Abstract
The immunomodulatory activity of an Indian Ayurvedic medicinal preparation, Ashwagandha (Withania somnifera (L. Dunal)) was studied in mice with myelosuppression induced by one or more of the following three compounds: cyclophosphamide, azathioprine, or prednisolone. The assessment of immunomodulatory activity was carried out by hematological and serological tests. A significant modulation of immune reactivity was observed in all the three animal models used. Ashwagandha prevented myelosuppression in mice treated with all three immunosuppressive drugs tested. A significant increase in hemoglobin concentration (P < 0.01), red blood cell count (P < 0.01), white blood cell count (P < 0.05), platelet count (P < 0.01), and body weight (P < 0.05) was observed in Ashwagandha-treated mice as compared with untreated (control) mice. We also report an immunostimulatory activity: treatment with Ashwagandha was accompanied by significant increases in hemolytic antibody responses towards human erythrocytes.