A CURE FOR THE COLD?


iStock

SCIENTISTS think they have found a way to stop the common cold.

Beating the common cold has been a massive problem in medicine.

Most colds are caused by rhinoviruses – nothing to do with the big, grey animal, in case you wondered. Rhin means nose – and comes from Greek!

There are around 160 different types of rhinoviruses and they mutate, or change, so easily that medicine hasn't been able to keep up to stop us getting colds. The viruses are also really good at hiding from our immune system.

This has led to the idea of "host-directed therapy". This means making our bodies places where the cold viruses can't spread.

An individual virus can't duplicate itself on its own. Instead, it needs to infect another cell and steal some of the parts inside.

Now, a team at Stanford University and the University of California, San Francisco, have found a protein that the viruses need. Once they worked out what it was, they found out that by turning off instructions in our DNA, the viruses weren't able to spread.

So, when do we get a cure?

Well, the plan is not to genetically modify humans, but to find a drug that can shut down the protein and give us protection.

Professor Jan Carette from Stanford said it was fantastic that they had found a target that the viruses needed. "Take that away and the virus really has no chance," he said. "This is a really good first step – the second step is to have a chemical that mimics this genetic deletion."

Prof Carette thinks development will be quick. Let's hope so – aachooo!

SIGN OF LIFE

WE now know which planet outside our solar system is most likely to contain life.

K2-18b, which is in the constellation of Leo some 110 light years away, was discovered in 2015. But new analysis of data from NASA's Hubble Space Telescope shows it contains water vapour in its atmosphere.

This is the first time a planet in a habitable zone – a part of space where the temperature isn't too hot or too cold for life to exist – has been found to have water in its gases. Water is essential for life as we know it to exist.

K2-18b is twice as big as Earth and it orbits its sun in just 33 days. The research team at University College London say their find doesn't prove there are seas, lakes and rivers on the surface. But they reckon it's a positive sign that the planet could contain life.

Before you reach for your passport, though, be warned that K2-18b isn't suitable for humans. For a start, it would take a million years to get there. Then there's the fact you wouldn't be able to stand up on the planet's surface: gravity is eight times as strong there as on Earth, so the average person would weigh 500kg – that's half a tonne!


ESA/Hubble, M. Kornmesser

An illustration of what K2-18b might look like

GLOSSARY

DNA – It contains our unique genetic code and holds the instructions for making all the proteins in our bodies

genetic modification – It is when the DNA of organisms is changed using science

Questions on: Big News: 'A cure for the cold?'

Part A: Find and explain the facts

A1. What are most colds caused by?

A2. What is "host directed therapy"?

Part B: Deduce and infer information

B1. Why has beating the common cold been "a massive problem in medicine"?

B2. Why is it stated that "the plan is not to genetically modify humans"?

Part C: Analyse the writing and presentation

C1. Why is the headline written in the form of a question?

C2. Could this article be on the Science News page with 'Sign of life'? Explain your answer.

Questions on: Science News: 'Sign of life'

Part A: Find and explain the facts

A1. Which planet outside our solar system is most likely to contain life?

A2. Describe the planet.

A3. Why isn't the planet suitable for humans?

Part B: Deduce and infer information

B1. The planet was discovered in 2015, so why is it in the news now?

B2. Why is it significant that this planet has been found to have water in its gases?

B3. Why is there a reference to the reader's passport?

Part C: Analyse the writing and presentation

C1. Comment on the use of an illustration of K2-18b rather than a photograph.