

Tumour Antigen SPAG9

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In news- The SPAG9 antigen **developed by the National Institute of Immunology (NII)** has received the **ASPAGNIITM trademark**.

About the antigen-

- India's first indigenous tumour antigen SPAG9 was **discovered in 1998 by Dr Anil Suri** who heads the Cancer Research Programme at the NII, a Department of Biotechnology (DBT) institute.
- At present, **ASPAGNIITM is being used in dendritic cell (DC) based immunotherapy** in cervical, ovarian cancer and will also be used in breast cancer. (As per WHO report, one in 10 Indians will develop cancer during their lifetime, and one in 15 will die of 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.
- Those patients expressing SPAG9 protein can be treated with a DC-based vaccine approach, in which a patient's cells, called **monocytes are collected from their blood and modified into dendritic cells**.
- These dendritic cells are **primed with ASPAGNIITM 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.