



EDITOR IN CHIEF (2022)

Andreas J. Bäuml
University of California at Davis

EDITORS

John H. Adams, Editor (2019)
University of South Florida

Helene L. Andrews-Polymeris,
Minireview Editor (2019)
Texas A&M University System Health Science Center

George S. Deepe, Jr., Editor (2019)
University of Cincinnati College of Medicine

Sabine Ehrt, *Editor* (2019)
Weill Cornell Medical College

Nancy E. Freitag, Editor (2021)
University of Illinois at Chicago College of Medicine

De'Broski R. Herbert, Editor (2023)
University of Pennsylvania School of Veterinary Medicine

Anthony T. Maurelli, Minireview Editor (2019)
University of Florida

Guy H. Palmer, Editor (2020)
Washington State University Paul G. Allen School for Global Animal Health

Shelley M. Payne, Editor (2019)
University of Texas at Austin

Liise-anne Pirofski, Editor (2022)
Albert Einstein College of Medicine

Manuela Raffatellu, Editor (2022)
University of California San Diego School of Medicine

Craig R. Roy, Editor (2023)
Yale University School of Medicine

Victor J. Torres, Editor (2022)
New York University School of Medicine

Marvin Whiteley, Editor (2022)
Georgia Institute of Technology School of Biological Sciences and Emory University School of Medicine Cystic Fibrosis Center

Vincent B. Young, Editor (2019)
University of Michigan

Patrick D. Schloss, Chairman, ASM Journals Committee

Stefano Bertuzzi, Chief Executive Officer

Melissa Junior, Director, Journals

Jessica Kanotz, Production Editor

Stefanie Kowalski, Assistant Production Editor

Laurie Webby, Editorial Coordinator

EDITORIAL BOARD

David Abraham (2020)
Luis Actis (2018)

Toni Aebischer (2020)
Brian Akerley (2019)

Klaus Aktories (2020)
Holly Algood (2019)

Julio Aliberti (2020)
Lee-Ann Allen (2018)

Andrew Alspaugh (2020)
Craig Altier (2018)

David Andes (2020)
Juan Anguita (2019)

Rui Appelberg (2019)
Glenn D. Armstrong (2019)

Sandra K. Armstrong (2020)
Bernard Arulanandam (2018)

Abdu F. Azad (2020)
Steffen Backert (2020)

Cynthia Baldwin (2018)
Jimmy D. Ballard (2020)

Jeff Banas (2019)
Joseph Barbieri (2019)

Stephen Barenkamp (2019)
Raul Barletta (2018)

John Belisle (2018)
Jose Bengoechea (2018)

Elke Bergmann-Leitner (2019)
Luiz E. Bermudez (2018)

Jon Blevins (2020)
James Bliska (2020)

Christian Bogdan (2018)
Helena Boshoff (2020)

Catherine Bosio (2018)
Kenneth L. Bost (2018)

Michael Brennan (2018)
Paul Brett (2019)

Volker Briken (2018)
David Briles (2018)

Igor Brodsky (2020)
Charles Brown (2020)

Eric L. Brown (2019)
Jeremy Brown (2020)

Juliane Bubeck Wardenburg (2020)

Carmen Buchrieser (2018)
James Burns (2019)

Dirk Hans Busch (2018)
Mariana X. Byndloss (2020)

Melissa J. Caimano (2018)
Anthony A. Campagnari (2018)

Michael Cappello (2019)
Nicholas Carbonetti (2020)

Jason Carlyon (2020)
Jean Celli (2018)

Kris Chadee (2020)
Ashok K. Chopra (2018)

Nicholas P. Cianciotto (2019)
Jörn Coers (2019)

Terry D. Connell (2018)
Paul Converse (2019)

Cynthia Cornelissen (2018)
Peggy Cotter (2018)

Kevin Couper (2018)
Timothy L. Cover (2020)

Robert Cramer (2020)
Alison Criss (2020)

Christopher W. Cutler (2018)
Charles J. Czuprynski (2019)

Johanna Daily (2020)
Richard Darveau (2018)

Andrew Darwin (2018)
Frank DeLeo (2018)

Donald R. Demuth (2018)
Eric Y. Denkers (2020)

Isabelle Derré (2019)
Albert Descoteaux (2018)

Corrella Detweiler (2018)

Joseph P. Dillard (2020)
Hazel Dockrell (2020)

Charles Dozois (2019)
Peter Dube (2020)

Malcolm Duthie (2020)
Roman Dziarski (2020)

Michelle Dziejman (2018)
Kathryn A. Eaton (2019)

Christian Engwerda (2019)
Peter B. Ernst (2020)

Christina S. Faherty (2020)
Hanping Feng (2018)

J. Christopher Fenno (2018)
Paul Fidel (2018)

Ken Fields (2018)
Joshua Fierer (2020)

Scott Filler (2019)
Derek Fisher (2020)

James Fleckenstein (2018)
Suzanne Fleiszig (2020)

Sarah Fortune (2018)
Timothy Foster (2019)

Dara Frank (2019)
Kristi Frank (2018)

Francisco Garcia-del Portillo (2020)
Nisha Garg (2019)

Beth Garvy (2019)
Jorge Giron (2018)

Joanna B. Goldberg (2020)
David Gondek (2019)

Channe Gowda (2018)
Bruce Green (2019)

Marc-Jan Gubbels (2018)
Patricia Guerry-Kopecko (2020)

Paul A. Gulig (2020)
John S. Gunn (2019)

Georg Häcker (2018)
Ted Hackstadt (2020)

Anders Hakansson (2018)
Sven Hammerschmidt (2020)

Lynn Hancock (2018)
Philip Hardwidge (2020)

Nicola Harris (2020)
Alan R. Hauser (2019)

Robert Heinzen (2019)
David Hendrixson (2019)

Michael Hensel (2020)
Hajime Hisaeda (2018)

Deborah Hogan (2018)
Daniel Howe (2020)

Gary Huffnagle (2018)
Christopher Huston (2019)

Lars Hviid (2018)
Ann Jerse (2018)

Yinduo Ji (2018)
Bradley D. Jones (2020)

Ann-Beth Jonsson (2018)
Sheryl Justice (2018)

Barbara Kahl (2018)
Bernhard Kaltenboeck (2018)

Laszlo Kari (2020)
Thomas H. Kawula (2019)

Marijke Keestra-Gounder (2018)
Shabaana Abdul Khader (2018)

Imtiaz Khan (2018)
M. Nadeem Khan (2020)

Samantha King (2018)
Robert Kingsley (2020)

Bruce Klein (2018)
Karl Klose (2020)

Leigh Knodler (2019)
Laura Knoll (2020)

Wolfgang Koester (2018)
Andrew Koh (2020)

Jay Kolls (2018)
Nirbhay Kumar (2018)

Sanjai Kumar (2019)

Borden Lacy (2020)
Eric Lafontaine (2019)

Richard J. Lamont (2019)
Gee Lau (2019)

Chia Y. Lee (2019)
Benfang Lei (2018)

Cynthia Leifer (2019)
John Leong (2019)

Cammie Lesser (2020)
Stuart Levitz (2020)

Lin-Xi Li (2018)
Stephen Libby (2020)

Andrew Limper (2018)
Philana Lin (2019)

Michael Linke (2020)
Mihalis Lionakis (2018)

Yael Litvak (2020)
Jose Lopez-Ribot (2019)

Michael Lorenz (2018)
Philip LoVerde (2020)

Anja Lührmann (2020)
David M. Lyerly (2018)

Donna M. MacCallum (2020)
Barbara J. Mann (2018)

Nicholas Mantis (2019)
Richard T. Marconi (2020)

Helene Marquis (2018)
Luis R. Martinez (2019)

Kevin Mason (2018)
Jere McBride (2019)

Mark McClain (2020)
Bruce A. McClane (2019)

John K. McCormick (2020)
Larry McDaniel (2018)

Paul A. McGee (2019)
Bradford McGwire (2020)

Kevin S. McIver (2019)
David N. McMurray (2018)

Joan Meccas (2020)
Nicole Meissner (2020)

Jay Mellies (2019)
Tod Merkel (2020)

D. Scott Merrell (2020)
Dennis Metzger (2018)

F. Chris Minion (2018)
Dominique Missiakas (2018)

Tim J. Mitchell (2018)
Hans-Willi Mittrüecker (2020)

Harry L. T. Moxley (2019)
Rodney A. Moxley (2019)

Matthew Mulvey (2020)
Ashlesh Krishna Murthy (2020)

Julian Naglik (2019)
Moon H. Nahm (2020)

David Narum (2018)
James P. Nataro (2020)

Gerard J. Nau (2020)
William Navarre (2020)

Melody Neely (2018)
David Nelson (2020)

Mihai Netea (2020)
Hayley Newton (2019)

Olivier Neyrolles (2018)
Frank C. Nichols (2018)

Tracy Nicholson (2020)
Kirsten Nielsen (2018)

Matthew Nilles (2018)
Steven J. Norris (2018)

Joshua Nosanchuk (2019)
Mairi Noverr (2019)

Bogdan Nowicki (2018)
Joshua Obar (2018)

David O'Callaghan (2019)
Marco Oggioni (2018)

Michal Olszewski (2018)
Carlos Orihuela (2018)

Mary O'Riordan (2018)

EDITORIAL BOARD (continued)

- | | | | |
|-------------------------------|-----------------------------|--------------------------------|------------------------------|
| Michael Otto (2018) | Larry S. Schlesinger (2018) | Vernon Tesh (2020) | Michael R. Wessels (2019) |
| David W. Pascual (2020) | Patrick Schlievert (2019) | Anna D. Tischler (2020) | Lee M. Wetzler (2018) |
| Marcela Pasetti (2018) | Dirk Schnappinger (2019) | David Tobin (2018) | Robert Wheeler (2020) |
| Mercio PereiraPerrin (2020) | Michael J. Schurr (2019) | Alfredo G. Torres (2018) | A. Clinton White, Jr. (2018) |
| Christine Petersen (2018) | Gil Segal (2018) | Renee Tsois (2018) | Brenda A. Wilson (2018) |
| William Petri (2019) | Janakiram Seshu (2018) | Takafumi Tsuboi (2018) | Emma Wilson (2020) |
| Gregory V. Plano (2019) | William Shafer (2018) | Cagla Tukul (2019) | Nathalie Winter (2018) |
| Michel Popoff (2018) | Terez Shea-Donohue (2019) | Joanne Turner (2020) | Sebastian Winter (2020) |
| Alice Prince (2018) | Hai Ning Shi (2018) | Rodney K. Tweten (2020) | Jeffrey Withey (2020) |
| Chad Rappleye (2020) | Sunny Shin (2019) | Jude Uzonna (2018) | William H. Witola (2020) |
| Adam Ratner (2018) | Jerry Simecka (2019) | Raphael Valdivia (2020) | Christiane Wolz (2020) |
| Jyothi Rengarajan (2020) | Eric P. Skaar (2019) | Miguel Valvano (2018) | Floyd Wormley (2020) |
| Richard F. Rest (2020) | Jon Skare (2020) | Adrianus van der Velden (2018) | Terry Wright (2018) |
| Anthony Richardson (2018) | James Schlauch (2018) | Jos van Putten (2020) | Hui Wu (2018) |
| Amariliz Rivera (2019) | Mark Smeltzer (2018) | Jos van Strijp (2018) | Betty Wu-Hsieh (2018) |
| Daniel Rockey (2019) | Vanessa Sperandio (2018) | Michael L. Vasil (2020) | Marcel Wüthrich (2020) |
| Stephen Rogerson (2018) | Chad Steele (2019) | Andrés Vazquez-Torres (2018) | Thomas A. Wynn (2019) |
| Luigina Romani (2020) | Torsten Sterzenbach (2020) | Anna Vecchiarelli (2018) | Timothy Yahr (2020) |
| Roy Martin Roop II (2020) | Brian Stevenson (2019) | Jorge Vidal (2020) | George S. Yap (2018) |
| David Sacks (2020) | Bradley Gene Stiles (2018) | Joseph M. Vinetz (2019) | Laxmi Yeruva (2020) |
| Padmini Salgame (2020) | Jason Stumhofer (2018) | Joseph Vogel (2018) | Hongwei Yu (2019) |
| Nita H. Salzman (2019) | Joy Sturtevant (2019) | Martin Voskuil (2020) | Jose Yuste (2019) |
| James Samuel (2019) | Xingmin Sun (2018) | Daniel E. Voth (2019) | Thomas C. Zahrt (2019) |
| Scott Samuels (2019) | W. Edward Swords (2020) | Honorine Ward (2020) | Guoquan Zhang (2020) |
| Karla Fullner Satchell (2020) | Eila D. Tait Wojno (2020) | Paula Watnick (2020) | Guangming Zhong (2020) |
| John-Demian Sauer (2020) | Rita Tamayo (2019) | Alison Weiss (2020) | Jun Zhu (2018) |
| Charles Scanga (2019) | Phillip Tarr (2020) | David Weiss (2019) | Daniel Zurawski (2018) |
| Dieter M. Schifferli (2020) | Christopher Taylor (2019) | Melanie Wellington (2019) | Arturo Zychlinsky (2020) |

Infection and Immunity (ISSN 1098-5522), a publication of the American Society for Microbiology (ASM), 1752 N St., N.W., Washington, DC 20036-2904, is devoted to the advancement and dissemination of fundamental knowledge concerning infections caused by pathogenic bacteria, fungi, and parasites.

Infection and Immunity became an online-only journal with Volume 84, Issue 1 (January, 2016). The final print issue was Volume 83, Issue 12 (December, 2015). Previous print ISSN: 0019-9567.

Instructions to Authors are updated throughout the year. The current version is available on the journal website. *Infection and Immunity* is published monthly, one volume per year. For subscription prices, contact the Subscriptions Unit, ASM (asmjournals@subscriptionoffice.com). Correspondence relating to author reprint orders should be directed to ASM Author Services (ASM.AuthorServicesSupport@cenveo.com), and correspondence relating to disposition of submitted manuscripts, proofs, and general editorial matters should be directed to the Journals Department, American Society for Microbiology, 1752 N St., N.W., Washington, DC 20036-2904. Phone: (202) 737-3600 (see <https://journals.asm.org/content/contact-us>). ASM policies for permissions, commercial reprints, and ePrints can be found at <https://journals.asm.org/content/permissions>.

CODEN: INFIBR

doi:10.1128/IAI.masthead.86-12

Copyright © 2018 American Society for Microbiology. All Rights Reserved.