

Scientists use old enemy to K.O. cancer

August 12 2008

Chemists are pulling cancer onto a sucker punch by getting infected cells to drop their guard – according to research published today. They are using the metal ruthenium as a catalyst to a cancer-busting reaction which calls up an old cellular enemy – oxidants – as an ally.

Cancer adapts quickly to traditional drugs which attack infected cells directly. But the latest laboratory tests reveal a second line of defence using ruthenium as a catalyst to a reaction which stops cells developing the anti-oxidant chemical glutathione.

As the targeted cell is forced to drop its glutathione defences, the oxidant levels increase, and the cancerous cell dies.

University of Warwick Chemistry Professor Peter Sadler explained: "We know oxidants produce free radicals that damage cells. Our experiments show ruthenium produces a reaction in the cell which destroys its anti-oxidant defence glutathione – thus destroying the cancer-infected cell.

"Working with colleagues in Edinburgh University and Oncosense we've proved this could be an effective line of defence against cancer."

Scientists working on the project now hope to move the research out of the laboratory – the next stage for this work would be medical trials.

The research was funded the Biotechnology and Biological Sciences Research Council (BBSRC), and the findings are published in the

Proceedings of the National Academy of Sciences - August 2008.

Source: University of Warwick

Citation: Scientists use old enemy to K.O. cancer (2008, August 12) retrieved 7 May 2024 from <https://medicalxpress.com/news/2008-08-scientists-enemy-ko-cancer.html>

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