

Dear Readers,

There is something profound about the moment a seed becomes a flower. The long, unseen work beneath the surface is finally giving way to something visible, vibrant, and alive. It is the image that inspired our theme for this volume: Full Bloom.

The research collected in these pages represents exactly that kind of transformation. Each submission began as a question—sometimes uncertain, sometimes bold—and grew through late nights, countless revisions, and the steady guidance of dedicated mentors into the scholarship you hold in your hands today. We are honored to share it with you.

This volume reflects the remarkable breadth of inquiry that defines undergraduate research at its best. From the natural sciences to engineering, and even our social sciences and humanities. Our contributors have approached their fields with rigor and curiosity in equal measure. That diversity is not incidental; it is the very heart of the URJ's mission to publish the most exemplary student research from every undergraduate discipline and school, and to take emerging scholars seriously as the researchers they already are.

None of this work happens in isolation. We owe deep gratitude to our faculty advisor, Paul Gibbons, whose long commitment to this journal and to undergraduate writing has shaped what the URJ is today. Thank you to our staff members, whose thoughtful engagement with every manuscript makes this journal worthy of the trust our authors place in it. And to the contributors themselves: publishing your work is an act of courage, and we are proud to give it a home.

To our readers, we invite you to approach these pages with the same openness that brought each of these projects to life. You will find ideas that challenge, inspire, and perhaps even surprise you, which is, we think, exactly what good research should do.

This is Full Bloom, a celebration of growth, of discovery, and of what becomes possible when curious minds are given the room to flourish.

With deep gratitude and admiration,

The Editorial Team UC Merced Undergraduate Research Journal, Volume 18, Issue 2