The Medical Student Research Journal (MSRJ) is the longest-running international academic journal in the United States authored, reviewed, edited, and published by medical students for medical students. It is dedicated to promoting the scientific achievements of medical students, teaching principles of peer and article review, and providing editorial, publishing and leadership learning experiences. Medical students worldwide are invited to submit manuscripts and serve as trained reviewers. The MSRJ publishes original research, case studies, editorials, research letters, reviews, and reflections that meet required standards, are authored by a medical student, and advance science. It is sponsored by the Michigan State University College of Human Medicine. Visit www.msrj.org and www.facebook.com/msrjchm for more information.

EDITORIAL BOARD
EXECUTIVE EDITORS
Jessica Wummel - MS4 and Jack Mettler - MS4

FOUNDING FACULTY ADVISOR
Clare Luz, Ph.D. (2007 – Present)

ADVISOR, OFFICE OF RESEARCH
Mark Trottier, Ph.D. (2012 – Present)

SENIOR EDITORS
David Carr - MS4
Margaret Chi - MS4
Michelle Dywer - MS4
Sahil Bobby Gambhir - MS4
Liza Gill - MS4
Caela Hesano - MS4
Patrick Roach - MS4
Kailyne Van Stavern - MS4
Tina Chaalan - MS3
Alexander Golec - MS3
Romina Kim - MS3
Ghadeer Shukr - MS3
Timothy Smith - MS3
Kaitlyn Vitale - MS3
Mey Yip - MS3

JUNIOR EDITORS
Johnathan Kao - MS3
Rama Salhi - MS3
Apoorva Aekka - MS2
Toomas Arusoo - MS2
Andrew Benintende - MS2
Trevor Carle - MS2
Tyler Junttila - MS2
Michael Klinger - MS2
Regina Matar - MS2
Jennifer Monacelli - MS2
Masaki Nagamine - MS2
Amir Pakray - MS2
James Polega - MS2
Mahnnoor Rehman - MS2
Garrett Roe - MS2
Joginder Singh - MS2
Nadine Talla - MS2
BG TenBrink - MS2
Samantha Wu - MS2
Daniel Ziazadeh - MS2

STUDENT REVIEWERS
Apoorva Aekka
Andrew Benintende
Lucas Deschames
Matthew Edwards
Alex Golec
Pishoy Gouda
Israel Oluwaseyidayo Idris
Johnathan Kao
Michael Klinger
Marissa Martz
Evan Milton
Jennifer Monacelli
Ahmed Negida
James Polega
Michael Rezaee
Patrick Roach
Joginder Singh
Nadine Talla
Kaitlyn Vitale

EDITORIAL STAFF

FACULTY REVIEWERS
Faculty reviewer credits will be published once per volume (year) to protect the double-blind reviews. The next recognition of faculty reviewers will be in the Fall issue of Volume 4.

EXECUTIVE EDITOR ALUMNI
Andrew Wyman, M.D.
Emergency Medicine, Carolina’s Medical Center ’14
Executive Editor Emeritus, Founder (2007–2011)

Steven Plato, M.D.
Integrated Vascular Surgery, UH/Case Western Reserve ’17
Executive Editor Emeritus, Founder (2007–2011)

Marissa Baca, M.D.
Plastic Surgery, GRMEP/MSU ’18
Executive Editor (2011–2012)

Chad Klochko, M.S., M.D.
Diagnostic Radiology, Henry Ford Health System ’18
Executive Editor (2012–2013)

David Ortiz, M.D.
Neurology, University of Minnesota ’17
Executive Editor (2012–2013)

Kevin C. Patterson, M.D.
Internal Medicine, Ohio State University Wexner Medical Center ’17
Executive Editor (2013–2014)

EDITOR ALUMNI
David Hobbs, M.D. (2011–2012)

SPECIAL THANKS
Marsha Rappley, M.D., Dean, College of Human Medicine
Aron Sousa, M.D., Senior Associate Dean for Academic Affairs
Jeffrey Dywer, Ph.D., Senior Associate Dean for Research and Community Engagement
David Solomon, Ph.D., Professor, Office of Medical Education Research and Development
Geri Kelley, Communications Director
Michigan State University, College of Human Medicine, Office of Research
Jincy Joby at Datapage.ie