

RISSET, European Commission encouraging research on organ transplantation

Bringing together 15 academic partners and 5 industrial companies throughout the European Union, RISSET develops a new vision of transplantation medicine.



The transplantation of organs and cells between individuals saves thousands of lives each year throughout Europe. The success of any transplant depends to a large extent on our ability to prevent rejection. Fortunately, rejection can be prevented by powerful drugs that suppress the activity of the immune system. However, many challenges remain in the field. Immunosuppressive drugs have to be taken forever after transplantation but nevertheless as time goes on, many transplants begin to fail. Furthermore, side effects of immunosuppressive drugs profoundly affect the health and the quality of life of transplant recipients. The high global cost related to chronic immunosuppression (estimated at 2 Billions € per year in the European Union) indicates that there is an urgent need for improving the standard of care in transplantation medicine. Currently, some patients receive more immunosuppression than required, whereas other patients

develop chronic transplant damage because of insufficient immunosuppression. Tailoring immunosuppression according to the immune reactivity of each transplant recipient would therefore represent a significant advance in transplantation medicine.

The key objective of the RISSET project - www.risetfp6.org - is to find new ways of making transplants survive for longer by investigating the way in which the immune system responds to a transplant. The RISSET acronym stands for Reprogramming the Immune System for the Establishment of Tolerance, a state in which the immune system becomes non-responsive to the transplant.

RISSET is taking important steps towards achieving transplantation tolerance by investigating innovative therapies. In the first phase of the RISSET project, pilot clinical studies investigating 3 new types of therapy in kidney, liver

and bone marrow transplantation have been initiated. In preparation for the second phase of the project, clinical teams from around Europe have been invited to apply to join RISSET by proposing other types of therapeutic strategies. The response to the call for new proposals has been very exciting and encouraging, demonstrating that there is a real unmet clinical need in transplantation medicine.

A second and very important component of RISSET is to develop tests that can be used to monitor the status of the immune system in each transplant recipient more precisely. These tests, once validated, will be very useful for assessing just how much immunosuppression each transplant recipient really needs to take to prevent rejection.

New therapies require years of research and development in the laboratory before they can be taken to the clinic. In order to speed up the processes by which discoveries made by scientists working in basic sciences can be translated into innovations accessible to a wide number of individuals, a key objective of the RISSET consortium is to promote partnerships between academic institutions and private companies, especially small/medium size enterprises developing diagnostic tests or novel therapies.

Integrating research activity in transplantation throughout Europe is an ambitious goal with major implications in terms of public health and research policy. The clinical pilot studies being undertaken by the RISSET consortium are the very first and important step on the path to developing new therapeutic approaches for transplantation.

www.risetfp6.org