

*JIM* is the official publication of the American Federation for Medical Research (AFMR).

***Journal of Investigative Medicine (JIM)*** is the official publication of the American Federation for Medical Research (AFMR). In keeping with the mission of the AFMR, *JIM* publishes original, high quality clinical and translational research. *JIM* also provides an avenue by which investigators can publish scholarly reviews relevant to the research-focused mission of the AFMR.

## Editorial Board

### Editor-in-Chief

**Michael J. McPhaul, MD**,  
Dana Point, California

### Deputy Editors

**Robert T. Means, Jr., MD**  
Johnson City, Tennessee

**Don C. Rockey, MD**  
Charleston, South Carolina

**Gloria L. Vega, PhD**  
Dallas, Texas

**Peter Wiernik, MD**  
Chappaqua, New York

**Michael Zitzmann, MD, PhD**  
Muenster, Germany

### Reviews Editor

**Marco Marcelli, MD**  
Houston, Texas

**Richard J. Auchus, MD**

Ann Arbor, Michigan

**Keith Colburn, MD**

Loma Linda, California

**Errol D. Crook, MD**

Mobile, Alabama

**David A. D'Alessio, MD**

Durham, North Carolina

**Samrat Das, MD**

Durham, North Carolina

**Dawn Davis, MD, PhD**

Madison, Wisconsin

**Janice Dutcher, MD**

Chappaqua, New York

**Aidar Gosmanov, MD, PhD**

Albany, New York

**David Green, MD**

Atlanta, Georgia

**Taylor Harrison, MD**

Atlanta, Georgia

**C. Michael Hart, MD**

Decatur, Georgia

**Emil Heinze, MD**

Sylmar, California

**Adriana Ioachimescu, MD, PhD**

Atlanta, Georgia

**Octavian Ioachimescu, MD, PhD**

Decatur, Georgia

**Armand Krikorian, MD, FACE**

Oak Lawn, Illinois

**Richard A. Lange, MD, MBA**

El Paso, Texas

**Suthat Liangpunsakul, MD, MPH**

Westfield, Indiana

**Ildiko Lingvay, MD**

Dallas, Texas

**Kieren Mather, MD**

Indianapolis, Indiana

**Philippe Montgrain, MD**

San Diego, California

**MingMing Ning, MD, MMSc**

Boston, Massachusetts

**James C. Oates, MD**

Charleston, South Carolina

**Nancy J. Olsen, MD**

Hershey, Pennsylvania

**Neda Rasouli, MD**

Denver, Colorado

**Allison Reiss, MD**

Mineloa, New York

**Florence Rothenberg, MS, MD, FA**

Cincinnati, Ohio

**Leticia Ryan, MD, MPH**

Baltimore, Maryland

**Michael Schivo, MD, MAS**

Sacramento, California

**Iuliana Shapira, MD**

Brooklyn, New York

**Abraham Thomas, MD, MPH**

New York, New York

**Kristina Utschneider, MD,**

Seattle, Washington

**Peter Van Buren, MD**

Dallas, Texas

**Cherry Wongtrakool, MD,**

Decatur, Georgia

**Amir Zeki, MD, MAS**

Davis, California

### AFMR National Council

#### President

**Suthat Liangpunsakul, MD, MPH**  
Westfield, IN

#### President-Elect

**Leticia Ryan, MD, MPH**  
Baltimore, MD

#### Past President

**Florence Rothenberg, MS, MD, FACC**  
Cincinnati, OH

#### Secretary-Treasurer

**Peter H. Wiernik, MD**  
Chappaqua, NY

#### Assistant VP of Meetings & Programs

**Cherry Wongtrakool, MD**  
Decatur, GA

#### Membership Committee Chair

**Edgar Lerma, MD**  
Berwyn, IL

#### Publications Committee Chair

**Amir A. Zeki, MD, MAS**  
Davis, CA

#### Editor-in-Chief

**Michael J. McPhaul, MD**  
Dana Point, CA

#### Councilors-at-Large

**Sidharth Mahapatra, MD, PhD**  
Omaha, NE

**Sharma S. Prabhakar, MD, MBA**  
Lubbock, TX

**Iuliana Shapira, MD**  
Brooklyn, NY

#### Eastern Chair

**Oana A. Sandu, MD**  
Bronx, NY

#### Eastern Chair-Elect

**Shireen Atabaki, MD, MPH**  
Washington, DC

#### Eastern Secretary-Treasurer

**Akanksha Goyal, MD**  
Bronx, NY

#### Midwestern Chair

**Vijay Shivaswamy, MBBS, MS**  
Omaha, NE

#### Midwestern Chair-Elect

**Joumana T. Chaiban, MD**  
Oak Lawn, IL

#### Midwestern Secretary-Treasurer

**Attaya Suvannasankha, MD**  
Indianapolis, IN

#### Southern Chair

**Dana Rizk, MD**  
Birmingham, AL

#### Southern Chair-Elect

**Samrat U. Das, MD**  
Chapel Hill, NC

#### Southern Secretary-Treasurer

**Viranuj Sueblinvong, MD**  
Decatur, GA

#### Western Chair

**Kevin D. Deane, MD, PhD**  
Aurora, CO

#### Western Chair-Elect

**Prasanth Surampudi, MD**  
Sacramento, CA

#### Western Secretary-Treasurer

**Melanie Cree-Green, MD**  
Aurora, CO

## Contact Details

### Editorial Office

Amanda Beaini  
Tel: +1 214 709 7076  
E: [info.jim@bmj.com](mailto:info.jim@bmj.com)

### Production Editor

Aimee Prior  
E: [production.jim@bmj.com](mailto:production.jim@bmj.com)

### Publisher & Supplement Enquiries

Kathy Lyons  
**BMJ Publishing Group Ltd**  
2 Hudson Place, 3rd Floor,  
Hoboken, NJ 07030  
Email: [klyons@bmj.com](mailto:klyons@bmj.com)  
Tel: +1-507-788-0836

**American Federation for Medical Research**  
500 Cummings Center,  
Suite 4400,  
Beverly, MA 01915, USA  
T: 978-927-8330  
[www.afmr.org](http://www.afmr.org)

### Customer support

For general queries and support with existing and new subscriptions:  
W: [support.bmj.com](mailto:support.bmj.com)  
T: +44 (0)20 7111 1105  
E: [support@bmj.com](mailto:support@bmj.com)

### Self-archiving and permissions

W: [bmj.com/company/products-services/rights-and-licensing/](http://bmj.com/company/products-services/rights-and-licensing/)  
E: [bmj.permissions@bmj.com](mailto:bmj.permissions@bmj.com)

### Advertising

W: [bmj.com/company/for-advertisers-and-sponsor/](http://bmj.com/company/for-advertisers-and-sponsor/)

### Display Advertising ROW

Sophie Fitzsimmons  
T: +44 (0)20 3655 5612  
E: [sftzsimmons@bmj.com](mailto:sftzsimmons@bmj.com)

### Online Advertising ROW

Marc Clifford  
T: +44 (0)20 3655 5610  
E: [mclifford@bmj.com](mailto:mclifford@bmj.com)

### Display & Online Advertising Americas

American Medical Communications (AMC)  
T: +1 973 214 4374  
E: [rgordon@americanmedicalcomm.com](mailto:rgordon@americanmedicalcomm.com)

### Reprints

**Author Reprints**  
BMJ Reprints Team  
E: [admin.reprints@bmj.com](mailto:admin.reprints@bmj.com)

### Commercial Reprints ROW

Nadia Gurney-Randall  
M: +44 (0)7866 262 344  
E: [ngurneyrandall@bmj.com](mailto:ngurneyrandall@bmj.com)

### Commercial Reprints Americas

Ray Thibodeau  
T: +1 267 895 1758  
M: +1 215 933 8484  
E: [ray.thibodeau@contentednet.com](mailto:ray.thibodeau@contentednet.com)

### For all other JIM queries:

<http://jim.bmj.com/content/contact-us>

## Subscription Information

*JIM* is published eight times a year (subscribers receive all supplements)  
ISSN 1081-5589 (print)  
ISSN 1708-8267 (digital)

## Institutional Rates 2018

### Print

#### *Institutional*

Extra Small \$960  
Print Only \$1,200

Small \$1,080  
Print Only \$1,200

Medium \$1,200  
Print Only \$1,200

Large \$1,320  
Print Only \$1,200

Extra Large \$1,380  
Print Only \$1,200

### OA Article Publication Charges

OA APC **CC-BY-NC** \$2000  
OA APC **CC-BY** \$2,580

### Online

Site licenses are priced on FTE basis and allow access by the whole institution.