6-12-2022

Production of monoclonal antibodies specific to soluble proteins of Bartonella bacilliformis

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PRODUCTION OF MONOCLONAL ANTIBODIES SPECIFIC TO SOLUBLE PROTEINS OF *BARTONELLA BACILLIFORMIS*

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Key Words: Monoclonal antibodies, *Bartonella bacilliformis*, soluble proteins

Bartonella bacilliformis is the causative agent of Carrion's disease, this illness affects poor communities of Andean valleys (Peru, Colombia and Ecuador) [1]. *B. bacilliformis* produces a biphasic infection: acute phase presents severe anemia and immunosuppression, and chronic phase involves dermal eruption [1]. Currently, the available tools for the diagnosis of Carrion's disease include low sensitive serological assays and expensive molecular tools [2]. To improve the diagnosis, this project aims to produce monoclonal antibodies specific soluble proteins of *B. bacilliformis*. The monoclonal antibodies production was performed immunizing three Balb/C mice with soluble proteins obtained from the total lysate of *B. bacilliformis*. The immune response was tested by ELISA at a serum dilution of 1:500 and 1:8000, seropositive animals were sacrificed to obtain B lymphocytes from the spleen. The B lymphocytes were fused with Ag8 myeloma cells in HAT medium, the obtained hybridomas were cloned. ELISA evaluation was performed for the selection of the monoclonal-antibody producing clones. The optical densities and antibody titers were analyzed using the statistical package SPSS. 21. The sera titer of immunized mice was equivalent to 0.8-1.0 OD at 1:8000 dilution, whilst the OD of the medium of the hybridomas was 0.2-2.0 (FIG. 1). Clones displaying higher density were growth upon reach OD of 2.0. Monoclonal antibodies were successfully produced, but antibody identification is pending evaluation.

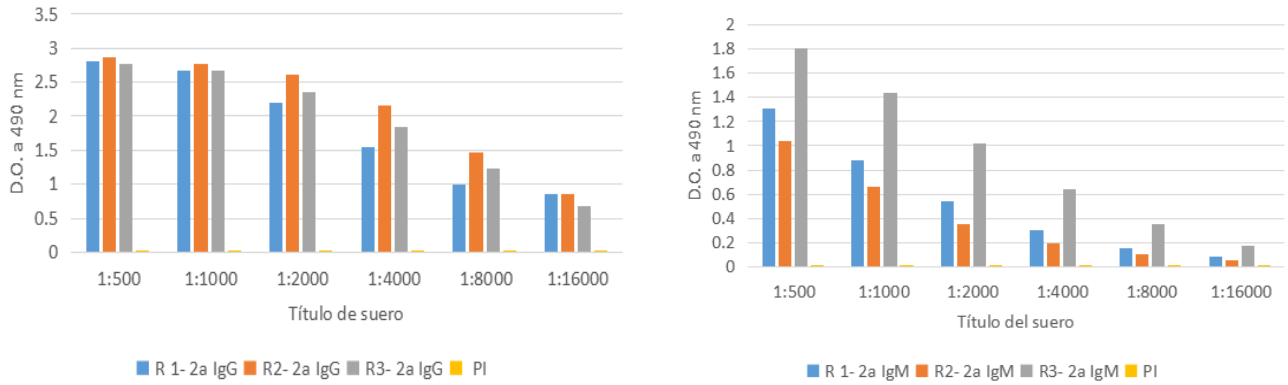

Figure 1 - IgM and IgG titers after second immunization of mice with soluble proteins of B. bacilliformis