

Scientists homing in on new hepatitis C vaccine

November 25 2015, by Fiona Tyrrell



Electron micrographs of hepatitis C virus purified from cell culture. Scale bar is 50 nanometers. Credit: Center for the Study of Hepatitis C, The Rockefeller University.

Trinity researchers have just commenced a major new study to evaluate a new vaccine for the prevention of Hepatitis C infection in HIV patients, who are at increased risk of contracting the common infection.

Around 180 million people worldwide and an estimated 20,000 to 50,000 people in Ireland have Hepatitis C. It is a blood borne viral [infection](#) which is spread through direct contact with the [blood](#) of an infected individual and can lead to fibrosis (scarring of the liver), [liver failure](#) and cancer. Currently, there is no effective vaccine available for Hepatitis C and treatment is costly, often in the region of €50,000 per individual, lengthy, associated with side effects and is not 100% effective.

Numerous recent outbreaks of Hepatitis C in HIV-infected individuals internationally have highlighted the urgent need for a vaccine to prevent infection. HIV-infected individuals are at increased risk of Hepatitis C infection due to similar routes of acquisition. Hepatitis C infection also progresses more rapidly to liver damage in HIV-infected individuals. Approximately 20-30% of people with HIV are co-infected with Hepatitis C.

"A safe, affordable and effective vaccine for Hepatitis C would have a huge impact on combatting Hepatitis C given the multitude of people who are unaware of their diagnosis and represent a potential source for new infections," said Dr Ciaran Bannan, a research fellow in Trinity College Dublin and the Department of GU Medicine and Infectious Diseases at St James' Hospital who is leading the research with Professor Colm Bergin, Clinical Professor of Infectious Diseases, School of Medicine.

The study, which is the first phase-1 vaccine study in HIV infected people in Ireland, is also the first of a planned number of early intervention studies to be carried out in the Wellcome Trust-HRB Clinical Research Facility, a joint enterprise between Trinity College Dublin and St James's Hospital.

The research team are evaluating the safety and the ability of a new

vaccine to produce an immune response against Hepatitis C. Previous healthy volunteer studies in the University of Oxford have shown encouraging results. If effective, this [vaccine](#) could also be made available to other high risk groups such as intravenous drug users.

The study, which will run for 20 months, will follow 20 patients have in Dublin and St Gallen, Switzerland. Patients will be given two vaccines eight weeks apart and then followed closely to assess safety and the development of immune responses to Hepatitis C following vaccination. The vaccines being tested in this study are called AdCh3NSmut1 and MVA-NSmut and have been developed by ReiThera Srl and GlaxoSmithKline Biologicals SA.

Provided by Trinity College Dublin

Citation: Scientists homing in on new hepatitis C vaccine (2015, November 25) retrieved 10 April 2024 from

<https://medicalxpress.com/news/2015-11-scientists-homing-hepatitis-vaccine.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--