other cancers as well as diseases such as heart disease and neural and psychiatric diseases. Identifying which drugs have the best responses in particular patients would not only save lives but would also save the NHS money as treatment with expensive drugs can be tailor-made for whom it works.”

Source: University of Edinburgh

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