METHOD OF IDENTIFICATION OF A SOLUBLE SET OF BIOMARKERS FOR DIAGNOSIS, PROGNOSIS AND MONITORING OF GLIOBLASTOMA, AND METHOD FOR DIAGNOSIS, PROGNOSIS OR MONITORING OF GLIOBLASTOMA BASED ON THE USE OF THIS SET

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FIELDS OF APPLICATION: MEDICINE

➢ The invention relates to a method of identification of a set of biomarkers to be used in prognosis and diagnosis of brain tumors.

➢ According to the invention, the method comprises the simultaneous determination of serum and plasma concentration in samples taken from patients suffering from glioblastoma versus the control of a complex of cytokines and angiogenic factors IL-1β, IL-6, TNF alpha and VEGF, the values of which are 1.5...10 times higher than the average normal values, and the simultaneous use thereof as a set of biomarkers for monitoring brain tumors.
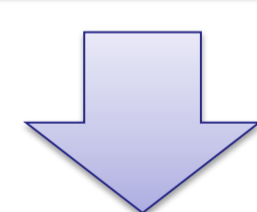
Fields of application:

Medicine - The technical problem solved by the present invention is the early diagnosis of brain tumors, especially glioblastoma, the precise classification of patients and their post-therapeutic monitoring through the creation and use of a useful and inventive set of circulating protein biomarkers
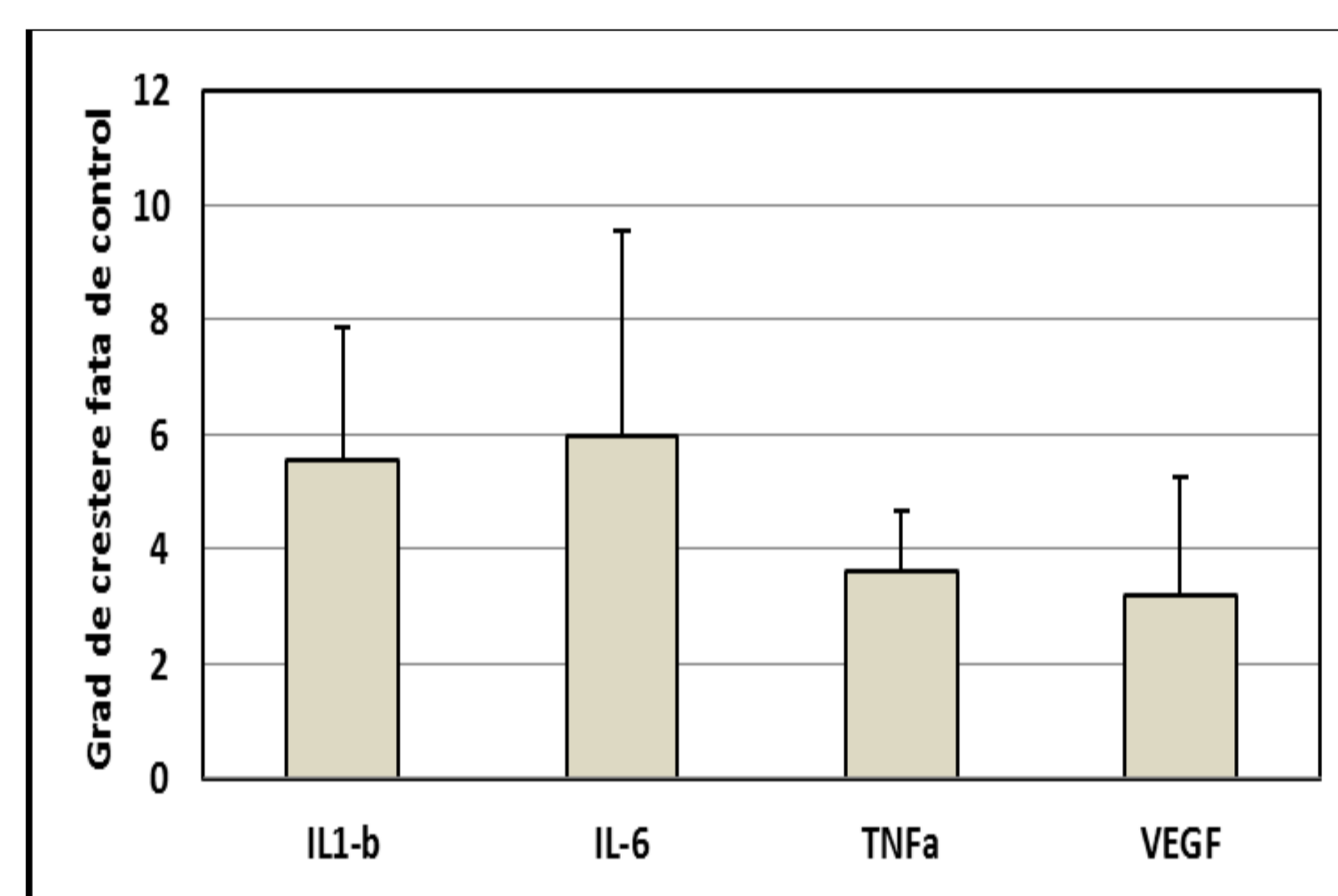

Figure 1. Shows the change in expression of serum cytokines IL-1b, IL-6, TNFα and VEGF in patients with glioblastoma. Data mean values + standard deviation of the degree of change in concentration compared to the mean serum concentrations at normal.
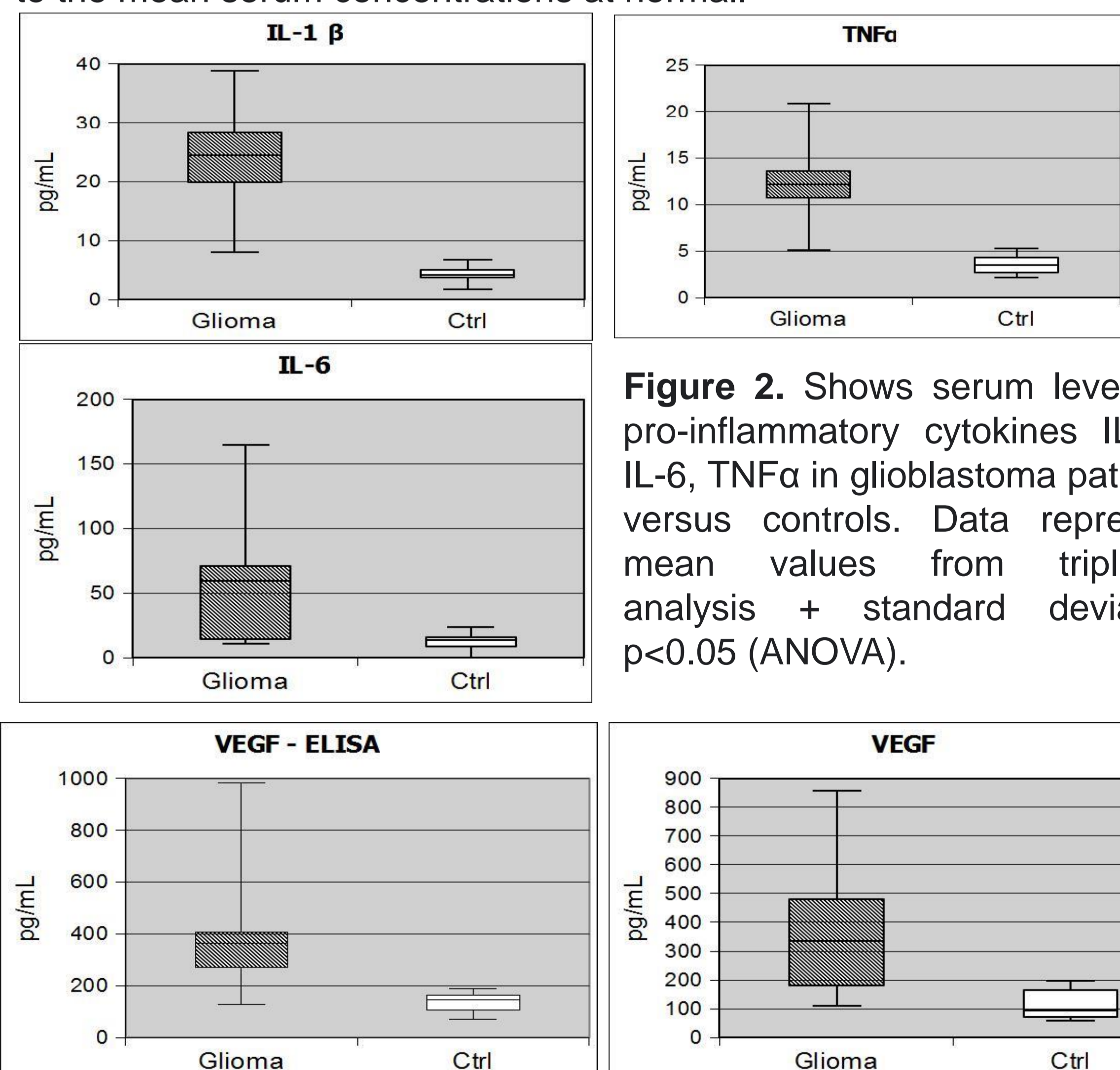

Figure 2. Shows serum levels of pro-inflammatory cytokines IL-1b, IL-6, TNFα in glioblastoma patients versus controls. Data represent mean values from triplicate analysis + standard deviation $p < 0.05$ (ANOVA).

Figure 3. Shows the values of serum VEGF concentrations in glioblastoma patients and controls, determined by Luminex-xMAP (top) and ELISA (bottom) $p < 0.05$ (ANOVA) methods.