News story: Making safer polio vaccines with plants

The research, published in the journal Nature Communications, confirms that these plant-made particles are structurally similar to poliovirus and can protect mice from infection as effectively as existing vaccines.

As large amounts of live poliovirus are needed to make current vaccines, VLP-based vaccines could provide a safer alternative for vaccine production after polio eradication.

What are VLPs?

VLPs are empty protein shells that 'mimic' the virus but lack the genetic material needed for replication. Scientists have suggested poliovirus VLPs as potential vaccine candidates because they can provoke an immune response but aren't infectious. However, their instability has long been a barrier for their use as vaccines.

In January, NIBSC researchers published a new genetic approach to make stable poliovirus VLPs, which forms the basis of this new study.

Using plants to make medicines

Over the last 20 years, plants have begun to compete with bacteria, yeast, insect and mammalian cells as producers of medicines and they've recently been used to make candidate VLP-based vaccines against infectious diseases such as influenza.

For this study, researchers expressed stabilised poliovirus VLPs in plants and compared them to normal, or 'wild-type', poliovirus.

They found that plant-produced stabilised VLPs had a similar structure to wild-type poliovirus and could promote similar levels of protective proteins, known as antibodies, as an existing vaccine.

This paper suggests plants could be used to make large quantities of stable and effective poliovirus VLPs for new vaccines.

The research is a collaboration between scientists at the John Innes Centre, NIBSC, University of Oxford, Diamond Light Source and University of Leeds and funded by the World Health Organisation (WHO).

NIBSC researcher, and study author, Dr Andrew Macadam said:

> Current vaccines for polio are produced from large amounts of live virus which carries a threat of accidental escape and re-introduction. As VLPs aren't infectious, making vaccines using these particles is safer and could be particularly important post-

eradication.

This research shows that plants can be used to successfully make stable VLPs for vaccines. It takes us a step closer to replacing current polio vaccines, providing us with a cheap and viable option for making VLP-based vaccines.

But the possibilities of this approach could extend further than polio and we're also looking at applying these methods to develop stable VLPs for new vaccines against other viruses.

News story: HMRC confirms country-by-country reporting format for multinationals

The UK follows the country-by-country reporting requirements of the Organisation for Economic Co-operation and Development (OECD).

More details can be found in this tax information and impact note.

HM Revenue and Customs (HMRC) have confirmed that the required format for country-by-country reporting will be via an XML (extensible markup language) schema, to ensure international consistency.

Find out if you must send a country-by-country report.

The International Exchange of Information Manual specifically includes directions relating to:

- the content and form of presentation of the country-by-country report and notifications
- the method for filing reports and providing notifications

News story: Foreign Secretary statement on Indian Independence Day

2017

Foreign Secretary Boris Johnson said:

> On behalf of the United Kingdom of Great Britain and Northern Ireland, I extend my warmest wishes to the people of India and the British Indian community in the United Kingdom on the occasion of India's Independence Day.
>
> The United Kingdom and India share a deep and longstanding partnership, rooted in the 1.5 million British Indian diaspora in the UK who contribute so richly to our society. Our two countries are committed to working together to promote our people's prosperity, improve global security and tackle the global challenges that we face today.
>
> Through the 2017 UK-India Year of Culture, we have celebrated the strength of UK-India ties, from our shared history, values, culture and language. Whilst today is an opportunity to reflect on India's success over the past 70 years, it is also a chance to look ahead at a bright future for both our countries, supported by the flourishing ties between the people of India and the UK.
>
> My best wishes to you all on this day

Further information

News story: Animal medicines improvement notice: Nupsala Veterinary Services

Details of the improvement notice issued to Nupsala Veterinary Services, Leicestershire published in August 2017.

This Notice was issued to Nupsala Veterinary Services, Burrough on the Hiill, Leicestershire, as they were advertising the product Lubravisc Vet, a product which is not authorised as a veterinary medicine in the UK. This is an

offence under Regulation 4 of the Veterinary Medicines Regulations.

This advertising was seen on the Nupsala stand at the Association of Racecourse Veterinary Surgeons. Nupsala had previously been informed of this offence earlier this year.

The improvement required is for:

- Nupsala must provide written confirmation to the VMD that all reference to the product Lubravisc Vet has been removed from all Nupsala marketing material.

Notice: S60 1RL, Stobart Biomass Products Limited: environmental permit issued

The Environment Agency publish permits that they issue under the Industrial Emissions Directive (IED).

This decision includes the permit and decision document for:

- Operator name: Stobart Biomass Products Limited
- Installation name: Greasbrough Depot
- Permit number: EPR/BP3739YW/A001