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VIRUS LIKE PARTICLES AND NUCLEOPARTICLES AS A VACCINE CANDIDATE

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The existing vaccines are mainly limited to the microorganisms we can culture and produce and/or to those whose killing is mediated by humoral response (antibody mediated). It has been more difficult to develop vaccines capable to induce functional cellular response needed to prevent or cure chronic diseases. New strategies should be considered in the improvement of cell-based immune responses to prevent and control the infections and eventually clear the virus. This work present preclinical and clinical results with vaccine candidates against dengue virus, HBV and HIV based on virus like particles (VLPs) and virus like nucleoparticles (VLNs) able to stimulate mucosal as well as systemic immunity. Particles based on envelope or nucleocapsid viral proteins induce a strong immune response after mucosal or systemic administration in mice, non-human primates and humans. In addition, the immune response obtained was biased in a Th1 sense.

BIOGRAPHY

Gerardo Guillén is a Biomedical Research Director at the Center for Genetic Engineering and Biotechnology (CIGB) in Havana, have more than 170 papers and 44 patents published on vaccinology, biotechnology, infectious diseases and pharmaceutical development. He has been honored with 47 annual awards of Cuban Academy of Science for scientific results, the Third World Academy of Science award on Biology, the CJ Finlay Medal of the Cuban State Council, awarded for upstanding results on Science and the patent award of the World Office of Intellectual Property. He is also the member of several editorial boards. He is the member of the Scientific Expert Committees of the BioCubaFarma, the CIGB and the Center for Tropical Medicine IPK.

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