About This CME/CE Activity

RATIONALE AND PURPOSE

Successful solid-organ transplantation extends far beyond the complexity of organ procurement and surgery—it also depends upon long-term preservation of both graft function and the health of the graft recipient. This issue of *The Immunology Report* examines the reasons for graft failure, the choice of an appropriate immunosuppressant regimen to minimize its occurrence, and the management of the adverse effects associated not only with the specific drugs used but also with the consequences of long-term immunosuppression.

Most of the reports in this issue—based upon presentations made at the World Transplant Congress (WTC), held July 26–31, 2014, in San Francisco—focus on improving the long-term outcomes of organ transplantation. Too little progress has been made in extending long-term graft survival or protecting transplant recipients from the risks of long-term immunosuppression. Part of the problem is recognizing those risks—cardiovascular morbidities, malignancies, infections—that threaten the health of the patient and others, such as the de novo development of donor-specific antibodies that threaten the survival of the graft. The other part of the problem is discovering and implementing effective strategies to counter those risks. As explained by the authors of this report, such remedies range from encouraging patients to lose weight to improving adherence to their immunosuppressive regimen to using biomarkers to spot late allograft failure. In addition, recent findings presented at the WTC on the use of belatacept to prevent kidney allograft rejection are reviewed, as well as the potential role of inhaled nitric oxide to limit ischemic reperfusion injury in patients receiving lung transplants.

The articles in this issue, written from the academic perspective of physicians in training at leading medical centers, summarize the import of these new findings and place them into clinical context. This activity has been developed and approved by a planning committee of nationally recognized thought leaders to meet a perceived educational need to provide immunologists, transplant specialists, and other healthcare professionals with the latest knowledge and tools to help them perform their roles.

LEARNING OBJECTIVES

After studying this issue of *The Immunology Report,* participants in this educational activity should be able to:

- Outline the causes of long-term allograft failure and strategies to limit the complications of prolonged immunosuppression
- Summarize the risk factors affecting graft and patient survival and effective methods for protecting both the graft and the patient
- Describe the influence that medication nonadherence has on the success or failure of immunosuppressive therapy and how it can be improved
- Explore the chronic care issues in managing transplant patients receiving long-term immunosuppressive therapy
- Review the results of recent clinical studies investigating the use of belatacept in kidney-transplant recipients
- Explain the potential value of inhaled nitric oxide in preventing the effects of ischemic reperfusion injury following lung transplantation.

TARGET AUDIENCE

Immunologists and other physicians significantly involved in organ transplantation, transplant nurses, transplant coordinators, pharmacists, and transplant case managers should find participation in this educational activity valuable.

ACCREDITATION AND CREDIT DESIGNATION

Physicians: This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the University of Cincinnati and Direct One Communications, Inc. The University of Cincinnati is accredited by the ACCME to provide continuing medical education for physicians.

The University of Cincinnati designates this Enduring Material Activity for a maximum of 3.0 *AMA PRA Category 1 Credits™*. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Transplant nurses and coordinators: The American Board for Transplant Certification (ABTC) has approved this educational offering for up to 3.0 Category I Continuing Education Points for Transplant Certification (CEPTCs). The ABTC approved provider number is 791-00.

Pharmacists: Northeastern University Bouvé College of Health Sciences School of Pharmacy is accredited by the Accreditation Council for Pharmacy Education (ACPE) as a provider of continuing pharmacy education. This activity is approved for 3.0 credit hours (0.30 CEU). The ACPE activity number is 0027-9999-14-149-H01-P, the initial release date is November 15, 2014, and the expiration date is November 17, 2017.

Case managers: This program has been pre-approved by the Commission for Case Manager Certification to provide continuing education credit to Certified Case Managers (CCMs). Expiration date: October 30, 2015.

CME/CNE CREDIT AVAILABILITY

Activity release date: October 31, 2014
Expiration date: November 1, 2015

METHOD OF PARTICIPATION

This Enduring Material Activity is available in print and online at **www.ImmunologyReport.com** and consists of an introduction, six articles, a postactivity assessment, and an evaluation. Estimated time to complete the activity is 3.0 hours.

To receive credit, participants must read the CME/CE information on these two pages, including the learning objectives and disclosure statements, as well as the full content of this monograph, and then complete the post test and evaluation form online at www.ImmunologyReport.com. Upon successful completion of the post test (80% correct) and evaluation form, a CME/CE certificate of participation will be awarded automatically. The certificate may be printed directly from the Web site or e-mailed and printed later.

There are no fees for participating in or receiving credit for this activity.

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FACULTY DISCLOSURES

All faculty members (or anyone else in a position to control content, such as activity planners) are required to complete a Disclosure of Commercial Interest and Resolution form and to cooperate with identified methods for resolving conflict of interest prior to participating in the activity. The University of Cincinnati requires disclosure to the learners of all relevant financial relationships and adheres strictly to the ACCME Standards for Commercial Support.

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Anita Young, EdD, RPh, has nothing to disclose.

Jacqueline Keenan and **Edwin S. Geffner**, of Direct One Communications, Inc., have nothing to disclose.

DISCLAIMER

This activity is an independent educational activity under the direction of the University of Cincinnati. The activity was planned and implemented in accordance with the accreditation policies of the ACCME, the Ethical Opinions/Guidelines of the American Medical Association, the US Food and Drug Administration, the Office of Inspector General of the US Department of Health and Human Services, and the Pharmaceutical Research and Manufacturers of America Code on Interactions With Healthcare Professionals, thus assuring the highest degree of independence, fair balance, scientific rigor, and objectivity.

However, the planning committee, faculty, University of Cincinnati, American Board for Transplant Certification, Northeastern University Bouvé College of Health Sciences School of Pharmacy, Astellas Pharma US, Inc., Bristol-Myers Squibb, Ikaria, Inc., and Direct One Communications, Inc. shall in no way be liable for the currency of information or for any errors, omissions, or inaccuracies in this activity. Participants in this activity are encouraged to refer to primary references or full prescribing information resources.

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DISCLOSURE OF UNAPPROVED/OFF-LABEL USE

Discussions concerning drugs, dosages, and procedures may reflect the clinical experience of the planning committee, may be derived from the professional literature or other sources, or may suggest uses that are investigational and not approved labeling or indications.

In this issue of *The Immunology Report,* Dr. Javed discusses the investigational use of inhaled nitric oxide to limit the effects of ischemic reperfusion injury in transplanted organs. Dr. Berger mentions the off-label use of bortezomib, eculizumab, rituximab, and intravenous immunoglobulin for managing antibody-mediated rejection; none of these drugs has been approved by the FDA for this purpose.

CONTACT INFORMATION

We would like to hear your comments regarding this or other educational activities produced by Direct One Communications, Inc. In addition, suggestions for future activities are welcome. Contact us at:

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