



## DIVISION OF IMMUNOTECHNOLOGY AND DIAGNOSTICS

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Regarding to PSA CIGB- IAEA project we will be generated a panel of monoclonal antibodies against prostatic specific antigen (PSA) free and complexed to  $\alpha$ 1 antichymotrysin, and tissue polypeptide specific (TPS) antigen as potentially useful markers for the diagnosis of prostate and breast cancer using IRMA or RIA. The panel of monoclonal antibodies would be distributed in Cuba and another countries for the development of diagnostic Kits.

The detailed objectives of our contract are:

1. To obtain a panel of monoclonal antibodies against prostatic specific antigen (PSA) complexed to  $\alpha$ 1 antichymotrysin.
2. To obtain a panel of monoclonal antibodies against free PSA.
3. To study the potential use for detect free or complexed PSA in the serum of patients with benign prostatic hypertrophy or prostatic neoplasia.
4. To obtain a panel of monoclonal antibodies against TPS.
5. To develop and validate IRMA or RIA assays using the panel of monoclonal antibodies.

The objectives are designed according to the present knowledge on the field of monoclonal antibodies and diagnostic kits. Basic techniques for developing monoclonal antibodies (Mabs) have been used in our division for more than 10 years. The possibility to acquire commercial PSA antigen could reduced the overall time to obtain the Mabs, according with our experience. All these aspects support the idea that the proposing Cuban institutes are able to develop this research project and that its benefits will be applicable in the country and in the region.

We proposed a detailed objectives for the first year in order to:

- 1.- Immunisation of Balb/c mice with prostatic specific antigen (PSA).
- 2.- Generation of Monoclonal Antibodies (Mabs) against PSA bound to  $\alpha$ 1 antichymotrysin.
- 3.- Characterisation of the Mabs panel with serum from patients with benign prostatic hypertrophy or prostatic neoplasia.
- 4.- Development of a sera panel for prostate cancer diagnostic studies.

Facilities for the development of this project are present in our division. We have a Monoclonal Antibodies Laboratory at the CIGB, Division of Immunotechnology and Diagnostics, supplied with 2 laminar box, centrifuges, microscopes and one incubator CO<sub>2</sub> supplied. Our Immunology Laboratory at the CIGB, Division of Immunotechnology and Diagnostics of CIGB, have been equippe with electrophoresis system (Sigma, USA), centrifuges (Eppendorf, Germany), medical freezers (-70°C and -20°C), (Sanyo, Japan), Personal Computer (Acer, USA) and other general facilities.