

TETEBENE: Effects of the Experimental Therapeutic Model Isolated Peptide Toxic-prodrug in the Treatment of Subjects with Breast Cancer and with/without Diabetes

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Currently breast cancer and complications for Diabetes are the two major public health problems in Latin America. It is estimated that one of every ten women and one in every hundred men have breast cancer; a fact that becomes more complex when a patient with diabetes is in an oncological treatment, because chemotherapy drugs and radiation used in these processes produce a more uncontrolled glucose level in the endocrine patient. Additionally, oncological treatments that are too expensive, ineffective and require a lot of medical personnel are not always available to the population that needs them. This research has resulted in the discovery of a peptide capable of inhibiting tumor cell growth, retarding the growth of murine tumors and generating an anti-inflammatory and analgesic effect; this peptide is located in the venom of two different species of scorpions, the *Centruroides suffusus* and the *Rhopalurus junceus*. The purpose of this project was to design a completely new treatment for people with breast cancer based on the peptide from the venom of the scorpions *suffusus*, *junceus*, and two prodrugs (Cyclophosphamide, Trastuzumab); that under certain indications of the Mexican population; studies over fifteen months on the human tumor cell lines MCF-7, T47D and HeLa and analysis on animal test subjects have shown that TETEBENE as it has been referred to the mixture; has an average inhibition of tumor cell growth four to five times larger and a mechanism of action less harmful to the existing market; mechanism characterized by decomposition of active ingredients in hydroxylated intermediates, DNA junctions and antineoplastic effects on cells exhibiting overexpression of HER2.