

Grass pollen allergy vaccine also effective against hepatitis B

September 8 2016, by Johannes Angerer

A new type of vaccine against grass pollen allergies (BM32) might also offer an effective treatment for combating hepatitis B infection. This is the finding of a study conducted at MedUni Vienna's Institute for Pathophysiology and Allergy Research that has now been published in the leading journal *EBioMedicine*, with a commentary from international experts.

The BM32 vaccine is based on an innovative recombinant peptide-carrier technology, which – compared with other immunotherapies for [allergy sufferers](#) – requires far fewer injections and has fewer side-effects. Recombinant peptide-carrier technology was developed at the Christian Doppler Laboratory for Allergy Research at MedUni Vienna, under the direction of Rudolf Valenta. BM32 was developed jointly with commercial partner Biomay AG.

In a Phase IIb study conducted as part of her dissertation at the Institute for Pathophysiology and Allergy Research at MedUni Vienna, Carolin Cornelius discovered that BM32 is also a highly promising treatment option for combating hepatitis B infections. Cornelius: "We were able to show that, in people who had not previously been immunised with a conventional hepatitis B vaccine, vaccination with BM32 achieved an average inhibition of hepatitis B virus infection of 80%. According to the MedUni Vienna researcher, this suggests that the concept of peptide-carrier fusion proteins might also be a potential approach for improving hepatitis B immunisation.

Hepatitis B: up to 10% of those vaccinated conventionally do not have effective antibodies

Cornelius: "Ongoing investigations should help to produce a comprehensive characterisation of the HBV neutralisation capability of BM32. Apart from having a preventive effect, there might be additional benefits for patients suffering from chronic hepatitis B infection.

Background: [hepatitis B](#) infection is still one of the most widespread health problems in the world. The virus is detectable in the blood of around 350 million people. However, around 5 to 10% of those who have been vaccinated using a conventional [vaccine](#) fail to build up an adequate antibody titer. "One can only assume that these people are not protected against [infection](#)."

More information: Carolin Cornelius et al. Immunotherapy With the PreS-based Grass Pollen Allergy Vaccine BM32 Induces Antibody Responses Protecting Against Hepatitis B Infection, *EBioMedicine* (2016). [DOI: 10.1016/j.ebiom.2016.07.023](https://doi.org/10.1016/j.ebiom.2016.07.023)

Provided by Medical University of Vienna

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