

Gipsitumab™ : A novel chimeric heterodimeric antibody derived from lineage-directed exfoliated human colonic epithelial GIP-C™ (gastrointestinal progenitor) cells arrest tumor growth in xenotransplants

Padmanabhan Nair

NonInvasive Tehnologies LLC, Johns Hopkins University Bloomberg School of Public Health, USA

Human colonic mucosa is known to be renewed every five days. We pioneered the discovery that these exfoliated cells are viable and that they can be isolated in their pristine state from a small sample of stool (0.5 gm) yielding a heterogenous population of about 20 million cells. These cells exhibit a strong oncolytic activity across a broad spectrum of human cancers mediated via the existence of a novel heterodimeric IgA/IgG chimeric immunoglobulin that can be generated in vitro against human cancers via a lineage-directed differentiation of these GIP-C cells. This antibody has been shown to arrest human colon cancer xenotransplants in nude mice. This technology has opened a new approach to rapid production of therapeutic antibodies to cancer as well as infectious agents such as HIV, Ebola and Marburg without generating a hybridoma.

Biography:

Padmanabhan Nair, Ph.D. (1956) Royal Institute of Science, Bombay (Mumbai), India; Research Officer, (1958-1960) All-India Institute of Medical Sciences, New Delhi, India; Fulbright Scholar and McCollum-Pratt Fellow,(1960-19963) The Johns Hopkins University, Baltimore, Maryland; Head of Medical Research,(1963- 1983) Sinai Hospital of Baltimore, Inc; Research Scientist (1983-1998) Beltsville Human Nutrition Research Center, ARS, USDA, Beltsville, Maryland; Founding President and CEO, (2000) NonInvasive Technologies LLC, Elkridge, Maryland; Adjunct Professor of International Health, Johns Hopkins University Bloomberg School of Public Health, Baltimore, Maryland.