NEXIS SEARCH

Word count title: 5

Word count body: 179

Sentence count: 10

Metro (UK)

February 8, 2011 Tuesday   
Edition 1;   
Scotland

Device may stop cancer side-effects  
  
**BYLINE:** Kirsteen Paterson  
  
**SECTION:** NEWS; Pg. 18  
  
**LENGTH:** 192 words

CHEMOTHERAPY patients could suffer fewer side-effects thanks to a tiny device working inside their bodies, it was claimed yesterday.

Scientists believe a unit developed at Edinburgh University could protect cancer sufferers from problems such as hair loss, sickness and weakened immune systems associated with current treatment.

The device uses minute amounts of a metal, palladium, to trigger reactions in cells.

The metal particles are covered in a coating to allow it to penetrate the cells without causing damage.

Experiments have shown specific cell functions could be activated without any impact on normal cell activity such as producing proteins.

It is hoped further work will see the technique used to activate cancer drugs at the site of a tumour.

Research leaders stress the work, carried out with the Universiti Kebangsaan Malaysia, is at an early stage.

However, it is hoped the discovery could have other applications, including delivering dyes to organs for diagnostic tests.

Prof Mark Bradley said: 'This technique potentially gives us the ability to deliver drugs to exactly where they are needed, for example in targeting cancerous tumours.'

The Scotsman

Word count title: 9

Word count body: 471

Sentence count: 21

February 8, 2011, Tuesday   
1 Edition

New pinpoint treatment aims to cut side-effects of chemotherapy  
  
**BYLINE:** Lyndsay Moss Health Correspondent  
  
**SECTION:** Pg. 21  
  
**LENGTH:** 496 words

Scottish scientists have developed a way to potentially deliver chemotherapy to cancer patients with fewer side-effects.

The researchers, from Edinburgh University, have created a device that is able to trigger a reaction in specific cells.

This could enable cancer drugs to be activated at the site of a tumour, targeting treatment to a certain area while protecting the cells around it.

Targeting drug treatment where it is needed should safeguard the rest of the patient's body and help curb side-effects linked to chemotherapy.

Many patients undergoing these aggressive treatments can suffer effects such as hair loss, sickness and weakened immunity.

Scientists are increasingly looking for new ways of tailoring treatments with the aim of making them more effective and causing fewer problems.

While such drugs can be expensive, experts hope that by making them more successful they will prove cost effective in the longer term.

The new device being developed in Edinburgh works by delivering tiny quantities of palladium, a metal not naturally found in human cells.

It helps trigger reactions in the cell without altering their normal functions, such as producing proteins and metabolising energy.

Researchers combined tiny particles of palladium with a harmless material that enables it to enter living cells.

They found that, in the lab, the metal was able to trigger specific reactions in the cell without having any effects elsewhere.

In practice, the palladium could be injected into the site of the cancer which doctors want to target.

It is hoped that cancer drugs could then be designed to only target cells treated with palladium, or another substance, and not affect healthy cells nearby.

Although the research is at an early stage, scientists believe the technique could be developed to allow better treatment for patients with cancer.

The discovery could pave the way for delivering other therapies to where they are needed in the body, scientists said.

And it could also be used to deliver dyes to organs which are used in some diagnostic tests.

Professor Mark Bradley, from the university's School of Chemistry, who led the research, said: "This technique potentially gives us the ability to deliver drugs to exactly where they are needed, for example in targeting cancerous tumours."

Researcher Dr Emma Johansson said the technique was still in the early stages of development, but they believed it had the potential to be useful in future drug development and the method could also be used in treating other diseases.

The study, published in the journal Nature Chemistry, was carried out in collaboration with the Universiti Kebangsaan Malaysia, supported by the Engineering and Physical Sciences Research Council, the Royal Society, the government of Malaysia and the Swiss National Science Foundation.

Dr Joanna Owens, of Cancer Research UK, said: "Developing treatments that specifically target cancer cells while sparing healthy tissue is an important area of research."