

# UCR Undergraduate Research Journal II

## Faculty Advisory Board

**Chuck Whitney**, Creative Writing, Board Chair  
**Thomas Eulgem**, Botany and Plant Science  
**Dimitrios Morikis**, Bioengineering  
**Nosang Myung**, Chemical and Environmental Engineering  
**William Okamura**, Chemistry  
**Rebekah Richert**, Psychology  
**Dana Simmons**, History  
**Howard Wettstein**, Philosophy and  
Director of University Honors Program

## Student Editorial Board

**Gregory Goalwin**, Political Science/International Affairs, History,  
Editor-in-Chief  
**Lauren Cummings**, History, Assistant Editor-in-Chief  
**Michael Bogseth**, Biochemistry  
**Sophia Fox**, Political Science/International Affairs  
**Rachael Meeker**, Sociology, Religious Studies  
**Jeffrey Suhlim**, Bioengineering  
**Elizabeth Zielins**, Bioengineering



**UCR Undergraduate Research Journal Student Editorial Board**, left to right: Michael Bogseth, Editor-in-Chief Gregory Goalwin, Assistant Editor-in-Chief Lauren Cummings, Elizabeth Zielins, Sophia Fox, Jeffrey Suhlim. Not pictured: Rachel Meeker.

## Executive Committee for Undergraduate Research

**David Fairris**, Vice Provost for Undergraduate Education,  
Committee Chair  
**Gary Scott**, Associate Dean, College of Natural  
and Agricultural Sciences  
**Steven Brint**, Associate Dean, College of Humanities,  
Arts, and Social Sciences  
**Chinya Ravishankar**, Associate Dean,  
Bourns College of Engineering  
**Leah Haimo**, Associate Dean, Graduate Division  
**Richard Luben**, Office of Research

## Staff Coordinators

**Patsy Oppenheim**, Assistant Vice Provost,  
Undergraduate Education  
**Breanna Baeza**, Student Assistant, Undergraduate Education  
**Debbie Pence**, Management Services Officer,  
Undergraduate Education

## From the Student Editorial Board

The members of the Student Editorial Board are honored to have played a part in the production of this, the second volume of the *UCR Undergraduate Research Journal*. As editors, we had the opportunity to work with both faculty members and our peers in crafting a journal that highlights the incredible depth and diversity of undergraduate research that is being conducted here at UCR. We were deeply impressed by the quality of the research and the professionalism of the student researchers who submitted articles to this year's edition of the journal. The number of articles submitted more than doubled the number submitted to last year's inaugural edition and we are proud to reflect this increasing awareness of the *Undergraduate Research Journal* through a commensurate increase in the size of the journal itself. It is our hope that undergraduate research will continue to be encouraged at UCR and we are pleased to provide an opportunity for the most outstanding student researchers to be recognized and celebrated for their efforts. It is with great pride that we present the second volume of the *UCR Undergraduate Research Journal*.