Detection of inhibitory Fc receptors in Skov-3 cells stimulated with ascitic fluid of ovarian cancer patients

Ovarian cancer is one of the gynecological cancers with higher mortality rate in over 40 years women, the majority is diagnosed in advanced stages of the disease. In addition, in some cases the patients present accumulation of fluid in the peritoneal cavity that is known as ascitic fluid, which provides a microenvironment that has been related to the progression of the disease, these factors together increase the aggressiveness of the disease and also hinder the patients treatment. To understand the mechanisms of disease progression, it is essential to study the way in which ovarian cancer and the antitumor immune response are related.

After finding Immunoglobulins (Ig) in protein extracts of SKOV-3 cells stimulated with ascitic fluid, we analyzed the mechanisms of Ig entry into the cells. Using western blot assays and immunofluorescence we detected FcRγII in ovarian cancer cells, these receptors physiologically act as regulators of the humoral immune response, down regulating the Ig production. Our results suggests that the FcR can serve as a possible mechanism of evasion of the antitumor immune response by ovarian cancer cells, facilitating the progression of the disease and also hindering immunotherapy treatment.