Tests to catch the makers of dangerous 'legal high' designer drugs

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The photograph shows, left to right: Professor Oliver Sutcliffe; Dr Katy Savage; Professor Niamh Nic Daeid. Credit: Image courtesy of University of Strathclyde

Urgently needed tests which could help identify the manufacturers of designer 'legal high' drugs are being developed in research led at the University of Strathclyde in Glasgow.

The drugs, known by names such as 'ivory wave' and NRG-1" and sold labelled as bath salts, plant food and incense, mimic the effects of illegal drugs such as amphetamine, cocaine and ecstasy. Although these so-called 'designer drugs' can be dangerous, many have not yet been made illegal and are difficult to detect with current drug tests.

A means of potentially tracing the source of the raw materials, and consequently providing information as to who is making the 'bath salts,'

is being developed by scientists at Strathclyde and The James Hutton Institute.

The bath salts drug can cause euphoria, paranoia, anxiety and hallucinations. It often contains mephedrone, a synthetic compound structurally related to methcathinone, which is found in Khat - a plant which, like mephedrone itself, is illegal in many countries.

The bath salts drug is labelled as being not for human consumption and is not illegal in the UK but its import has been banned. The term 'bath salts' is used by those who sell the drug as a way of circumventing legislation when supplying it.

The researchers developing tests for the drug are using a technique known as isotope ratio mass spectrometry (IRMS) to reveal the course of a drug's manufacture.

The research is being carried out by Dr Oliver Sutcliffe, at the Strathclyde Institute of Pharmacy and Biomedical Sciences, and Professor Niamh Nic Daeid and Dr Katy Savage at the Centre for Forensic Science in the Department of Pure and Applied Chemistry, in collaboration with Dr Wolfram Meier-Augenstein at The James Hutton Institute.

Dr Sutcliffe said: "The legal status of designer drugs varies around the world but they present many dangers to users and these are borne out by the Home Office's decision to ban the import of 'bath salts.'

"The new method we have used has enabled us to work backwards and trace the substances back to their starting materials. IRMS measures the relative amounts of an element's different forms- it is successful because these relative amounts are transferred like a fingerprint through the synthesis of the drug."

Provided by University of Strathclyde