

British Skin Foundation

PRESS RELEASE

Painless needles could put an end to flu deaths

For immediate release

A team of scientists in Cardiff have developed a way of taking the pain out of injections that could play a vital role in the mass immunisation against seasonal and swine flu outbreaks.

The two year study, funded by skin disease research charity the British Skin Foundation, has seen the development of microneedles only a fraction of a millimetre in length which can provide a quick, pain-free and potentially far cheaper way of administering medicines without the need for intervention from doctors and nurses.

Professor Alex Anstey, a consultant dermatologist at Royal Gwent Hospital and Dr James Birchall from the Welsh School of Pharmacy headed the piece of research. They found that the microneedles, which were between 0.18mm and 0.28mm in length, caused significantly less pain than the conventional hypodermic needle, as they did not pierce the skin deep enough to touch pain receptors and blood vessels found in deeper skin layers.

With over 100 deaths so far this winter, GPs running low on vaccinations and seven out of ten pregnant women having not had the combined flu jab in the UK, developments like this could be crucial in putting an end to the deaths from seasonal flu and swine flu over the winter period.

Dr Birchall believes that microneedles have the potential to play a vital role in the fight against disease outbreaks such as swine flu. He says: "Being able to deliver medicines through the skin painlessly will not only make injections a lot more patient friendly, but could also allow a wider range of medicines to be administered in this way.

"In terms of vaccines, microneedles may allow the public to self-deliver the vaccine in the form of a skin patch similar to a plaster without the need for doctors or nurses. This could mean more people get vaccinated in less time, which, in the case of the current situation with the various flu strands for example, could prove to be a big advantage when trying to quickly immunise large populations."

Skin biopsies also showed that the small holes made by microneedle use had sealed and repaired within 8 - 24 hours of application, which was faster than the healing rate of skin pierced by the hypodermic needle.

The microneedle team at Cardiff University work with engineering experts at Tyndall National Institute in Ireland and are currently collaborating with US researchers at The Georgia Institute of Technology and Emory University to develop a microneedle patch for pandemic influenza. Hopefully, by the time the next cycle of flu comes around, efforts like this will mean the UK will be better prepared.

Matthew Patey of the British Skin Foundation, said: “What Dr Birchall and his colleagues have developed is certainly exciting in light of the current health epidemic. This system of drug administration that uses needles barely longer than the width of a strand of hair could affect millions of lives across the globe, both in the approach to immunisation against any disease outbreak but also for those who have a phobia of needles.”

-Ends-

For more information about the study contact: Bevis Man, Communications and Press Officer at the British Skin Foundation. Phone: 0207 391 6347, email: bevis@bad.org.uk, Website: www.britishskinfoundation.org.uk

The British Skin Foundation (BSF) is a charity committed to raising funds for skin cancer and skin disease research. Working closely with the British Association of Dermatologists (BAD) the BSF is the only charity dedicated to supporting dermatologists and skin science.

Over the last four years, the BSF has awarded in excess of £2.7 million to a number of studies that aim to find new treatments and eventually cures for the many skin diseases in the UK.