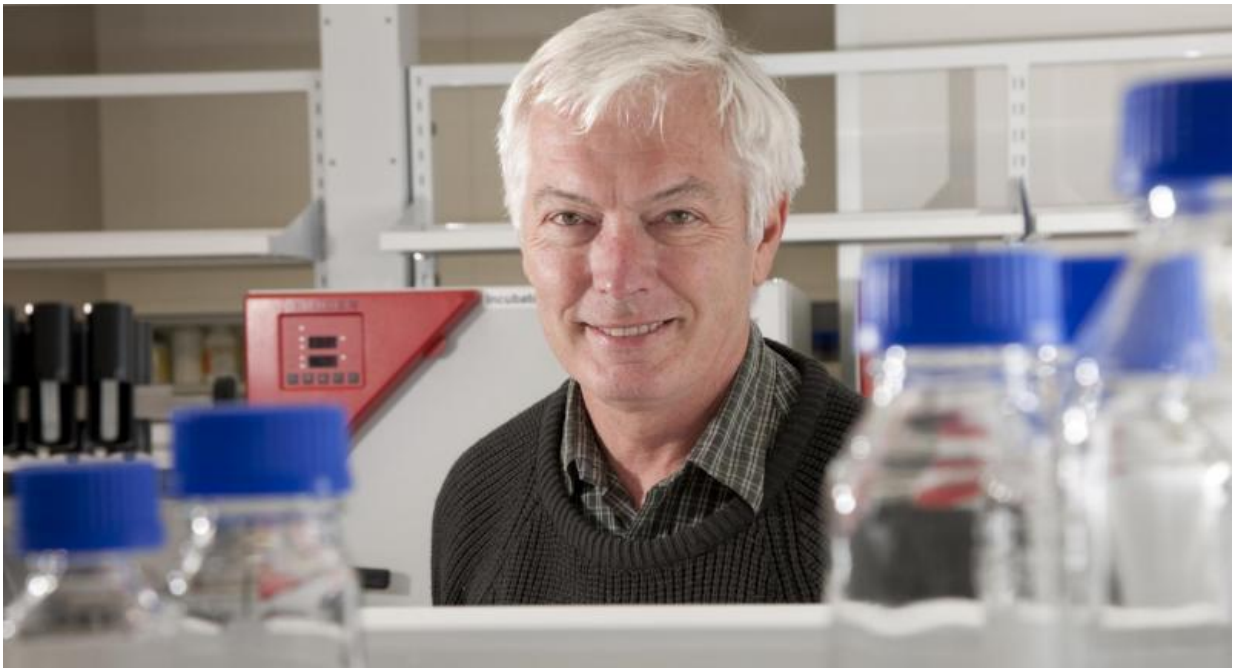


# Researchers create new combination vaccine to fight Streptococcus A

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Griffith University Professor Michael Good, of the Institute for Glycomics has developed a groundbreaking combination vaccine that may finally beat Strep A infections. Credit: Griffith University

Griffith University's Institute for Glycomics has developed a groundbreaking, combination vaccine that may finally beat *Streptococcus* A infections.

Human trials are set to begin, early as next year, for the vaccine which combines the protein, SpyCEP, with a previously developed vaccine J8-DT.

Infections caused by *Streptococcus pyogenes* are responsible for the deaths of almost 500,000 people worldwide each year. It is particularly prevalent in [developing countries](#) and Indigenous populations, including Aboriginal people and Torres Strait Islanders.

Infections can range from tonsillitis and what is commonly known as 'schools sores', to life threatening diseases where deep tissues are infected.

If left untreated infections can give rise to the very serious condition of [rheumatic heart disease](#).

Principal Research Leader at the Institute for Glycomics, Professor Michael Good said the team's latest research, which is published in the current issue of the *Journal of Immunology*, shows that they are getting closer to beating Strep A once and for all.

"We have successfully vaccinated mice with a vaccine that we believe will be suitable for humans," he said.

"We will spend the next six months developing that vaccine at a high level of purity suitable for humans and hope to start a clinical trial next year."

The inspiration to use SpyCEP came to Professor Good during a conference in Rome three years ago. He then thought of combining it with the J8-DT vaccine.

"While Strep A can cause tonsillitis or school sores, it can sometimes

develop a mutation in its DNA which causes the organism to spread to other tissues in your body," he said.

"This is when it becomes dangerous and 10-15 per cent of infected people will die when that happens. But we have worked out how to combat that virulence.

"We vaccinated the mice with a protein which induces antibodies that protect the white cells that are needed to battle the [infection](#) when a mutation occurs.

"When the [white cells](#) can work, they can attack the organism as long as there are other antibodies there. And this is when the J8-DT vaccine comes in."

Professor Good said it was the combination of the two vaccines that he believes will be highly effective.

**More information:** *Journal of Immunology*,  
[www.jimmunol.org/content/early ... 500157.full.pdf+html](http://www.jimmunol.org/content/early ... 500157.full.pdf+html)

Provided by Griffith University

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