Introduction: The Walker 256 tumor, carcinoma originally found in mammary tissue of rats, has been intensely used as a model in physiological and immunomodulatory researches. The exopolysaccharide (EPS) show distinct pharmacological activities acting as an immunotherapy treatment, activating Natural Killers cells, macrophages, T cells and release of cytocins/interleucines, as well as antibody production, acting, therefore, as important effectors in antitumor activity. **Materials and Methods:** A strain of *Agaricus brasiliensis* was cultivated in standard medium composed of glucose, yeast extract and salts (pH 6.0) at 30º C and 120 rpm/7 days. The mycelial biomass was isolated from the cultivation broth by filtration and the supernatant submitted to precipitation with ethanol (2v). The EPS was separated by centrifugation, resuspended in water, dialyzed (12-14 KDa) and lyophilized. The analysis of metabolic indices was realized by physical measurements of the liver, spleen and gastrocnemius muscle of Wistar rats bearing Walker 256 tumor injected with 16 consecutive doses of EPS (10mg/kg animal/day). **Discussion and results:** The analysis of physical measurements revealed significant difference (P<0.001) between the spleen weight in animals treated with EPS of *A. brasiliensis* and control group. As this organ is associated with the beginning of immunological activity it is possible that the alteration in this organ can be related to the major immune activity unleash by the presence of EPS in the group undergoing treatment. **Conclusion:** Metabolic alterations are directly associated with the stimulation of immune cells, the various metabolic disorders, such as hepatical disorder and loss of muscle mass. The variation of spleen weight demonstrates a relevant immunotherapy route of EPS action, while the same did not act significantly about the others metabolic indices observed.

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