

Editor-in-Chief

Patricia Ann Mabrouk

Department of Chemistry and Chemical Biology
Northeastern University
p.mabrouk@northeastern.edu

Associate Editors

Jennifer G. Coleman

School of Behavioral Sciences
Western New Mexico University
jennifer.coleman@wnmu.edu

Hasitha Mahabaduge

Department of Chemistry, Physics and
Astronomy
Georgia College & State University
hasitha.mahabaduge@gcsu.edu

Niharika Nath

Department of Biological and Chemical Sciences
New York Institute of Technology
nnath@nyit.edu

Lorraine S. Wallace

Department of Biomedical Education
and Anatomy
The Ohio State University
Lorraine.Wallace@osumc.edu

Editorial Advisory Board

Joanne D. Altman

Department of Psychology and Department
of Undergraduate Research and
Creative Works
High Point University

Joshua Feinberg

Department of Earth and Environmental
Sciences
University of Minnesota

Edray Herber Goins

Mathematics and Statistics
Pomona College

Charles Gunnels

Department of Biology
Florida Gulf Coast University

Michelle Hayford

Division of Academic and Student Affairs
North Carolina State University

Margaret MacDougall

Centre for Population Health Sciences
Edinburgh Medical School,
University of Edinburgh

Aaron R. Sakulich

Civil, Environmental, and Architectural
Engineering
Worcester Polytechnic Institute

Issue Editor

Niharika Nath

New York Institute of Technology

Publisher

Council on Undergraduate Research

Lindsay Currie, Executive Officer

Gaithersburg, MD
www.cur.org

Coordinating Editor

Technica Editorial

Carrboro, North Carolina
www.technicaeditorial.com
spur@technicaeditorial.com

Copyeditor

Deborah Lapp

Union, ME

Design

Afra Bahavar

Sterling, VA

Scholarship and Practice of Undergraduate Research (SPUR) is published in the fall, winter, spring, and summer by the Council on Undergraduate Research.

The mission of the Council on Undergraduate Research is to support and promote high-quality mentored undergraduate research, scholarship, and creative inquiry.

Journal Purpose

Scholarship and Practice of Undergraduate Research (SPUR) is to serve as the leading international, cross-disciplinary scholarly destination for those committed to effective, inclusive, and diverse experiences in mentored undergraduate research, scholarship, and creative inquiry. SPUR advances knowledge and understanding of novel and effective approaches to mentored undergraduate research, scholarship, and creative inquiry by publishing high-quality, rigorously peer-reviewed studies written by scholars and practitioners of undergraduate research, scholarship, and creative inquiry.

Journal Audience

The audience encompasses the many individuals interested in quality undergraduate-level education and professional preparation such as postsecondary administrators, faculty, staff, researchers, and student mentors both on and off campus, as well as industry professionals—all those involved in the scholarship and practice of undergraduate research around the world.

CUR Advertising Policy

The Council on Undergraduate Research accepts advertising from organizations and individuals if such ads are in line with CUR's tax-exempt educational purpose, which is to promote undergraduate research and education.

For more information, contact CUR at cur@cur.org or 202-783-4810.

Accessing SPUR

CUR members receive access to SPUR as a benefit of membership (delivery channel is dependent on membership type). For individual non-members, the subscription rate is \$75 annually. For libraries, the subscription rate is \$750 annually. SPUR also is available through EBSCOhost and ProQuest Education and is indexed in ERIC.

To search for articles, visit
<https://bit.ly/SPUR-CURQSearch>

ISSN 2476-101X

Entire contents © 2023 Council on Undergraduate Research

Council on Undergraduate Research
267 Kentlands Boulevard, No. 4021
Gaithersburg, MD 20878
Tel: 202-783-4810; Fax: 202-783-4811

INTRODUCTION

- Undergraduate Research as an Ecosystem: Aligning Design, Access, and Support** 2
– Niharika Nath

EDITORIAL

- Global Classrooms, Local Impact: Reframing Undergraduate Research in a Connected World** 4
– Lorraine S. Wallace

ARTICLES

- Undergraduate Research As a Catalyst for Career Competency Development** 6
– Sarah K. Powell, Lance F. Barton
- Backward Design As a Framework for Strengthening CURE Development** 17
– Kelly Y. Neiles, Rebecca A. Hunter, Maury E. Howard, Daniel F. Scott, Kimberley A. Frederick
- Gateways to Undergraduate Research Experiences: Building Confidence and Access to Undergraduate Research** 30
– Elizabeth Wimberly-Young, Vanessa C. Morales, Kathleen F. Weaver
- Undergraduate Research and Cognitive Apprenticeship: An Analysis of Mentoring Practices** 40
– Jonathan Seymour, Maria Navarro

REVIEW

- Perceived Value of Undergraduate Research for Faculty Advancement** 51
– Beena Ajmera, Heather Dillon, Jeff Dusek, Irene Reizman

BOOK REVIEW

- Labwork to Leadership: A Concise Guide to Thriving in the Science Job You Weren't Trained For** 59
– Zachary Murphy