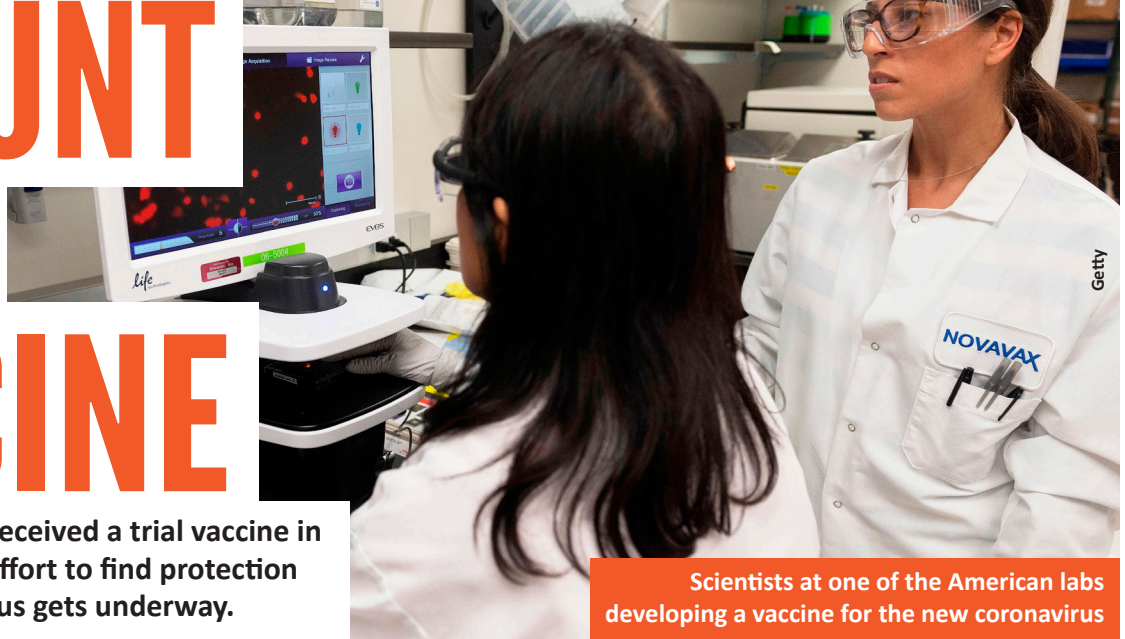


SCIENCE NEWS

THE HUNT FOR A VACCINE



The first volunteers have received a trial vaccine in the USA, as a worldwide effort to find protection against the new coronavirus gets underway.

Scientists at one of the American labs developing a vaccine for the new coronavirus

A vaccine is a substance that helps the body to recognise and kill off viruses or bacteria, keeping us safe from the diseases they cause. They are usually injected and already exist for several diseases, including measles, typhoid and some types of flu. But before a vaccine can be given to members of the public, it must first undergo a long series of trials to make sure it's safe and effective.

As this new coronavirus quickly spreads around the world, scientists in various countries are working to urgently find a vaccine to protect the most vulnerable.

Jennifer Haller, a mum of two, was the first volunteer in America to receive a new vaccine called mRNA-1273. It has been developed by a biotechnology company called Moderna Inc in Massachusetts, USA. Haller said she really wanted to help in the hunt for a vaccine: "This was just something that I could do and that I wanted to do."

As there is such an urgent need to slow the spread of the virus, researchers at Moderna were allowed to skip the usual

rules of performing tests on animals first.

On 16 March, Haller was one of four volunteers to receive the jab. A total of 45 will take part in the trial, and they will be regularly monitored for 14 months, to see if the vaccine works. That means, of course, that even if mRNA-1273 is successful, it can't be rolled out to the general public until some time next year at the earliest.

But several other trials are taking place in the USA and beyond. In the UK, researchers at Oxford University are expected to trial the country's first vaccine next month.

A German biotechnology company called CureVac claims it could have a vaccine ready this autumn. The European Union is so confident in CureVac's work that it has pledged £74 million of support.

Citizen scientists can also have a crack at helping researchers by playing a free online game. *Foldit* poses weekly science challenges that are directly related to vaccine research being done at the University of Washington.

F1 JOINS FIGHT



F1 champion Lewis Hamilton in his Mercedes car earlier this year

Formula 1 teams will produce ventilators to help British hospitals cope with COVID-19.

A group of UK-based F1 teams are working out how they can use their engineering skills to increase production of the life-saving kit.

Some people with COVID-19 (the disease caused by the new coronavirus) find their breathing is badly affected, and ventilators are the devices that doctors use to supply air to them.

The F1 teams, engine manufacturers and technology experts are well-placed to help because they have experience of designing and manufacturing products safely and, most importantly, quickly.

A spokesperson for F1 said: "All the teams have expert design, technology and production capabilities... which is hoped can be applied to the critical needs set out by Government."

The NHS currently has access to 8,175 ventilators. The Government has already asked companies including Airbus, Rolls-Royce, Nissan and JCB to help produce up to 30,000 ventilators in just two weeks.

GLOSSARY

biotechnology – Technology based on biology. The use of living systems and organisms to develop or make products



Questions on – Science News: ‘The hunt for a vaccine’ and ‘F1 joins fight’

Questions on: ‘The hunt for a vaccine’

Part A: Find and explain the facts

- A1. What is a vaccine?
- A2. Where in the world have the first volunteers received a trial vaccine against the new coronavirus?
- A3. Fill the gaps to complete the sentences about the trial.

On March, Haller was one of volunteers to receive the jab. A total of will take part in the trial, and they will be regularly monitored for months, to see if the vaccine works.

Part B: Deduce and infer information

- B1. What is the problem with the mRNA-1273 vaccine, even if it is successful?
- B2. Why has the European Union pledged £74 million of support to CureVac?
- B3. How might a free online game help in the effort to find protection against the new coronavirus?

Part C: Analyse the writing and presentation

Jennifer Haller is directly quoted in this article. What is the effect of this?

Part D: Discussion task

Researchers at Moderna have been allowed to skip the usual rules of performing tests on animals first. Do you agree or disagree with the decision to allow them to do this? Justify your view.

Questions on: ‘F1 joins fight’

Part A: Find and explain the facts

- A1. What are a group of UK-based F1 teams going to produce to help British hospitals cope with COVID-19?
- A2. Answer the following questions:

How many ventilators does the NHS currently have access to?	
How many ventilators does the Government want produced in two weeks?	

Part B: Deduce and infer information

- B1. What makes the F1 teams well-placed to help?
- B2. Why is it significant that the Government has already asked companies including Airbus, Rolls-Royce, Nissan and JCB to help to produce up to 30,000 ventilators in two weeks?

Part C: Analyse the writing and presentation

Comment on the effectiveness of the headline: “F1 joins fight”.

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