

New research in Australia aims to end refrigeration of vaccines

23 February 2022 | News

The World Health Organization estimates that at least 50 per cent of vaccines are wasted globally each year, with a lack of facilities and temperature control the major cause



Researchers at Australia's national science agency, Commonwealth Scientific and Industrial Research Organisation (CSIRO), have developed a technique that addresses the challenge of transporting temperature-dependent vaccines, which researchers hope may increase access in rural and remote communities in Australia and developing countries.

The researchers encapsulated live virus vaccines with a dissolvable crystalline material called MOFs (metal organic frameworks), which protected the integrity of the vaccines for up to 12 weeks and at temperatures as high as 37 degrees Celsius. Without refrigeration the vaccines would otherwise last only a few days.

The breakthrough science would now focus on proving the approach for other animal and human vaccines, including mRNA COVID-19 vaccines.

The team continues to progress this research and is looking to partner with animal and human health companies to commercialise their work.

"This breakthrough has the potential to enable more affordable and equitable access to vaccines across the world", said the researchers.