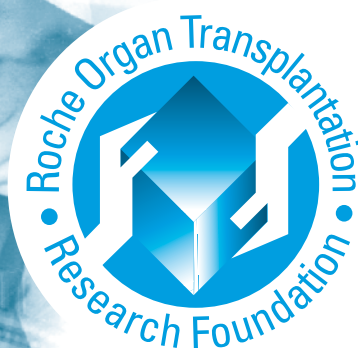




*R O T R F*

*Roche Organ Transplantation  
Research Foundation*



***ANNUAL  
REPORT 2010***



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# *The Roche Organ Transplantation Research Foundation*

The mission of the Roche Organ Transplantation Research Foundation (ROTRF) is to advance the science of organ transplantation in order to improve the care of the thousands of patients undergoing transplantation every year. The results of the funded research projects will contribute to an understanding of many aspects of the clinical and scientific transplantation, such as the mechanisms of long-term organ deterioration and the consequences of tissue injury, and will provide the opportunities to intervene in these processes.

The Foundation is an independent medical research charity that provides operating funds to established academic staff at universities, transplant centres and research institutes. The Foundation supports research in organ transplantation, particularly where there is an unmet medical need.

The funding of the foundation consists of donations from F. Hoffmann-La Roche Ltd, with an initial sum of 25 million Swiss francs over the first five years and renewal donations of 15, 10 and 17.5 million Swiss francs for the following eight and a half years (a total of 67.5 million Swiss francs over 13.5 years). The funds are distributed as grants of up to 300,000 Swiss francs distributed over three years. The foundation is legally independent from F. Hoffmann-La Roche Ltd and is guided solely by the Board of Trustees according to its charter.





## 1. Preface

The Five-Year Plan of the Roche Organ Transplantation Research Foundation (ROTRF), which started in 2007, aims to promote increased understanding of the pathogenesis and prevention of human transplantation diseases. The primary focus of the Foundation remains clinical research in transplant patients, relevant topics in non-transplant patients, and newly emerging organ transplantation technologies. The ROTRF's decision in 2008 to realign the research emphasis wholly towards clinically relevant projects has been very well received, and it gives me great pleasure to announce, on behalf of the ROTRF Board of Trustees, that over 2.7 million Swiss francs were awarded to clinical research projects in Cycles XXIII and XXIV.

During 2010, the ROTRF Board of Trustees and the Scientific Advisory Committee (SAC) selected 17 outstanding projects\* for funding. Projects were rated on their merit, originality and design, with particular attention paid to the realistic potential for clinical application in the near term. Those chosen for ROTRF funding represent the best in strong cross-disciplinary collaborations tackling innovative, novel and clinically important questions. The focus of the research projects awarded a grant include assessment and lipid analyses of liver function and quality, evaluation of long-term function of kidney allografts, post-transplant lymphoproliferative disease, hepatitis C in liver transplantation and graft outcome, antibody-mediated rejection, and bronchiolitis obliterans syndrome. Previously funded projects have set the bar high, with results frequently presented on national and international stages at congresses, in peer-reviewed journal publications, and of course on the ROTRF homepage. As Trustees, we are looking forward to welcoming further new and exciting data from these newly funded 2010 projects.

Grants for Cycle XXV have just been awarded, and applications for Cycle XXVII are currently being accepted. The Trustees invite investigators to submit proposals for clinically oriented research projects. This may, for example, encompass observational clinical studies or studies that use human transplant samples for laboratory examinations to investigate the pathogenesis of human disease states in organ transplantation. The Trustees are also interested in promoting collaborative partnerships, examining ideas that will push the frontiers of novel techniques or tackle currently under-studied areas of clinical transplantation research. As in the past, we anticipate a large number of grant applications being submitted and look forward to another exciting and competitive selection process.

*\* At the time of going to press one grant award in each cycle was still pending due to administrative reasons and is not listed in the grant award overview.*

During 2010, the ROTRF sponsored satellite symposia at both the American Transplant Congress in San Diego and at the XXIII International Congress of The Transplantation Society in Vancouver. The symposia, entitled *“T cell-mediated Rejection: Emerging Relationships – Puzzles and Paradoxes”* and *“Antibody-Mediated Rejection – an Ounce of Prevention is Worth a Pound of Cure”*, respectively, focused on current issues around T cell-mediated rejection and advancements made in the prevention of antibody-mediated rejection. The presentations given for both symposia were of outstanding quality, and the symposia were extremely well-attended with positive feedback from both audiences.

The ROTRF is grateful to F. Hoffmann-La Roche Ltd for their continued support of research into organ transplantation. The Board of Trustees would like to thank the ROTRF Scientific Advisory Committee for their dedication to this cause, and the grantees for their excellent work and support, which have contributed to the overall success of the Foundation.

Finally, the ROTRF wishes the newly granted investigators of Cycles XXIII and XXIV good luck with their research!

On behalf of the Board of Trustees

A handwritten signature in black ink, appearing to read 'Philip F. Halloran', written in a cursive style.

Philip F. Halloran, MD, PhD, OC  
Chairman, ROTRF Board of Trustees



## 2. Facts and Figures

### **Funding Cycles XXIII and XXIV – Letters of Intent Submission in October 2009 and April 2010**

Since the last annual report, the Roche Organ Transplantation Research Foundation (ROTRF) has had the pleasure of awarding over 2.7 million Swiss francs research funding to 17 investigators\*. In keeping with the ROTRF's decision to shift the emphasis of the Foundation towards clinical research in organ transplantation, all awards in Cycles XXIII and XXIV support clinically orientated research projects.

Letters of Intent (LOIs) were received from 114 and 83 prospective applicants for funding in the two 2010 review cycles, XXIII and XXIV, respectively. Applications for Cycle XXIII were received from all over the world up until the 1<sup>st</sup> October 2009 deadline. North American teams submitted 42.1% of all LOIs (USA 36.0%, and Canada 6.1%). European proposals accounted for 45.6%: mostly from UK (8.8%), German (7.9%), Italian and French research groups (4.4% each). Australasian research teams accounted for 11.4% of Cycle XXIII applications and South American groups 0.9%.

The geographical distribution of ROTRF Cycle XXIV submissions, received up until the 1<sup>st</sup> April 2010 LOI deadline, was similar. Most of the applications were received from North America (50.6%): USA (43.4%) and Canada (7.2%). European research teams accounted for 42.2% of applications; for the most part from the UK (12.1%) and Switzerland (7.2%). Italy, The Netherlands and France each submitted 4.8% of LOIs, and Germany 3.6%. Of the remaining applications received, Australasia accounted for 4.8%, and Asia and Africa 1.2% each.

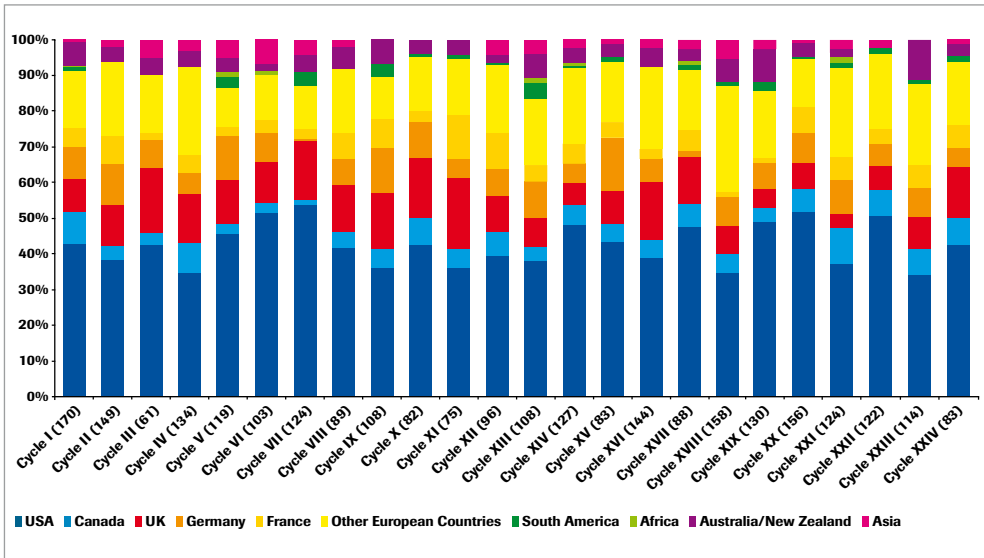
Based on the Scientific Advisory Committee (SAC) review, the Board of Trustees invited 24 applicants to submit Full Paper Applications (FPAs) in Cycle XXIII and 20 in Cycle XXIV; of these, 8 applications were awarded grants in Cycle XXIII (April 2010) and 9 during Cycle XXIV (October 2010).

The research funded in these two cycles of ROTRF awards focuses on clinical aspects of organ transplantation, including organ preservation, assessment and repair, e.g. evaluation of long-term function of kidney allografts, lipid analysis for donor-liver evaluation; post-transplant lymphoproliferative disease; identification of rejection biomarkers; factors influencing allograft survival and post-transplant morbidities, e.g. BK viral infection or HCV recurrence post-transplantation. Abstracts of all funded projects are available on the ROTRF homepage.

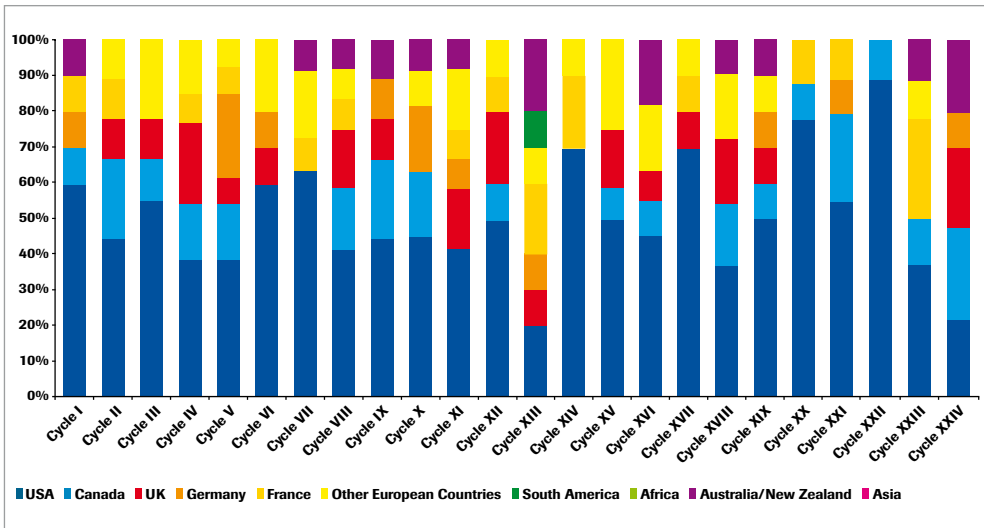
*\* At the time of going to press one grant award in each cycle was still pending due to administrative reasons and is not listed in the grant award overview.*



## Statistics on Applications to the ROTRF

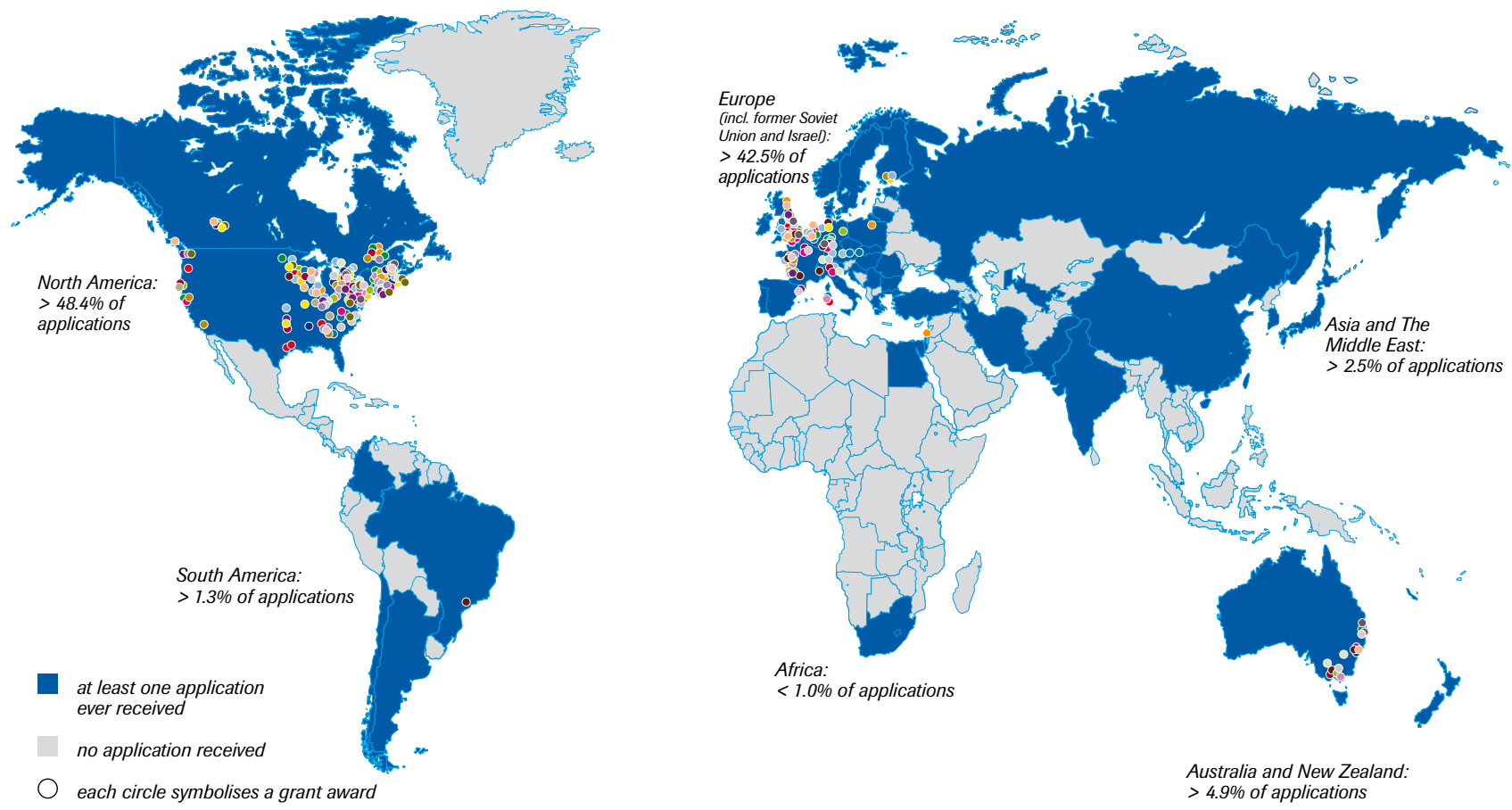


**Figure 1.** Geographical distribution of the applicants who submitted Letters of Intent (LOI) during the first twenty-four ROTRF funding cycles. The total number of LOIs submitted per cycle is shown in brackets.



**Figure 2.** Geographical distribution of the applicants who were awarded ROTRF grants during the first twenty-four ROTRF funding cycles.

# The Global View of Applications to the ROTRF: Distribution of the ROTRF Applications Worldwide







### 3. ROTRF Grant Awards in Cycle XXIII and Cycle XXIV

*The abstracts of these projects are available on the ROTRF homepage.*

#### 3.1. Research Grant Awards – Cycle XXIII

*„A second shot at HCV: the impact of HLA mismatch for viral control post-OLT“*

Dr Christian Brander, Fundació irsiCaixa, Badalona, Spain

*„Role of memory T cells in transplant rejection“*

Dr Mandy Ford, Emory University, Atlanta, USA

*„Preventing PVAN by inhibiting enzymes in the host cell DNA damage response“*

Dr Thomas Friedrich, Albany Medical College, Albany, USA

*„Uncultured bacteria hold the key to development and progression of rejection in lung transplant patients“*

Dr Peter M. A. Hopkins, The Prince Charles Hospital, Brisbane, Australia

*„The role of the immune protein TIM3 in lung transplantation“*

Dr Benjamin Medoff, Massachusetts General Hospital, Boston, USA

*„Oxygenated ex vivo liver perfusion as a novel technique for organ storage, assessment, and repair“*

Dr Markus Selzner, Toronto General Hospital, Toronto, Canada

*„Role of B cells in patients who accept their kidney graft without any treatment“*

Prof. Jean-Paul Soulillou, ITERT-INSERM, Nantes, France

#### 3.2. Research Grant Awards – Cycle XXIV

*“Genetic variation in FCGR2B and renal transplant survival”*

Dr Menna Ruth Clatworthy, University of Cambridge, Cambridge, United Kingdom

*“Optimizing the treatment of lymphomas that occur after transplantation”*

Dr Maher Gandhi, Queensland Institute of Medical Research, Brisbane, Australia

*“New treatment option for chronic transplant dysfunction”*

Prof. Hermann-Josef Gröne, German Cancer Research Center (DKFZ), Heidelberg, Germany

*“Identifying transplantable organs to expand the donor pool”*

Dr Seth Karp, Beth Israel Deaconess Medical Center, Boston, USA

*“Virus-specific killer T cells: a double edged sword in organ transplantation”*

Prof. Rajiv Khanna, Queensland Institute of Medical Research, Herston, Australia

*“Improving outcomes of hepatitis C infected patients after liver transplantation”*

Dr Nazia Selzner, Toronto General Hospital, Toronto, Canada

*“Lung progenitor cells in tissue repair and prevention of allograft rejection”*

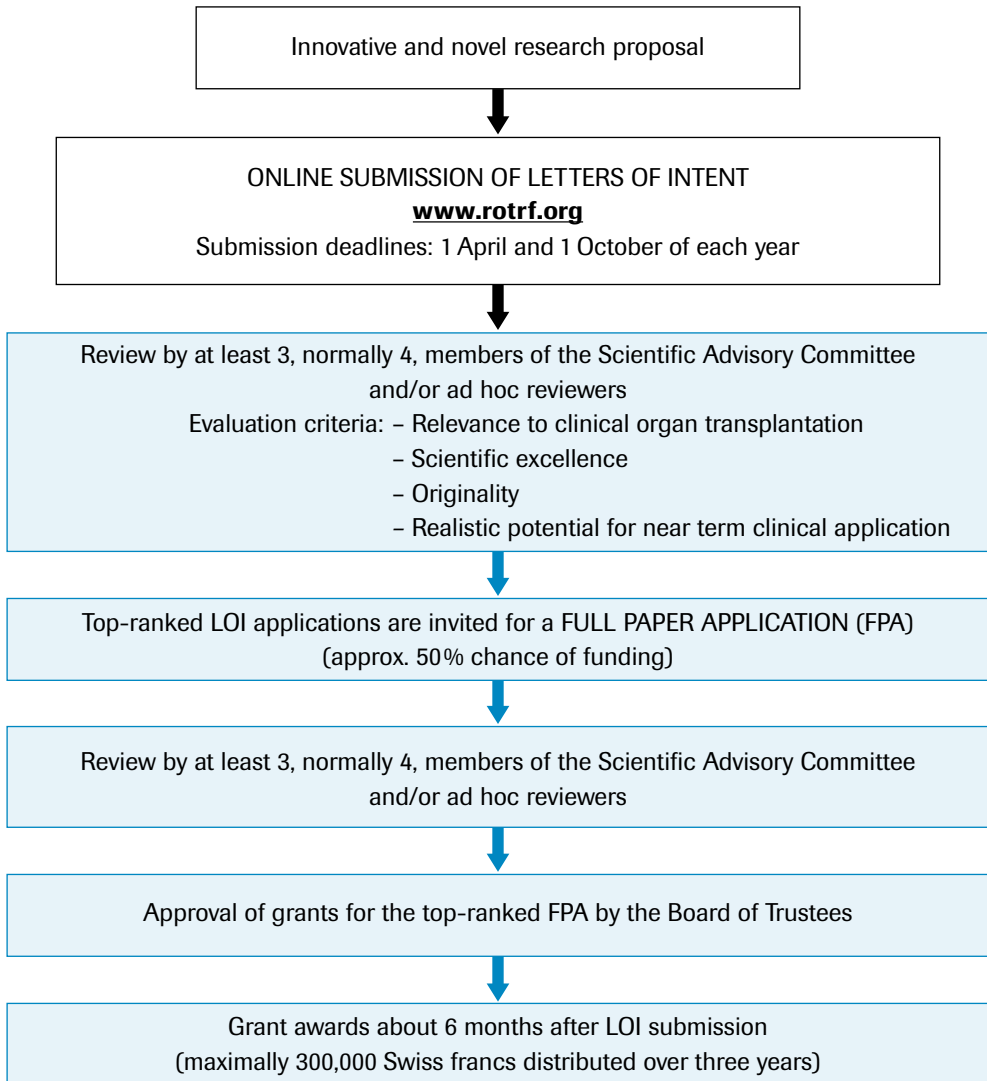
Dr Thomas Waddell, University Health Network, Toronto, Canada

*“Analyzing the development and function of “non-specific” antibodies in the blood of kidney transplant recipients”*

Dr Emmanuel Zorn, Massachusetts General Hospital, Charlestown, USA



## 4. How Do I Apply for a ROTRF Grant?



## **ROTRF Priority**

Our priority is to support clinically oriented research projects, such as observational clinical studies or studies that use human transplant samples for laboratory examinations, and focusing on understanding the pathogenesis and prevention of human transplantation diseases, including organ injury and rejection, viral infection, and late graft deterioration. Furthermore, the ROTRF may consider funding research that addresses related clinical issues in non-transplant patients, including hepatitis C infection and other viral infections, and inflammatory processes relevant to human organ transplantation. These related clinical issues should demonstrate their relevance to disease phenotypes in organ transplant patients. The Trustees will also consider funding studies that investigate transplant populations, ethics, organ preservation and allocation, and healthcare delivery. Moreover, the ROTRF will welcome research in new emerging technologies that examine the pathogenesis of human disease states in organ transplantation.

## **Project Proposals**

Project proposals submitted to the ROTRF should include work with clinical transplant material or with organ transplant patients, e.g. in human organ preservation, human transplant pathology, or other human transplant areas, and should be focused on issues relevant to clinical organ transplantation. If animal models are used to complement the clinical research, a higher priority will be given to those that simulate pathological states and mechanisms operating in human organ transplantation. To be considered for a grant award, applications should demonstrate practical applicability to human organ transplantation in the near term.

*\* Please note that the ROTRF cannot fund interventional clinical trials and projects involving interventions that would add risk to the patient or alter patient management. However, the Trustees may consider funding non-invasive scientific studies that complement an ongoing, approved clinical trial or projects proposing diagnostic clinical examinations posing minimal risk to the patients, e.g. laboratory investigations with a biopsy core obtained as an additional sample during biopsy procedures performed as standard of care. The Trustees will evaluate the clinical risk and take the final decision on the suitability of the project for ROTRF funding.*

## Research Areas Funded by the ROTRF\*

- Improvement of long-term graft survival and prevention of chronic organ dysfunction
- Relevant immune recognition, regulation and effector mechanisms
- Histocompatibility
- Inflammation and tissue injury in transplantation
- Development of new agents for use in transplantation
- Prospective and specific analysis of human organ transplant populations
- Induction of antigen-specific unresponsiveness
- New clinical trial methods and surrogate endpoints
- Tissue injury and organ preservation relevant to transplantation
- Cell or tissue transplantation relevant to organ transplantation
- While the ROTRF does not support operating costs for registries, it will consider providing limited support for unique initiatives such as international databases of general interest to transplant researchers.

### \* OF NOTE:

*Research in human cloning is not considered for funding.*

*Applications for funding of research into transplantation of organs that are not yet transplanted in the clinic will not be considered.*



## 5. Board of Trustees

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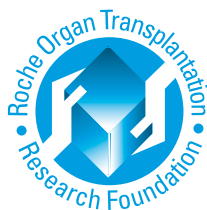
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