

# Clinical Chemistry

Volume 65, Number 6, Pages 715–819

JUNE 2019

## EDITOR-IN-CHIEF

**Nader Rifai**  
Boston Children's Hospital  
Harvard Medical School  
Boston, MA

## DEPUTY EDITORS

**Thomas M. Annesley**  
University of Michigan  
Ann Arbor, MI

**James C. Boyd**  
University of Virginia  
Charlottesville, VA

## ASSOCIATE AND SECTION EDITORS

**Fred S. Apple**  
Hennepin County Medical Center  
University of Minnesota  
Minneapolis, MN

**Linnea M. Baudhuin**  
*Perspectives Editor*  
Mayo Clinic  
Rochester, MN

**Michael J. Bennett**  
University of Pennsylvania  
Philadelphia, PA

**Rossa W.K. Chiu**  
*Q&A Editor*  
The Chinese University of Hong Kong  
China

**Christina Ellervik**  
*AACC Learning Lab Co-Editor*  
Boston Children's Hospital  
Harvard Medical School  
Boston, MA

**Paolo Fortina**  
Thomas Jefferson University  
Philadelphia, PA

**Ann Gronowski**  
*Clinical Case Studies Co-Editor*  
*Clinical Chemistry*  
*Trainee Council Co-Chair*  
Washington University  
School of Medicine  
St. Louis, MO

**Shannon Haymond**  
*Social Media Editor*  
Ann & Robert H. Lurie  
Children's Hospital of Chicago  
Northwestern University  
Chicago, IL

**Andrew N. Hoofnagle**  
University of Washington  
Seattle, WA

**Gary L. Horowitz**  
*Clinical Case Studies Co-Editor*  
Tufts Medical Center  
Boston, MA

**Y.M. Dennis Lo**  
The Chinese University of Hong Kong  
China

**W. Greg Miller**  
Virginia Commonwealth University  
Richmond, VA

**Jason Y. Park**  
*Reviews Co-Editor*  
University of Texas  
Southwestern Medical Center  
Dallas, TX

**Robert Rej**  
*New Media Editor*  
Wadsworth Center for  
Laboratories and Research  
Albany, NY

**David B. Sacks**  
National Institutes of Health  
Bethesda, MD

**Mitchell G. Scott**  
Washington University  
School of Medicine  
St. Louis, MO

**Ping Wang**  
*Reviews Co-Editor*  
University of Pennsylvania  
Philadelphia, PA

**Carl T. Wittwer**  
University of Utah  
Salt Lake City, UT

**Ian Young**  
Queen's University  
Belfast, Northern Ireland

## BOARD OF EDITORS

**Patrick M.M. Bossuyt**  
Academic Medical Center  
University of Amsterdam  
The Netherlands

**Carey-Ann Burnham**  
Washington University  
School of Medicine  
St. Louis, MO

**Stephen A. Bustin**  
Anglia Ruskin University  
Chelmsford, United Kingdom

**Steven A. Carr**  
Broad Institute  
Harvard University/MIT  
Cambridge, MA

**Nancy Cook**  
Brigham and Women's Hospital  
Harvard Medical School  
Boston, MA

**R. Graham Cooks**  
Purdue University  
West Lafayette, IN

**Mari L. DeMarco**  
University of British Columbia  
Providence Health Care  
Vancouver, Canada

**Charles S. Eby**  
Washington University  
School of Medicine  
St. Louis, MO

**Graeme Eisenhofer**  
Dresden Technical  
University Medical Center  
Germany

**Frank B. Hu**  
Harvard School of Public Health  
Boston, MA

**John P.A. Ioannidis**  
Stanford University  
Stanford, CA

**David R. Jacobs, Jr.**  
University of Minnesota  
Minneapolis, MN

**Allan Jaffe**  
Mayo Clinic  
Rochester, MN

**Peter A. Kavsak**  
McMaster University  
Hamilton, Ontario  
Canada

**Kathleen F. Kerr**  
University of Washington  
Seattle, WA

**Wolfgang Koenig**  
University of Ulm Medical Center  
Germany

**Larry J. Kricka**  
University of Pennsylvania  
Philadelphia, PA

**Kristian Linnet**  
University of Copenhagen  
Denmark

**Kara L. Lynch**  
University of California San Francisco  
San Francisco, CA

**G. Mike Makrigiorgos**  
Dana Farber Cancer Institute  
Harvard Medical School  
Boston, MA

**JoAnn E. Manson**  
Brigham and Women's Hospital  
Harvard Medical School  
Boston, MA

**Elaine R. Mardis**  
Institute for Genomic Medicine  
The Ohio State University  
Columbus, OH

**Stephen R. Master**  
Children's Hospital of Philadelphia  
Philadelphia, PA

**David A. Morrow**  
Brigham and Women's Hospital  
Harvard Medical School  
Boston, MA

**Børge G. Nordestgaard**  
Copenhagen University Hospital  
Denmark

**Klaus Pantel**  
University Medical Center  
Hamburg-Eppendorf  
Germany

**Alan Remaley**  
National Institutes of Health  
Bethesda, MD

**Ulf-Håkan Stenman**  
Helsinki University Central Hospital  
Finland

**Dorine W. Swinkels**  
Radboudumc  
The Netherlands

**Gregory J. Tsongalis**  
Dartmouth-Hitchcock Medical Center  
Lebanon, NH

**Jennifer E. Van Eyk**  
Cedars-Sinai Medical Center  
Los Angeles, CA

**Kenneth W. Witwer**  
The Johns Hopkins University  
School of Medicine  
Baltimore, MD

## SYCL LIAISON

**Joe M. El-Khoury**  
Yale University  
New Haven, CT

## SENIOR DIRECTOR

Matt Boyle

## DIRECTOR

Sheehan Misko

## ASSISTANT MANAGING EDITOR

Kristen Hauck

## EDITORIAL SPECIALISTS

Patty Brady

Erin Roberts