This research was made with the purpose to evaluate Atropa belladonna and Echinacea angustifolia, in simple potency and potency’s accords, effects on leukocyte activity and migration in a model of experimental peritonitis using mice. In phase A, A.belladonna and E. angustifolia associated in a same preparation increase polimorphonuclear,spreading percentage and macrophage phagocytosis percentage and decrease lymphocyte, macrophage and degenerated leukocyte percentage.In phase B, E. angustipholia increased polimorphonuclear cells and phagocytic activity of macrophages and reduced degenerated cells percentage. In phase C, Belladonna Injeel Forte increased polimorphonuclear cells migration, phagocytosis and spreading percentage and decreased lymphocite migration and degenerated leukocytes. We conclude that both A. belladonna and E. angustifolia have evident modulating activity on inflammatory response and exert synergic effects among them. Evidence of having weak cytotoxicity effects upon migrated leukocytes should be noted.