A new role for an old protein in breast cancer

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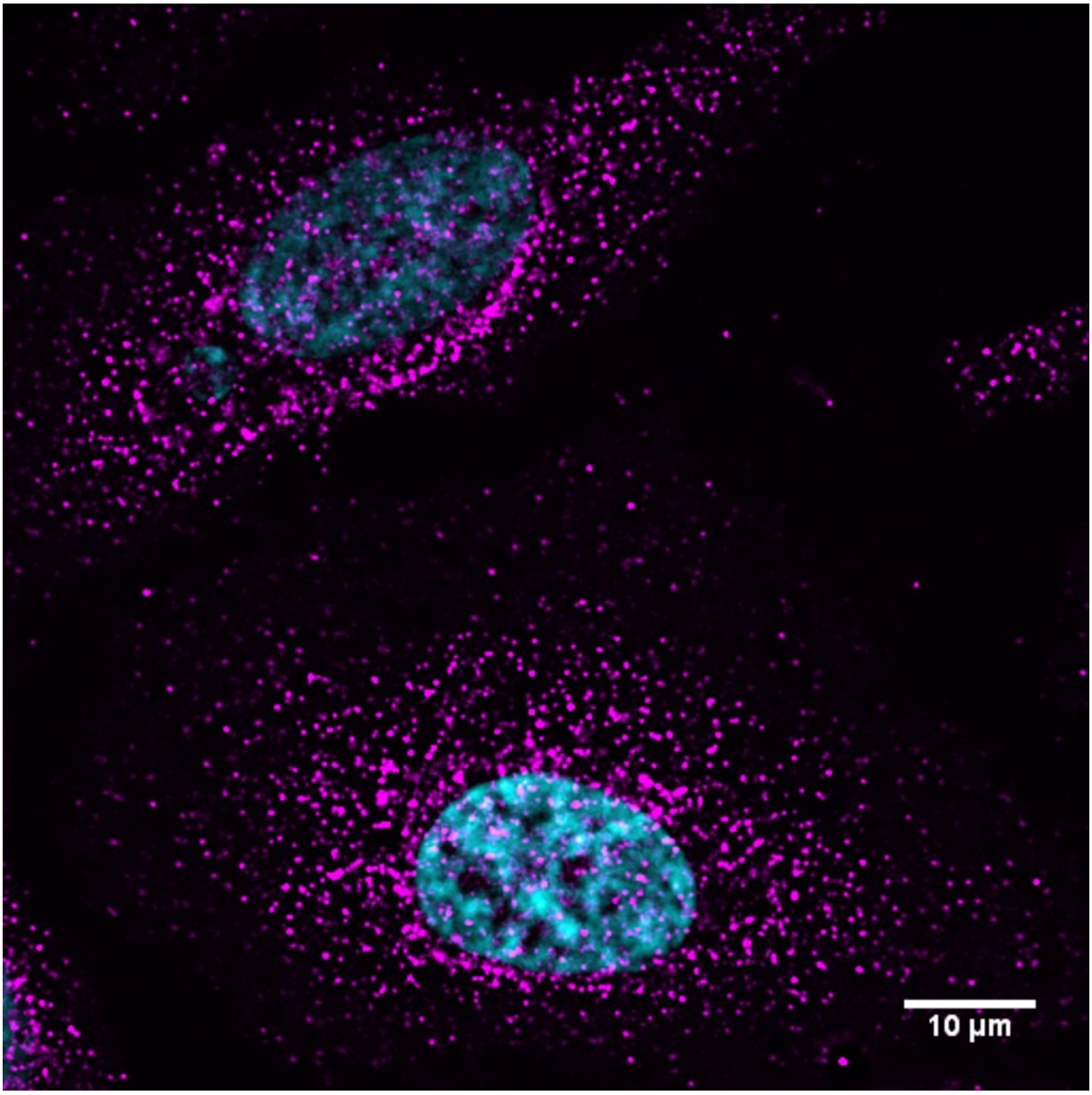

Myosin VI in human cells. Credit: University of Kent

Scientists led by Dr Chris Toseland of the University's School of Biosciences studied a protein called Myosin VI, a molecular motor which acts as a courier to transport other proteins within our cells. Myosin VI is highly present in many cancers yet the role is unclear.Dr Toseland's study to understand the role of Myosin VI found it was critical in the production of specific genes which are linked to cell growth and tumour development. This is particularly relevant to breast, ovarian, prostate and colon cancer.

Approximately 70% of all breast cancer is oestrogen sensitive and the results of this study may identify new treatment targets for patients with the disease. As a result of his findings, Dr Toseland is now inviting patients in the NHS to take part in further research. This will investigate how myosins are targeted to specific genes, and determine how they are themselves regulated, enhancing scientists understanding of their function during breast cancer.

Understanding the role of Myosin VI in the disease may also highlight further diagnostic clues for the disease. This would potentially allow for a better choice of treatment to be administered.

Dr Toseland's findings are presented in an article entitled: NDP52 activates nuclear myosin VI to enhance RNA polymerase II transcription, published in the journal *Nature Communications*.

More information: Natalia Fili et al, NDP52 activates nuclear myosin VI to enhance RNA polymerase II transcription, *Nature Communications* (2017). DOI: 10.1038/s41467-017-02050-w