



Heart Transplantation

Scope of application

Heart transplantation is well established technique to study mechanisms and therapeutic approaches to prevent solid organ transplant rejection.

Models

Vascularized heterotopic heart transplantation (htx) can be performed in mice and rats. Depending on the strain combination for donor and recipients models for acute and for chronic rejection are possible. Heterotopic vascularized heart transplantation is carried out according to the method of Corry et al. (Transplantation 1973). For acute rejection C57BL/6 (H-2b) and BALB/c (H-2d) are used as donors and recipients. Animals are anesthetized with isoflurane. The donor pulmonary artery will be anastomosed to the recipient's inferior vena cava and the donor ascending aorta will be anastomosed to the abdominal aorta, respectively. Graft function will be assessed by daily palpation. Rejection is defined as the lack of palpable cardiac contraction. In this model of acute htx rejection mortality is 90% within 10 days.