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Tergenpumatucel-L

National Cancer Institute

Source

National Cancer Institute. *Tergenpumatucel-L*. NCI Thesaurus. Code C66985.

An allogeneic lung cancer vaccine with potential immunostimulating and antineoplastic activities. Derived from allogeneic lung tumor cells, tergenpumatucel-L is engineered to express the murine alpha-1,3-galactosyltransferase (GalT), an enzyme humans lack. GalT catalyzes the expression of foreign alpha-1,3-galactosyl (alpha-gal) carbohydrate epitopes in glycoproteins and in glycolipids on the cell membranes of the allogeneic lung tumor cells present in the vaccine, essentially producing a 'xenograft'. The hyperacute rejection involves pre-existing human anti-alpha-gal antibodies that bind the foreign alpha-gal epitopes expressed by the vaccine tumor cell xenograft, resulting in complement-mediated cytotoxicity (CMC) and antibody-dependent cell-mediated cytotoxicity (ADCC) towards endogenous lung tumor cells with unmodified carbohydrate epitopes.