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NII receives Trademark for Indiaâ??s first indigenous tumour antigen SPAG9

04 June 2021 | News

It may revolutionise cancer treatment



To successfully implement innovation newer modalities for cancer treatment, researchers at the New Delhi-based National Institute of Immunology (NII), an Autonomous Institute of Department of Biotechnology (DBT),and clinicians at Cancer Institute, Adyar, Chennai have been working together to translate new scientific discoveries into improved care for cancer patients.

Over the past two decades, this team has been engaged in translating breakthrough that promises to add a highly potent weapon to the armoury against cancer especially employing targeted cancer Immunotherapy.

India's first indigenous tumour antigen SPAG9 was discovered by Dr Anil Suri in 1998 who is heading the Cancer Research Program at NII. In a recent development, the SPAG9 antigen has received the trademark ASPAGNII™.

Currently, ASPAGNII™ is being used in dendritic cell (DC) based immunotherapy in cervical, ovarian cancer and will also be used in breast cancer.

Immunotherapy is a new approach that exploits the body's inner capability to put up a fight against cancer. With this approach, either the immune system is given a boost, or the T cells are "trained'' to identify recalcitrant cancer cells and kill them. In this personalised intervention,those patients expressing SPAG9 protein can be treated with DC-based vaccine approach.

In DC-based vaccine, patient's cells called monocytes from their blood are collected and modified into what are called dendritic cells. These dendritic cells are primed with ASPAGNII™ and are injected back to the patient to help the 'fighter' cells, or T-cells, in the body to kill the cancer cells.

DC-based immunotherapy is safe, affordable and can promote antitumor immune responses and prolonged survival of cancer patients.

With the funding support of the Department of Biotechnology in future, employing ASPAGNII™, a phase 2 randomised controlled clinical trial to evaluate the role of metronomic chemotherapy and dendritic cell vaccine in recurrent hormone receptor-negative breast cancer will be initiated at Cancer Institute, Adyar.