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From viruses to tumor associated antigen cancer vaccines

Giulio Tarro

Temple University Center for Biotechnology, USA

Anti-HBV vaccine was found to prevent some liver tumors as well as anti-HPV vaccine is able to prevent most of the cervical cancers. Tumor associated antigens (TAA) were studied in SV40 and Polyoma viruses that were patterns for human cancer. Cancer immunotherapy, or the manipulation of the naturally occurring oncolytic immune reaction, is based on the observation that both in animals and humans neoplastic cell antigens stimulate the onset of specific humoral and cellular antibodies. Antigens, from autologous and homologous human cancer cells, were obtained by various purification procedures. Tumor Liberated Protein (TLP) is a protein extracted from tumors and from cultured transformed cells. It is detectable in blood as well as in cancer tissue and behaves as a TAA of 50KD monomer, overexpressed in lung tumor and other epithelial adenocarcinomas. TLP is immunogenic in humans as evidenced by serum antibodies. The first observation demonstrated that when TLP is extracted from a tumor, purified in the laboratory, and reintroduced into the patient's body, it boosts the immune system's cancer responsive capabilities. TLP may have the potential to greatly improve the cure rate and/or serve as a cancer vaccine.

Biography

Giulio Tarro graduated from Medicine School, Naples University (1962). He is a Research Associate, Division of Virology and Cancer Research, Children's Hospital (1965-1968), Assistant Professor of Research Pediatrics, College Medicine (1968-1969), Cincinnati University, Ohio. He is also an Oncological Virology Professor, Naples University (1972-1985), Chief Division Virology (1973-2003), Head Department Diagnostic Laboratories, (2003-2006). Since 2007, he is the Chairman Committee of Biotechnologies and VirusSphere, World Academy Biomedical Technologies, UNESCO, Adjunct Professor, Department of Biology, Temple University, College of Science and Technology, Philadelphia, recipient of the Sbarro Health Research Organization lifetime achievement award (2010). He is the President Foundation de Beaumont Bonelli for Cancer Research.

gitarro@tin.it