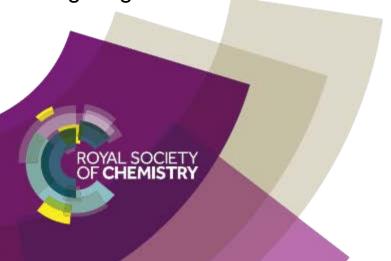
Targeting manganese fights the flu

Read the full article at rsc.li/2qLlaUK

An American scientist and his team discovered a compound that fights the flu. It does this by binding to a manganese atom on one of the flu virus's enzymes.

When they looked at the crystal structure of this compound, they realised they could change it slightly so that it binds to both available manganese atoms. This made it 1000 times more effective at fighting the flu.





Chest X-ray of a patient with H1N1 'swine flu'. It can lead to lung inflammation, which is shown by the patches on the lungs. © J Radiol / CC BY 4.0

They now need to take the drug through clinical trials so they know how safe it is for humans. It could be used as a backup to the flu vaccine, which was only 40% effective in 2017–18.

Vaccines are sometimes ineffective because the virus mutates. However, the enzyme this drug targets is the same for all strains of the flu.

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- 1. State three things your periodic table tells you about manganese. What three other things about manganese do you think should be in the periodic table, and why?
- 2. A flu outbreak in 1918 killed up to 5% of the world's population. Do you think we are more or less at risk of major flu outbreaks today? Why?
- 3. If viruses are alive, and killing things is wrong, why is it okay for us to kill viruses?