Inhaler treatment for lung cancer

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This is Dr. Chris Carter of the University of Strathclyde. Credit: University of Strathclyde

Lung cancer patients could receive safer and more efficient treatment through a system being developed by researchers at the University of Strathclyde in Glasgow.

The scientists have devised a method for giving drugs by inhalation to patients through a nebuliser, rather than the current approach of intravenous delivery.

The system could administer the treatment far more quickly than existing methods and without the harmful side effects associated with

current systems, which can cause kidney damage.

It could also enable health authorities to deliver the drugs in smaller doses without diminution of benefit to patients.

Lung cancer and mesothelioma caused 4,147 deaths in Scotland in 2009, and deaths of women from the disease increased by 12% in the preceding decade, despite a corresponding fall of 20% among men.

Dr Chris Carter, a Senior Lecturer the Strathclyde Institute of Pharmacy and Biomedical Sciences, led the research, partnered by Professor Alex Mullen and Dr Valerie Ferro. She said: "Increasing awareness of cancer risks and improvements in treatment do not alter the fact that it remains one of Scotland's biggest killers and lung cancer is its most common form. This means that new, improved treatments are still essential.

"By delivering cisplatin, one of the most widely used drugs for lung cancer, in a vaporised form, we would be able to get it to the cancerous cells and avoid the damage to healthy cells which can be hugely debilitating to patients. It would make the treatment far less onerous for them and we hope it would help them to live longer."

The research is an example of the pioneering work of the Strathclyde Institute of Pharmacy and Biomedical Sciences in developing new medicines for illnesses and conditions including infectious diseases, cancer, heart disease, and schizophrenia. An £8 million fundraising campaign is underway for the Institute's new £36 million building, to expand and enhance its innovative research and education in medicine discovery, development and use.

The research received funding from Scottish Enterprise's Proof of Concept Programme, which supports the pre-commercialisation of leading-edge technologies emerging from Scotland's universities,

research institutes and NHS Boards. It helps researchers to export their ideas and inventions from the lab to the global marketplace and create new sustainable technology businesses in Scotland or license the technology to Scottish companies.

Provided by University of Strathclyde