

New vaccine for hepatitis C virus

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Murdoch University researchers have begun a study to develop a new and innovative vaccine for the hepatitis C virus (HCV).

HCV is spread through blood-to-blood contact and causes liver inflammation and [liver disease](#). It affects about 284,000 [Australians](#) and 212,000 are living with chronic HCV.

The research in collaboration with Oxford University and funded by the McCusker Foundation, is using a new approach to develop the vaccine, which aims to protect against the majority of circulating HCV strains.

Researcher Michaela Lucas said: “Previous attempts to create a vaccine have been limited because like HIV, [hepatitis C virus](#) escapes our immune system by rapid change of its genome and shape.

“Our project is using genetics to identify these escape patterns so we can create vaccines that take this ability of the virus to change into account. That should mean a higher chance of success.”

Dr. Lucas said if successful, the vaccine could halt the infection cycle by protecting people at risk from initial infection and re-infection.

“[Hepatitis C](#) virus infection is a major global health problem and despite public health efforts in Australia to prevent HCV infection, it has become the most common blood-borne infection,” she said.

“There is currently no vaccine for the prevention of HCV and previous

HCV infection does generally not protect from re-infection. Furthermore, available treatment is not accessible to all, is expensive and can have life-threatening complications.

“Even if treatment and newer treatment strategies are successful and eradicate the virus within an individual, it will not prevent re-infection, which is common in high-risk exposure groups. A vaccine against HCV would provide a mechanism to stop the continuation of the infection cycle.”

Provided by Murdoch University

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