Acute liver failure (ALF) is a severe clinical syndrome due to extensive liver damage associated to hepatic inflammatory response, which can be induced by several etiologies and the main clinical aspects are encephalopathy and coagulopathy. In spite of recent advances in clinical management of liver function, hepatic transplantation is a single promising therapeutic option. Therefore, alternative therapies to the transplantation must be further investigated for patients with ALF. The same agents involved in ALF may induce less severe forms of hepatic disease, and several studies have associated the immune response intensity to the liver damage in several liver diseases. Thus, the detection of the inflammatory milieu in patients who develop ALF could help to find more effective therapeutic strategies. Cytokine patterns produced during clinical course of hepatitis may trigger more severe liver damage, and some of them could be associated to ALF. The aim of this study was to investigate the level of cytokines and chemokines in plasma of ALF patients. The study protocol was approved by the Ethical Committee for Human Research of the Oswaldo Cruz Foundation (Fiocruz) and informed consent was obtained from all subjects (CEP Fiocruz no. 22/03). Blood samples from patients who developed ALF were obtained during liver transplantation procedures, which were done in Hospital Federal de Bonsucesso, Rio de Janeiro, Brazil. Blood samples of healthy individuals were used as control. In the first moment, blood samples of 6 patients with ALF and 4 healthy controls were analyzed. Bio-Plex Pro cytokine, chemokine and growth factor assays-BIO-RAD was used to investigate the inflammatory milieu in the peripheral blood of patients involved in study. Analysis was conducted on Laboratório de Desenvolvimento Tecnológico em Virologia (LADTV). Preliminary results showed high levels of IL-15 and IL-10 in plasma of ALF patients in comparison to healthy controls (P<0,05). These findings may indicate a role for IL-15 in liver damage of ALF patients. The high IL-10 levels could be associated to unsuccessful attempt of immunomodulatory response.