



BE PART OF THE CURE



Treatment

Summary of Professor Nicola Brown's research project

Project name: Bevacizumab response in breast cancer - are neuropilins the key?

Project award: PhD studentship grant

Subject: Treatment

Grant holder and researcher: Professor Nicola Brown and Sapna Lunj

Institution: University of Sheffield

Key findings of the project

- Professor Brown's research has shown that molecules called neuropilins, which Professor Brown thought were stopping the drug Avastin from working, can be blocked using specific inhibitor molecules in human cells in the laboratory, but these molecules do not appear to have the same effects on tumour cells
- Unfortunately when Professor Brown's team combined the neuropilin blocking molecules with Avastin (also known as bevacizumab) there was no additional reduction in tumour growth
- However, the research has shown for the first time that Avastin can stop the growth of tumours that have already spread
- The researchers also found that Avastin appears to reduce breast tumour growth at lower doses than previously reported in other research

Next steps

- Professor Brown's team will try to confirm whether Avastin can stop tumours growing which have already spread and see if neuropilins play a role in this
- The team will also try to refine the neuropilin blocking molecules they used in research and see if they can help to make other chemotherapy drugs work more effectively

What does this mean for patients?

- The discovery that Avastin could reduce breast tumour growth at lower doses than previously thought is very useful information for doctors conducting trials to decide what dose of Avastin to use, and could lead to doctors using lower doses of Avastin which could reduce the side-effects experienced by patients

Other key outcomes

- Sapna Lunj, the researcher on this project is now trained as a breast cancer researcher and will submit her PhD thesis in April 2013. This means we are attracting and keeping bright young scientists producing the next generation of world class breast cancer researchers.