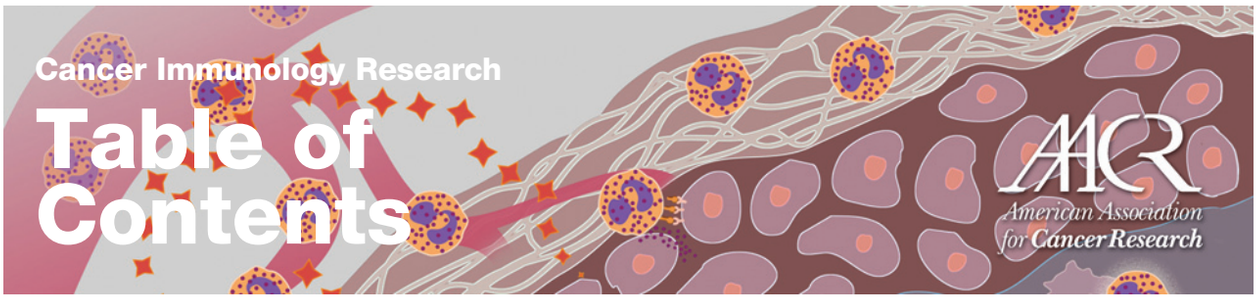

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MASTERS OF IMMUNOLOGY

CANCER IMMUNOLOGY AT THE CROSSROADS: MICROBIOLOGY

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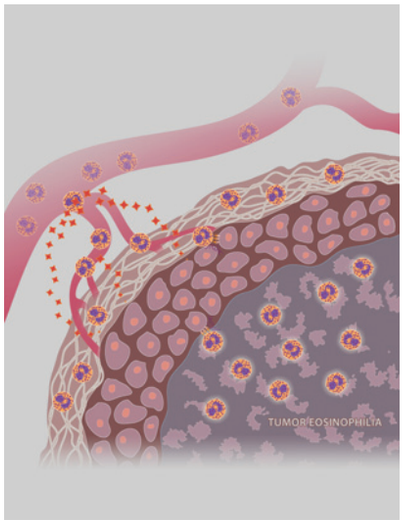
ABOUT THE COVER

The cover image is an artistic rendition of tumor eosinophilia. Eosinophils are granulocytic leukocytes derived from bone marrow hematopoietic progenitors. Mature eosinophils, characterized by their large cytoplasmic secretory granules, are stimulated by inflammatory mediators and tumor-associated cytokines and chemokines (orange stars/diamonds). Upon activation, they enter the blood stream, migrate to, and infiltrate both the necrotic core (lower right) and fibrous capsules of tumors. Known tumor-associated cytokines and chemokines related to eosinophil accumulation include IL-2, IL-3, IL-5, IL-25, GM-CSF, eotaxin-1, and HMGB1. Cellular contact is mediated by CD11a/CD18 and 2B4 and likely by NKG2D. Eosinophils secrete a wide variety of molecules important for their function, including cytokines, chemokines, lipid mediators, neurotransmitters, DNA traps, and cytotoxic granule proteins ECP, EDN, EPO, and MBP. For details, see the Masters of Immunology primer by Davis and Rothenberg on page 1 of this issue.



ABOUT THE MASTER

Marc E. Rothenberg, MD, PhD, is a professor of pediatrics at the University of Cincinnati College of Medicine and the director of the Division of Allergy and Immunology at the Cincinnati Children's Hospital Medical Center. He graduated summa cum laude in chemistry and biochemistry from Brandeis University and received his MD/PhD degree from Harvard Medical School (HMS). His PhD thesis work was on eosinophil hematopoiesis in Dr. Frank Austen's laboratory, where he developed the first culture system for human eosinophils. Dr. Rothenberg completed residency training in pediatrics and a combined fellowship in allergy/immunology and hematology at the Boston Children's Hospital and HMS. His postdoctoral training was in Dr. Philip Leder's laboratory, where he cloned the gene encoding the eotaxin chemokine. At the University of Cincinnati Children's Hospital, he has helped to build a premier program in pediatric research, with his division a leader in pediatric allergy and immunology. Dr. Rothenberg's research program is focused on the molecular mechanisms of allergic disorders. He directs the Cincinnati Center for Eosinophilic Disorders, where he sees patients with allergic and immunologic diseases from around the world.

Dr. Rothenberg has received many honors, including the Pharmacia Allergy Research Foundation Award for the best young investigator in the allergy field; the American Academy of Allergy, Asthma, and Immunology Young Investigator and Scholar in Allergy Awards; the Ohio Governor's Recognition Award; and the 2007 Society of Pediatric Research E. Mead Johnson Award. He is an elected member of the American Society of Clinical Investigation, the Association of American Physicians, and the Society for Pediatric Research and a Diplomate of the American Academy of Allergy, Asthma, and Immunology. Dr. Rothenberg has published over 250 articles on the molecular mechanisms of allergic responses and edited a book entitled *Chemokines in Allergic Disease*. He has served on various review panels for journals and funding agencies, including the Advisory Council of the NIAID, the Burroughs Trust, and the Medical Research Council of the UK. His research has been supported by the NIH, the U.S. Department of Defense, the Human Frontier Science Program Organization, the Burroughs Wellcome Fund, the Dana Foundation, and the Food Allergy and Anaphylaxis Network.

Cancer Immunology Research

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