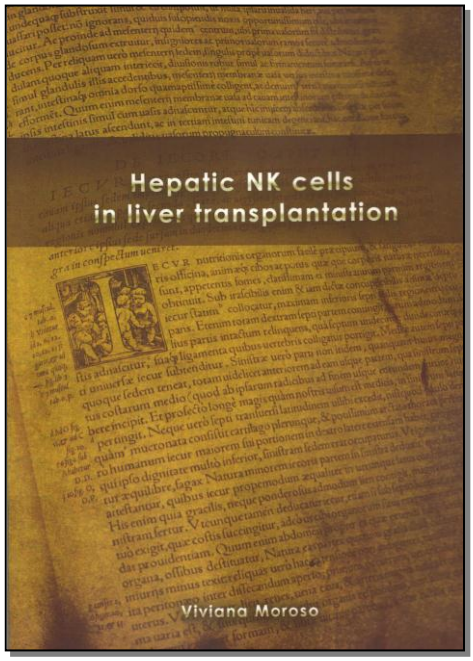

Samenvatting proefschrift Viviana Moroso

'Hepatic NK cells in liver transplantation'

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Promotor:
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My 4-year PhD project has focused on liver transplantation (LTX) and on the role that some cells of the immune system can have on the outcome of a patient after LTX. The liver is an organ that contains a large amount of cells of the immune system. These immune cells are specialized in defending our body from all types of "foreign" factors that may harm our health. While the function of immune cells is very useful when combating infectious virus and bacteria it can be extremely dangerous when reacting against a foreign organ (the liver) that has been transplanted in a patient. It this case, the patient will have a rejection and needs to be treated with higher doses of immune-suppressant drugs. Rejection of the liver can occur in spite of the fact that all patients take immune-suppressants. However, some patients do not incur in graft rejection of the liver even in the absence of immune-suppressants: these patients are called "tolerant". Until now, it is not known what determines the difference between tolerant and non-tolerant patients. Based on numerous studies, we formulated the hypothesis that the difference between these two types of patients relates to a difference in the capacity of their immune system to react against the liver graft from a donor. Specifically, in my project I have focused on a type of immune cells called Natural Killer (NK) cells that have been shown to be important in other types of transplantation: NK cells, in fact, have the capacity to kill "foreign" cells only when they have specific characteristics. This thesis first illustrates the studies we have performed on NK cells derived from human liver, then proceeds exploring the role that these NK cells may have in tolerant and non-tolerant patients after LTX. In addition, in this project we also describe the possible local development of NK cells in the adult human liver. A final chapter describes our first attempts to explore the effect of an important molecule, HLA-G, in patients that are tolerant after LTX. ◄

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