

# Hand hygiene: a Guinness World Record

Guinness World Records has officially confirmed a new record for the largest simultaneous hand hygiene lesson at multiple venues. The event was organised in March by Glasgow City of Science working with partners that included the IBMS. A total of 3089 children from 36 Glasgow primary schools successfully smashed the existing record held by the Health Protection Agency in England (now Public Health England) of 2147 children from 21 schools from across the UK.

The new record was officially declared at the Glasgow Science Centre on 20 March 2015. The presentation of the certificate also saw a number of activities take place involving the children, including a specially commissioned jingle for the children to sing, a hand hygiene relay, and hand washing demonstrations. IBMS in Scotland member Diane Anderson was part of the steering group organising the campaign. On presentation of the certificate for the

IBMS, Diane said: "Last year's event was an excellent and fun event with a serious message to children that good hand hygiene prevents disease and colds. Breaking the record was a wonderful tribute to all the



Diane Anderson with Jamie Hepburn and the IBMS record-breaker certificate of participation.

pupils, teachers, student nurses and volunteers who helped with the success of this event. This includes all our IBMS members who knitted the very popular woolly bugs. They will be pleased to hear that the bugs have found new homes to remind children about hand hygiene and bugs."

The Scottish government's Minister for Sport, Health Improvement and Mental Health, Jamie Hepburn, said: "I am delighted to have been asked to participate in the celebratory event to mark the hand hygiene world record. Tackling and reducing infection in our hospitals and the wider community is a top priority for this government. It is vitally important that all children are made aware of the importance and benefits of washing their hands properly, and by encouraging them to do so will ensure this becomes a lifelong habit. We would encourage all children to pass on everything they have learned to their families and friends to spread the word."

[www.ibms.org/go/media/news.864](http://www.ibms.org/go/media/news.864)

## Vaccination against Ebola infection

A live vaccine based on the vesicular stomatitis virus (VSV) has yielded highly promising results for the rapid development of an effective agent against the Ebola virus. This vaccine would only need to be injected once for long-lasting immunoprotection. These are the key findings of an international study coordinated by the World Health Organization (WHO) in which the Medical University of Vienna played an important role.

As part of the phase I study, the results of which have been published in the *New*

*England Journal of Medicine*, 138 test subjects (healthy adults) were vaccinated with various doses of the live vaccine. The results are highly promising, with the most significant side-effect being temporary joint pain and inflammation reported among a small group of test subjects, particularly in the European centres.

In the phase II studies now starting, the vaccine will be used in patients living in the areas currently most badly affected by Ebola, especially Guinea, Sierra Leone and Liberia.

[www.meduniwien.ac.at](http://www.meduniwien.ac.at)

## Smartphone testing for prostate cancer

A Loughborough University academic has developed what is believed to be the first in a new generation of rapid detection tests for prostate cancer using smartphone technology.

In a study led by Dr Nuno Reis, the university research team conducted a test for the second most common cause of cancer in the male population worldwide, using a small sample of blood, a new affordable microfluidic test strip, and a smartphone camera. The full study was published recently in the journal *Biosensors and Bioelectronics*.

The portable device uses simple image analysis to monitor the levels of prostate-specific antigen (PSA) – the most widely used prostate cancer biomarker – in a blood sample. According to Dr Reis, this point-of-care, over-the-counter test has the potential to "revolutionise the healthcare system", by making reliable laboratory and consumer test results accessible to everyone, even in remote areas of developing countries where laboratory facilities are limited.

A magnifying lens is attached to the smartphone camera in order to capture an image of a signal generated from the blood to determine the level of PSA. This is shown as a number, which the GP, for example, can then use to indicate to the patient his risk of developing prostate cancer. The whole process takes 15–20 minutes.

[www.lboro.ac.uk](http://www.lboro.ac.uk)

## Faecal transplant for *C. difficile* infection

Distasteful though it sounds, the transplantation of faecal matter is more successful for treating *Clostridium difficile* infections than previously thought. Research, published in the open-access journal *Microbiome*, reveals that healthy changes to a patient's microbiome are sustained for up to 21 weeks after transplant, and has implications for the regulation of the treatment.

*Clostridium difficile* infections are a growing problem, leading to recurrent cases of diarrhoea and severe abdominal pain, with thousands of fatalities worldwide every year. The infection is thought to work by overruling the intestinal microbiome, the ecosystem of microorganisms that maintain a healthy intestine.

Faecal microbiota transplantation was

developed as a method of treating *C. difficile* infection, and is particularly successful in patients who suffer repeated infections. Faecal matter is collected from a donor, purified, mixed with a saline solution and placed in a patient, usually by colonoscopy.

Previous research has shown that the faecal microbiota of patients resembles that of the donor, but not much is known about the short- and long-term stability of faecal microbiota transplanted into recipients. In the recent research, the team at the University of Minnesota collected faecal samples from four patients before and after their faecal transplants. Three patients received freshly prepared microbiota from faecal matter and one patient received faecal microbiota that had previously been frozen. All received faecal microbiota from the same donor.