

2<sup>nd</sup> International Conference on

## VACCINES &amp; VACCINATION

&amp;

3<sup>rd</sup> International Meeting on

## VETERINARY &amp; ANIMAL HEALTH

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**Development and preclinical evaluation of novel microparticulate vaccine formulation for the treatment of metastatic breast cancer****Rokon Uz Zaman**

Mercer University, USA

**Purpose:** The aim of the study was to formulate a microparticulate vaccine formulation for metastatic breast cancer by using a murine metastatic breast cancer cell line 4T1 for transdermal administration through microneedles.

**Introduction:** Breast cancer (BC) is the most commonly diagnosed malignancy and is the second leading cause of cancer related death in American women. For this reason development of a therapeutic breast cancer vaccine is an area of research that needs urgent attention offering these women a better chance of a cancer free life. Many therapeutic vaccine

strategies are under clinical trials for breast cancer but currently there are no FDA approved vaccines for breast cancer. Therefore an optimum cancer vaccine with characteristics like, rapid production time, ease of delivery, and the ability to be customizable for individual patients is an area of interest in cancer research. Our microparticle-based vaccine approach, addresses many of the problems associated with the current vaccine therapies including the high vaccine costs. We have developed a novel formulation using sustained release polymers encapsulating antigens in a biodegradable matrix containing immune potentiator adjuvants.

**Biography**

Rokon Uz Zaman is a Ph.D. student in the Department of Pharmaceutical Sciences, Mercer University, Atlanta. He has completed his MS in microbiology from University of Dhaka, Bangladesh. As a graduate student in the vaccine nanotechnology laboratory at Mercer University, his research is focused on targeted drug delivery and development of vaccines for metastatic breast cancer using nanotechnology.

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