

9<sup>th</sup> World Congress and Expo on

# IMMUNOLOGY, IMMUNITY INFLAMMATION & IMMUNOTHERAPIES

November 02-03, 2017 | Atlanta, USA

## Formulation and testing of novel particulate vaccines for measles

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Measles is a highly contagious infection that is caused by the measles virus. It mainly affects children and can be fatal as well. The disease causes about 100,000 deaths every year worldwide, although it is completely preventable by vaccines. It affects people primarily in the developing areas of Africa and Asia causing the most vaccine-preventable deaths of any disease. Since the primary targets of this disease are children, we aimed at formulating an oral vaccine that would prevent the use of needles, making the vaccine more patient-compliant. The oral cavity of the mouth is covered by a lining that is rich in immune cells. These immune cells help the body to distinguish between harmful and harmless foreign material entering the body through the mouth. Oral disintegrating films (ODF) are films that dissolve when placed in the mouth. These films can be an inexpensive and an effective means to deliver drugs/vaccines orally without the use of needles. On dissolution, the microencapsulated vaccine antigen will be recognized by the immune cells in the mouth and further processed to produce protective antibodies against measles virus. Later, whenever the body is exposed to the virus, the protective antibodies present will be capable of combating the measles infection. The goal of this study was to explore the potential of oral disintegrating films (ODF) loaded with measles vaccine nanoparticles as a viable immunization strategy. In this preliminary study, two pigs were used in the *in-vivo* model in order to evaluate the immunogenicity of the measles vaccine formulation when administered via the buccal route using ODFs..

### Biography

Rikhav P Gala is a Research Scientist-1 in the Department of Pharmaceutical Sciences at the University of New Mexico, Albuquerque. His area of interest are formulations of dosage forms for small and large molecules. He has worked on the formulation and mechanistic characterizations of vaccines. He has a PhD and an MSc in Pharmaceutical Sciences.

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