



## CONTENTS

<b>Letter from the Editors</b>	<b>1</b>
DAISEY YU, AMOGH ANGADI, AYSE ELDES, ANIKET DAGAR	
<b>Acknowledgements</b>	<b>2</b>
<b>Our Mission Statement</b>	<b>5</b>
<b>Confronting Two Crises: The Effect of Mental Health Disorders on Opioid Use</b>	<b>6</b>
ISABEL ZHANG	
<b>Experience of stigma and its relationship to identification with the neurodiversity model for Indian parents of children with autism spectrum disorder</b>	<b>15</b>
SAHITA MANDA	
<b>Analyzing the Efficacy and Utility of the Americans with Disabilities Act of 1990 on College Students with Disabilities</b>	<b>16</b>
MAGDA WOJTARA	
<b>The Relationship Between Student Living Situation and the Effects of COVID-19 During the 2020–2021 Academic Year at the University of Michigan</b>	<b>26</b>
BARBARA TAN, ALYSSA CADEZ-MARTIN, SARAH FOX, SAMIR GADEPALLI, MD, MBA	
<b>Oxime-Conjugated Dendrimers as Therapeutics for Organophosphate Poisoning</b>	<b>35</b>
RACQUEL HARRISON, TANG SHENGZHUANG, JAYME CANNON, KELLY YANGA, PAMELA WONG, SEOK KI CHOI	
<b>The Importance of Interpreters in the Medical System</b>	<b>45</b>
AMBER BEILFUSS, KAITLYN ZABLOCK, JASMINE LOWENSTEIN, ALLISON GOODSSELL, JACQUELINE RODRIGUEZ, IZABEL VAREJÃO	

<b>Do We Need More Midwives In Our Hospitals?</b> AMBER BEILFUSS	50
<b>Imaging the effects of GLP-1 on the developing pancreas</b> CHLOE RUSCILLI AND CORENTIN CRAS-MÉNEUR	54
<b>Reinterpreting de Gaulle: Nationalist or Realist?</b> JIAHAO YANG	64
<b>Reimagining Hum Dekhenge</b> BILAL IRFAN	71
<b>Balancing the Saints: An Analysis of the Inclusion of Divine Intercessors</b> MALVIKA PANDYA	94
AuQ1 <b>About the Staff</b>	
AuQ2 <b>Index</b>	106



Dear Readers,

Our mission at University of Michigan Undergraduate Research Journal is to give students the opportunity to present and publish their research. We work with faculty members at the University of Michigan to review submissions to our journal and work with authors to present their research at the highest quality.

It is our pleasure to assemble another edition of our annual issue that exhibits research from life sciences, social sciences, math, physics, and humanities. The journal is proud of its interdisciplinary identity that represents the diverse academic exploration taking place on our campus.

Sincerely,

Daisey Yu, Editor-in-Chief (2022–23)

Amogh Angadi, Editor-in-Chief (2022–23)

Ayse Eldes, Editor-in-Chief Emeritus (2022–23)

Aniket Dagar, Editor-in-Chief Emeritus (2022–23)

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## Thanks to our Faculty Reviewers

We thank the following faculty for their contributions to ensuring quality work in the undergraduate research journal and providing guidance through feedback for all of our journal submissions.

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- Leonard Sander, PhD

### ***Math and Physics***

- Yang Chen, PhD
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Avery Heo

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We are a student-run, non-technical research journal. Our mission is to build connections between undergraduates, graduate students, and the public, as well as among the different academic disciplines through the publication of non-technical articles in all fields of research. Our goal is to tap student creativity and effort in all academic disciplines through a peer-edited, faculty-reviewed electronic and print publication. We hope to inspire interest in research in the student body, faculty, and the campus community.

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