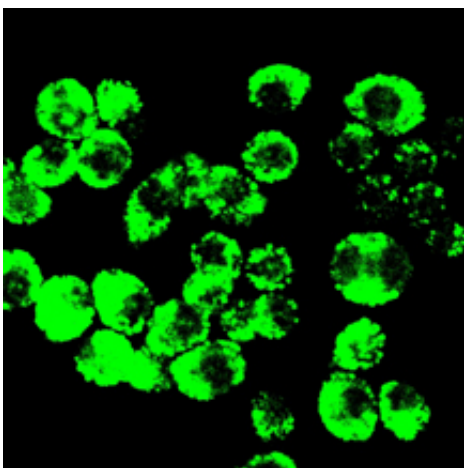


University patents new diagnostic technique for early detection of multiple conditions

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The water soluble boronate-based fluorescence probe in cells.

A team led by Professor Tony James and Dr Steve Bull from our Department of Chemistry has patented a technique they hope will help with the early diagnosis of diseases such as cancer, Alzheimer's and Parkinson's disease.

The key to their research is the detection of the chemical peroxynitrite. Peroxynitrite is associated with many diseases but is difficult to detect as it is so short-lived.

The team began by using a water soluble fluorescence probe to successfully detect peroxynitrite in [cancer cells](#). They are now hoping to

use this technique as the basis for tests for the [early diagnosis](#) of other diseases.

Their paper on their research – A water soluble boronate-based fluorescence probe for the selective detection of peroxynitrite and imaging in living cells – has just been published in *Chemical Science*, a Royal Society of Chemistry journal.

The team from our Department of Chemistry is made up of Professor James, Drs Steve Bull, Stephen Flower, John Lowe and Mr Xiaolong Sun. They are joined on this project by Dr John Fossey from the University of Birmingham, Qingling Xu, Gyoungmi Kim and Juyoung Yoon from Ewha Woman's University and Xu- Hong Qian from East China University of Science and Technology.

Professor James said: "Our research into the detection of peroxynitrite has the potential to change the way these diseases are diagnosed. We are excited by the impact this could have on people's lives.

"We are very grateful to Phil Brown from our Research Development Support Office for helping with the Patent Application."

More information: pubs.rsc.org/en/content/article/2014/sc/c4sc01417k

Provided by University of Bath

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