



THE JOURNAL OF
IMMUNOLOGY

EDITOR-IN-CHIEF: Robert R. Rich

MANAGING EDITOR: M. Michele Hogan

PUBLICATION DIRECTOR: Kaylene J. Kenyon

DEPUTY EDITORS

Barbara E. Bierer
Jeremy M. Boss
Pamela J. Fink
Jeffrey A. Frelinger
Jerry R. McGhee
Robert L. Modlin
Hidde L. Ploegh
Linda A. Sherman
Thomas F. Tedder

SECTION EDITORS

Amnon Altman	David M. Mosser
A. Dean Befus	Christian Munz
Francisco Borrego	Peter J. Murray
Melissa A. Brown	Cathryn R. Nagler
Esteban Celis	Luke A. J. O'Neill
Thomas C. Chiles	Suzanne Ostrand-Rosenberg
Sean P. Colgan	Anna Karolina Palucka
Daniel H. Conrad	Jeffrey L. Platt
Alison Finnegan	Bali Pulendran
Thomas F. Gajewski	Michael K. Racke
Nicholas R. J. Gascoigne	Mohamed H. Sayegh
Wayne W. Hancock	Harry W. Schroeder, Jr.
Cory M. Hogaboam	Liisa K. Selin
David A. Hume	David V. Serreze
Gary W. Hunninghake	Hao Shen
Christopher A. Hunter	Joyce C. Solheim
Stephen C. Jameson	Herman F. Staats
Dragana Janković	Steffen Stenger
Jay K. Kolls	William Stohl
Paul Kubes	Luc Van Kaer
Alan L. Landay	Charles S. Via
Klaus Ley	Matthias G. von Herrath
Paul E. Love	Christopher M. Walker
Jean S. Marshall	Teizo Yoshimura
Carolyn Mold	Juan Carlos Zúñiga-Pflücker
Penelope A. Morel	

ASSOCIATE EDITORS

Toru Abo	David Dombrowicz	Jennifer A. Punt
Edward Abraham	George R. Dubyak	Raghavanpillai Raju
Adam J. Adler	Peter B. Ernst	Barbara Rehermann
Luciano Adorini	Mark A. Exley	Mercedes Rincón
Devendra K. Agrawal	Giamila Fantuzzi	Paul F. Robbins
Shizuo Akira	David R. Fitzpatrick	John R. Rodgers
Carla Jo Aldrich	David M. Frucht	Nikolaus Romani
Hydar Ali	Dmitry I. Gabrilovich	Noel Rose
Julio Aliberti	Ricardo T. Gazzinelli	John J. Ryan
Rui Appelberg	Daniel E. Geraghty	Shimon Sakaguchi
Alfred Ayala	Gabriele Grunig	Padmini Salgame
Alan G. Baxter	Hamida Hammad	Stephen P. Schoenberger
Gabrielle T. Belz	Laura Haynes	Luis J. Sigal
Cornelia C. Bergmann	Alain Haziot	Mark K. Slifka
Avinash Bhandoola	You-Wen He	Silvano Sozzani
Holly H. Birdsall	William H. Hildebrand	Pramod Srivastava
Christian Bogdan	Robert J. Hogan	Gary Starling
Zacharie Brahmi	Dieter Kabelitz	Freda K. Stevenson
Stefan Brocke	Pawel Kalinski	Georg Stingl
Randy Brutkiewicz	Mariana J. Kaplan	Jill Suttles
James J. Campbell	Mark Kaplan	Alexander J. Szalai
Francis R. Carbone	Michael P. Keane	Wayne R. Thomas
Marco A. Cassatella	Liwu Li	David F. Tough
David M. Center	Peter Linsley	David M. Underhill
Andrea Cerutti	Robin G. Lorenz	Jos A. G. van Strijp
Lucienne Chatenoud	Joaquín Madrenas	Stanislav Vukmanovic
Lieping Chen	Alberto Mantovani	Hermann Wagner
Youhai H. Chen	Larry S. McDaniel	Craig M. Walsh
Bobby J. Cherayil	Steven B. Mizel	Ji Ming Wang
Anita S.-F. Chong	Atsushi Mizoguchi	Stephen G. Ward
Edward J. Collins	Mansour Mohamadzadeh	Hartmut Wekerle
Mario P. Colombo	Bethany B. Moore	Andrew D. Wells
David B. Corry	B. Paul Morgan	Michael A. West
Randy Q. Cron	Muriel Moser	Ifor R. Williams
Tyler J. Curiel	William J. Murphy	Bridget S. Wilson
Mohammed Daha	Christopher C. Norbury	Reen Wu
George S. Deepe, Jr.	Giorgio Parmiani	Osamu Yoshie
Frank R. DeLeo	Seth H. Pincus	Jian Zhang
Eric Denkers	Hanspeter Pircher	Steven F. Ziegler
Alexander L. Dent	Stephen B. Pruet	
Raffaele De Palma	Paolo Puccetti	

THE AMERICAN ASSOCIATION OF IMMUNOLOGISTS

OFFICERS

PRESIDENT
Lewis L. Lanier

VICE PRESIDENT
Olivera J. Finn

SECRETARY-TREASURER
Steven J. Burakoff

PAST PRESIDENT
Paul M. Allen

COUNCILLORS

Arthur Weiss Betty A. Diamond Jeffrey A. Frelinger Leslie J. Berg

EXECUTIVE DIRECTOR
M. Michele Hogan

PUBLICATIONS COMMITTEE

CHAIRPERSON: Judy M. Teale

Avery August
Michael P. Cancro
Victor H. Engelhard
Stephen C. Jameson
Yvonne Paterson
Robert D. Schreiber
Arlene H. Sharpe



THE JOURNAL OF
IMMUNOLOGY

Information for Subscribers

The Journal of Immunology was first published in 1916. It is currently published twice per month by The American Association of Immunologists, Inc.

Annual Subscription Rates: See <http://www.jimmunol.org/subscriptions/> for our subscription rates.

Change of Address: AAI member subscribers must notify AAI 60 days in advance. Non-member subscribers must notify *The Journal of Immunology* 60 days in advance of their changes. AAI is not responsible for undeliverable issues. Duplicates can be obtained, if available, from *The Journal of Immunology* at the regular price of single issues.

New Subscriptions and Renewals: New subscriptions and renewals begin January 1, and expire one year later.

AAI Member Subscribers: For questions regarding receipt of *The Journal of Immunology* as part of your membership, please contact: AAI Membership Office, 9650 Rockville Pike, Bethesda, MD 20814-3994; phone 301-634-7195; fax 301-634-7733; email: members@aai.org.

Microfilm: For availability, contact: *The Journal of Immunology*, 9650 Rockville Pike, Bethesda, MD 20814-3994.

Reprints: Reprints of individual articles are available only from authors.

CADMUS PROFESSIONAL COMMUNICATIONS, INC.

COLUMBIA, MARYLAND 21046 U.S.A.