

Research/NIH Funding

The success of clinical transplantation in saving the lives of individuals with life-threatening diseases is due to advances made through basic scientific research in the fields of immunology, molecular biology, biochemistry, genetics, and cell biology. NIH-funded research has been the foundation for the development of an infrastructure supporting studies that serve to improve therapy and outcome of patients requiring organ transplants. Results obtained through NIH-funded research have led to prolonged patient and graft survival, the development of new pharmaceutical agents such as immunosuppressants and anti-microbials, and exciting ventures into future innovative therapies, including novel immunomodulators, stem cells, strategies for promoting organ regeneration, and xenotransplantation. The American Society of Transplantation (AST) strongly supports increases in NIH funding to promote new discoveries and innovations in basic and translational research, all of which serve to improve the health and prolong the lives of individuals with life-threatening and chronic diseases.

Current NIH-supported research related to organ transplantation is primarily funded through the NIAID, NHLBI, and NIDDK Institutes. Transplantation or replacement of human organs and tissues has the potential to cure multiple organ-specific and systemic diseases, as well as disfigurement and damage due to combat injuries, burns, and accidents. The success of transplantation as a therapy, and the translation of research findings into the clinic, is crucially dependent upon the steady growth of basic science, and the training of basic scientists, clinical investigators, and expert clinicians. We are now on the threshold of many important breakthroughs in transplantation. Key to the improved success of transplantation will be the ability to manipulate the immune system to prevent chronic graft rejection and to potentially induce immune tolerance. Moreover, rapidly emerging research efforts in the area of stem cell technology are increasing the potential to achieve tissue and organ regeneration. The AST strongly supports any and all initiatives to increase funding for basic and clinical research and for the training of scientists. These funds will provide the necessary foundation for the field of organ transplantation to realize its full potential for improving the length and quality of human life.

In addition to basic and translational research the AST sees tremendous value in research designed to measure and improve the outcomes of transplantation. Studies conducted using the Scientific Registry of Transplant Recipients supported by monies from HRSA as well as studies focusing on outcomes and quality improvement that are supported by PCORI and AHRQ also have the potential to dramatically enhance patients' quality and length of life through the development of new best practices and the enhancement of safety.

In summary, the AST supports the following initiatives:

- Sustained and increased funding of transplantation research through the NIH, DOD and other federal agencies
- Promotion of investigations into the biological basis of rejection, the mechanisms for chronic allograft injury, and the development of new strategies for tolerance induction, such that transplanted organs will last longer and organ shortages will be alleviated
- Provision of funding for bench-to-bedside studies investigating the mechanisms for differences in graft survival outcomes especially in relation to age, ethnicity, race and gender

- Continued support for programs that directly and immediately improve transplantation through assessment of outcomes and the patient experience

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