Safe and effective preventative Epstein-Barr Virus (EBV) vaccine (P-1309)

Key facts

- Can be used prophylactically
- Induces strong immune response
- Removes side effects associated with current EBV vaccines
- Improved safety profile

Abstract
Experts estimate that an EBV vaccine could prevent 2% of all cancer cases worldwide. Until now no method for producing a safe and efficient vaccine against EBV has been developed. This vaccine uses "virus-like particles" (VLP), devoid of detectable genetic material, to mimic an EBV infectious particle. While these particles prompt the body to mount an immune response they are themselves innocuous, thus making the vaccine much safer.

The Technology
This vaccine lacks the ability of EBV particles to induce chromosome instability and chromosomal associated with cancer development. In particular, EBV particles in this vaccine do not enter the cytosol and/or nucleus of cells, making it significantly safer than existing alternatives.

Applications and Commercial Opportunity
DKFZ is currently seeking a commercial partner to develop this technology under an exclusive license and/or collaboration agreement to commence clinical trials.

Development Stage
Convincing *in vitro and in vivo* data are available showing the absence of chromosomal instability after treatment with the new generation VLP. Animal studies looking at safety and efficacy of the VLPs are currently being conducted.

Inventors
The investigators are Henri-Jacques Delecluse, Anatoliy Shumilov, Ming-Han Tsai.

Intellectual Property
International Patent application "Improved EBV Vaccine" filed as WO2018/087296.

Further Information
No other public information is currently available, but further information is available under a signed Confidential Disclosure Agreement (CDA).

Related Publications

1. Shumilov A, et al. Epstein-Barr virus particles induce centrosome amplification and chromosomal instability. Nat Commun. 2017 Feb 10;8:14257. doi: 10.1038/ncomms14257.
2. Related patent family WO2013098364 "Second generation virus-like particles from Epstein-Barr Viruses for vaccination purposes".
3. DKFZ press release dated January 8 in 2019: "New vaccine strategy against Epstein Barr virus".

For further information, including a CDA, please contact:

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