



COUNCIL ON UNDERGRADUATE RESEARCH

## 2023-2024 Elections Biology Division: Division Representative Slate

**Position Purpose:** The work of Divisions is done by Division Representatives who advance undergraduate research by providing networking opportunities, activities, and educational content. Their aim is to create and foster community and value within the organization. Representatives support the members of their division in activities and programs that align with the CUR strategic plan, mission, vision, and values.

### Needed Qualifications:

- Familiar with CUR and it's mission
- Passionate about or had mentor experience in undergraduate research
- Showcases thought leadership in undergraduate research
- CUR Membership (once elected)
- Previous volunteer experience, not required but

*There are 12 individuals running.*

*You may vote for up to 8 of the candidates presented to be elected as representatives for this division.*

Candidate information is presented on the following pages. Click on each candidate name below to be taken to their Information In the document.

- [Nicole Najor](#)
- [Maryann Herman](#)
- [Daniel Strahs](#)
- [Joshua Owens](#)
- [Ansul Lokdarshi](#)
- [Jonathan Fitz Gerald](#)
- [Susan Klinedinst](#)
- [Ghanshyam Heda](#)
- [Tessa Durham Brooks](#)
- [Abdullah Salim](#)
- [Samantha Giordano-Mooga](#)
- [Jinjie Liu](#)

## Nicole Najor, University of Detroit Mercy

---

### *Biology Division Nominee*

#### **NOMINEE STATEMENTS**

##### **Please comment on your involvement in undergraduate research activities in the context of your institution and its mission.**

At the University of Detroit Mercy I have been involved in undergraduate research through many different contexts. Since joining the faculty at Detroit Mercy in August of 2016, the overarching research goal of my research is to understand the relevance and significance of the COP9 signalosome interaction with the desmosome. To meet this goal I have established and maintained an active research team in my lab and I have implemented some of our research questions in my Cell and Molecular Biology course (BIO4750) as a CURE (course-based undergraduate research experience). I have published 6 papers, written 27 grants, been awarded a total of \$210,000 from internal and external funds combined, been invited for 3 seminars at outside institutions, and my students have presented at 43 local/regional/national conferences. The Biology department at the University of Detroit Mercy is home to 400+ students and 13 faculty members. The ability for every student to be able to participate in an authentic research experience is difficult given the limited space of individual research groups. However, CUREs provide a unique solution to this problem. CUREs are designed to provide students with hands-on research experiences, where students develop testable hypotheses that are novel and contribute to the field. They combine the benefit of traditional coursework with real-world application, allowing students to develop better critical and analytical thinking skills. I have employed 2 different CUREs during my time at Detroit Mercy, where products from those CUREs were either published or used in grant proposals.

##### **In what ways have you helped promote diversity and inclusion in URSCA?**

I have participated in a Culturally Aware Mentor Training Workshop through the National Research Mentoring Network (NRMN), to work towards understanding implicit biases and how to counteract those biases. Topics discussed at this workshop also included how cultural diversity can impact a mentoring relationship and the impact of conscious and unconscious assumptions. To promote diversity and inclusion in research and scholarship at Detroit Mercy, I began organizing our Undergraduate Research Week events (2019- present). The events were designed to bring students together in an academic and social umbrella, so that we could celebrate student's commitment to research (<https://sites.udmercy.edu/urw/>). Our celebration was recently supported by an American Chemical Society Award that helped support an outside speaker and a student Research Fair. Past events have included "wear your best science gear" event, and a "dry-ice ice cream social", as a mechanism to bring students together in a non-threatening environment for students share and discuss their research failures and successes. Additionally, I was recently awarded through the Detroit Mercy Innovation Fund to support a Community Engaged Learning (CEL) project entitled "Undergraduate Research Inspired Community Art (URICA)". This project funds a CEL experience where Detroit Mercy Undergraduate Researchers work with high school art students in the city of Detroit to perform a cell biology experiment. The high school art students then create a piece of art that is inspired by that experience, which is then showcased at our institution in a competition exhibition.

**How do you anticipate your skills will help successfully uphold the Division Representative charge?**

There are a lot of challenges that face undergraduate research in today's day and age, but as a CUR Biology Division Representative I believe continuing to champion undergraduate research at my home institution and within my sub-discipline of cell biology will assist in continuing to push the importance of undergraduate research forward. I have used my skills in placing undergraduate research on a platform in many different lights, such as Detroit Mercy's Undergraduate Research Week, and also organizing a CUR roundtable discussion at the most recent American Society of Cell Biology (ASCB) Annual conference. At this roundtable participants had the opportunity to discuss ideas and mechanisms to integrate research into the classroom through CUREs (course-based undergraduate research experiences), hear from others on what has worked for them, share their own personal experiences, and learned how CUR-MIRIC can continue to help after the ASCB annual meeting is over. I hope to continue to apply my skills in this avenue, embracing the larger community towards understanding the importance of undergraduate research.

**If you have served a previous term as Division Representative (previously Division Councilor), are there any particular contributions during your previous term(s) that you would like to highlight?**

I have co-chaired Mentoring Research In the Classroom (MIRIC) subcommittee for the past 2 years. We hold once-a-month Learning Communities (journal-club style) where we discuss seminal and newer articles surrounding CURE themes (assessment, DEI pedagogy, developing a CURE framework, maintenance of CUREs long term, etc). We also hold once-a-month working affinity groups that are centered around one theme. These affinity group meetings are informal sessions where faculty work together to gather resources to assist each other and to create a repository of resources surrounding that central theme, which all our members have access to. Our current working affinity groups are (1) culturally responsive, (2) maintaining CUREs, (3) building skills, and (4) starting from scratch.

## Maryann Herman, St. John Fisher College

---

### *Biology Division Nominee*

#### **NOMINEE STATEMENTS**

##### **Please comment on your involvement in undergraduate research activities in the context of your institution and its mission.**

As a faculty member at St. John Fisher University (16th year), a primarily undergraduate institution, my passion continues to be mentoring undergraduates. I have been privileged to mentor 87 undergraduate researchers, with 61% presenting at least once at a local, regional, and/or national scientific meeting. Over 75% of my former research students are in graduate programs or earned an advanced degree. All are part of my Fisher research family and have left an indelible mark on my life. I received CUR's Biology Mid-Career Mentor Award in 2021. Beyond working with students in the lab, I advise our biology Collegiate Science and Technology Entry Program (CSTEP) students. This program provides students paid research opportunities, preparation for graduate/professional schools, and academic/career development activities. I meet with students twice (or more) a semester to support their academic progress, explore research options, and push them to advocate for themselves. As co-chair of biology's curriculum revision committee, I co-lead development of an innovative program framed by AAAS Vision and Change and rooted in inclusive and universal design practices. We utilized elements from SCALE-UP and Studio models to create three foundational courses and engage all majors in novel research through a CURE in their second year. Our goals include promoting student sense of belonging and identity in the sciences, enhancing the student learning experience, and preparing our students as scientists, clinicians, and engaged citizens. Long-term, we're looking to improve retention to the major from first to second year, and increase graduation rates of all students, especially those who are low-income, first-generation, and/or underrepresented minorities (URMs). I developed student activities, using CIMER materials and other resources, for defining mentor-mentee roles and articulation of research project goals and expectations for our first CURE offering (Fall 2023). I'm excited to develop a section of the course Fall 2024.

##### **In what ways have you helped promote diversity and inclusion in URSCA?**

Previously, our undergraduate research opportunities catered to a subset of students confident enough to advocate for themselves or who had been encouraged to explore research; URMs were less likely to seek research opportunities. This was a driver to incorporate CUREs into our biology curriculum - all students now have an opportunity to explore novel research. I developed, with three colleagues, our second-semester organismal biology course. Our three semester sequence integrates minimal lecture with student activities, self- and group assessment, and inquiry-based experiments. We've incorporated lab skills previously saved for more advanced students, such as maintaining nematode cultures and developing long-term experiments on plant development. I've only taught the course twice, but seen the impact of the pairing of research skills with content. Students who don't perform as well on exams, disproportionately URMs, could see the value of other skills in STEM. While they work on skills to improve content learning, seeing concepts "in action" enhances understanding. One student lit up during lab activities - though they felt discouraged by exam grades and had trouble focusing, research helped them see their future in STEM. They joined my lab this fall to dabble before taking their CURE and were accepted into the CSTEP program. Additionally, CSTEP scholars I work with are underrepresented minority and/or economically disadvantaged STEM undergraduates. I see myself as a 'pre-research mentor' as I work with students earlier in their academic journey to establish connections with research mentors and peers, explore community opportunities, and serve as a source of encouragement.

This experience has been eye opening as I'm gaining a great understanding of the enormity of barriers that many students face, but rarely discuss with professors. I am using this opportunity to better appreciate and advocate for practices that meet the needs of our student mentees

**How do you anticipate your skills will help successfully uphold the Division Representative charge?**

I've held a number of leadership roles, such as interim department chair, chairperson and a developer of the American Society of Plant Biologist's PUI section, and chair of various University committees. I've used the opportunities to develop skills valued in CUR's strategic plan. I enjoy working with all stakeholders in a given community to achieve common goals and solve problems. One of my most fulfilling roles as interim chair this past fall was to welcome our three new faculty into the campus and departmental community. Coordinating a department of 20+ faculty and staff with student and administrative demands was not easy; I approached it as a puzzle where laying out the perspectives helped develop solutions that best met the needs of all. The heart of my teaching career has been advocating for students – from individuals to needs and best practices for all. I've been energized by our creation of a student-focused curriculum. Throughout this process, we have been assessing and evaluating effectiveness. We've worked with administration to make this teaching model economically sustainable within our footprint at the University. I have applied to be involved with a collaborative endeavor between ASPB and other scientific societies to develop highly-local interaction networks (HLNs), groups of PUI faculty interested in teaching and mentoring. HLNs could also provide student researchers with greater opportunities to present their work and interact with peers and faculty outside their institution.

**If you have served a previous term as Division Representative (previously Division Councilor), are there any particular contributions during your previous term(s) that you would like to highlight?**

No response provided.

# Daniel Strahs, Pace University

## *Biology Division Nominee*

---

### **NOMINEE STATEMENTS**

#### **Please comment on your involvement in undergraduate research activities in the context of your institution and its mission.**

My research projects at Pace University Biology department have focused on investigations of bacterial topoisomerase IA, an essential enzyme in bacterial metabolism. Since 2003, I have mentored 41 undergraduate students, 4 graduate students, and 7 high school students; from these research projects, 6 undergraduates and the 4 graduate students have produced theses. Several papers have been published from this work, most with undergraduate authors. Within the department, I have worked to increase participation in research courses. I prevailed on our department to eliminate the grade prerequisite for participation in research, thereby increasing availability to more students in the program. I initiated a plan to revise the Biology curriculum to enable more internships and independent work, which enables students to engage in more experiences as part of the curriculum. As part of my service to the University, a faculty governance committee I chair is working to set up procedures for post-award grant management and centralized financial oversight of grant awards; thereby improving the formal structures to support research and creative works throughout the University. As our University is largely an undergraduate institution, this directly promotes undergraduate student research. All of these stated activities align completely with Pace University's strategic plan supporting scholarly and creative work and a student-centered culture.

#### **In what ways have you helped promote diversity and inclusion in URSCA?**

In an effort to increase equity and inclusivity in the Biology curriculum, I led efforts to eliminate the grade prerequisite for research in faculty laboratories. The grade prerequisite for laboratory research, which had been established during an overhaul of the overall core courses, was preventing students with lower GPAs from engaging in research and perpetuated divisions in our student body. Similarly, I initiated a plan to revise the Biology curriculum to enable more internships and independent work. As part of this plan, we are eliminating the use in our curriculum of a unique grade prerequisite structure embedded in the University: students with higher GPAs are steered towards one form of independent study (course number 395), while students with lower GPAs are steered towards a different independent study course (course number 396). Although the coursework and outcomes of these two courses (395 and 396) are identical, the use of these courses establishes a stigma among the faculty and students. Thus, I started a plan to remove these courses from our curriculum so that all students have similar equity. As a Biology faculty, I have been part of a departmental effort to retool our laboratory class design to implement inquiry-driven learning. This educational paradigm, which structures laboratory coursework as a semester-long student-driven guided inquiry, increases engagement in the classwork and can improve learning outcomes for all students, including those with less equity in the courses. I have been a faculty mentor supporting NYU's GSTEM program (<https://www.nyu.edu/admissions/high-school-and-middle-school-programs/high-school-programs/gstem.html>) from 2016 through 2019. As part of this program, high school students participated in summer-long research projects in my laboratory. I am involved in the University's CSTEP program (<https://undergraduateresearch.pace.edu/c-step/>). One CSTEP student, Noor Aayla, a graduating senior conducting research with me received the Chemistry Poster Presentation Award for her presentation at the 2023 ECSC conference.

**How do you anticipate your skills will help successfully uphold the Division Representative charge?**

At Pace University, I am a biochemist in the Biology department. Due to this discipline, I am an interdisciplinary faculty straddling a boundary between the Biology and Chemistry & Physical Science departments and thus engage both departments. I am also initiating collaborative coursework efforts with faculty in the Environmental Science department. In addition, I teach both undergraduates and graduate students. Thus, my broad connections to all the different departments and subdivisions in our science departments provide a background to support working with the MIRIC initiative to promote active learning ideas in these diverse programs. Since 2003, I have provided extensive service supporting both the science departments and the University. Within the science departments, I have provided significant support since 2003 including serving as the assistant departmental chair for Biology for two years. In the University, I have participated in and coordinated many committee structures which are too numerous to fully name. However, significant services have included: chair of the faculty on the NYC campus of Pace University; service on the Strategic Plan committee; and service as chair of faculty handbook negotiations. Thus, I have extensive experience in University, college, and departmental service. In these efforts, my contributions has principally been in development of policies and initiatives. One of my intentions is to bring this broad background in policy to assist the Biology Division's development.

**If you have served a previous term as Division Representative (previously Division Councilor), are there any particular contributions during your previous term(s) that you would like to highlight?**

No response provided.

## Joshua Owens, Lipscomb University

### *Biology Division Nominee*

---

#### **NOMINEE STATEMENTS**

##### **Please comment on your involvement in undergraduate research activities in the context of your institution and its mission.**

I am a full supporter of undergraduate research (UR) as I have seen the incredible power that research has to change a student's perspective and motivation that ultimately leads them to be able to achieve their goals and dreams. In secondary education, students are consumers of knowledge and are excellent at regurgitation of information. However, this form of learning does little for student growth, critical thinking, and long-term retention of information. Through undergraduate research, students become producers of knowledge. With this switch, students take ownership of their learning and can immediately apply their knowledge. This paradigm shift is why I am a supporter of undergraduate research. Tangibly, I have 14 undergraduate students in my research lab as well as I am currently leading a team through CUR's STR program. In support of my commitment to undergraduate research, I was recently appointed the Undergraduate Research Coordinator for my university. In this role, I have been meeting with professors across several different academic disciplines to encourage and support UR. Additionally, I serve as the chair of my university's Student Scholars Symposium which serves as a formal research conference for our undergraduates to present their research. Finally, two of my courses are Course-based undergraduate research experience and I have led two workshops on how to integrate CUREs at my university. Altogether, I believe that undergraduate research creates excellent learners that can impact their fields.

##### **In what ways have you helped promote diversity and inclusion in URSCA?**

As CUR and other groups have noted, undergraduate research has vast benefits for students and these effects are magnified for under-represented groups. To increase diversity and inclusion, my university has tried to increase the number of CUREs available to our students. In support of this, I have led two workshops in the past 6 months to aid professors in the creation of CUREs so that any student can participate in URSCA. Additionally, I have tried to increase funding for under-represented students for undergraduate research in my discipline. To do this, I am currently applying for a T34 from the NIH so that we may intentionally serve and mentor our under-represented students in the biological sciences. Finally, I lead a Biology Book Club in which I try to spotlight DEI issues and the many racial and ethical problems that have plagued medicine and the sciences. Altogether, I feel that I and my university are working towards a more equitable future for all students to participate in undergraduate research.

##### **How do you anticipate your skills will help successfully uphold the Division Representative charge?**

Recently, I took the Clifton Strengths Test and my number one strength is restorative. This strength means that I am a problem solver and will constantly find the problems and issues, and then come up with solutions so that we can bring about restoration. However, this problem solving is not done in isolation as another one of my strengths is relator. In this strength, I build genuine relationships, and I believe in the power of community. Thinking about these two strengths, I, along with the other Biology representatives, would collaborate and then execute on new initiatives beyond the current strategic vision and strengthen current strategies to advance undergraduate research.

The current five goals are fantastic, and I think we could continue to work to improve and execute on this strategic vision moving forward. Whether I am chosen or not, I am optimistic about the future of undergraduate research and I am excited for what our students will produce!

**If you have served a previous term as Division Representative (previously Division Councilor), are there any particular contributions during your previous term(s) that you would like to highlight?**

No response provided.

# Ansul Lokdarshi, Valdosta State University

---

## *Biology Division Nominee*

### **NOMINEE STATEMENTS**

#### **Please comment on your involvement in undergraduate research activities in the context of your institution and its mission.**

In alignment with my institution's commitment towards experiential learning, I have developed a course - "Laboratory Techniques in Biotechnology" that involves short research projects related to different model systems in our department. Students are supported to share their work at the annual institutional undergraduate research symposium.

#### **In what ways have you helped promote diversity and inclusion in URSCA?**

The strategy of "Open to All" has been successful in attracting diverse talent in my lab (75% females – Afro-American, Hispanic, International). My institutional advising webpage advertises - Interested in student mentees without defined career goals, with deaf or hard-of-hearing, or with no/preliminary scientific training.

#### **How do you anticipate your skills will help successfully uphold the Division Representative charge?**

Building new connections: I am an active member of several professional societies such as the Georgia Academy of Sciences, American Society of Plant Biologist (PUI section, Southern Section), which will be used as valuable networking platforms to successfully enhance the "CUR" representation via showcasing undergraduate research.

#### **If you have served a previous term as Division Representative (previously Division Councilor), are there any particular contributions during your previous term(s) that you would like to highlight?**

If selected, this will be my first opportunity to serve as a Division Representative for CUR.

## Jonathan Fitz Gerald, Rhodes College

### *Biology Division Nominee*

---

#### **NOMINEE STATEMENTS**

##### **Please comment on your involvement in undergraduate research activities in the context of your institution and its mission.**

Like many of us, undergraduate research (UR) was my first induction into the world of science and had dramatic, lasting effects on the work I do now. Even in the early stages of my career, as a graduate student in Chicago then a post-doc in France and Singapore, I sought out opportunities to mentor undergraduates and develop their potential as research scientists. I am driven primarily by the UR opportunities that target financially challenged students and increase the diversity of the STEM workforce. As an undergraduate, I had to pass up many academic opportunities to make sure I could make rent and tuition. As a professor, I find many of my colleagues fail to understand that pressure. I was fortunate to find a position at a top-tier liberal arts college whose mission is summarized by the Rhodes Edge, an educational and residential experience that ensures our graduates are intellectually ready to solve the world's most pressing problems, leadership ready to create equitable communities and career ready to succeed. In support of this mission, I have mentored over 45 undergraduate researchers, over 20 having presented their work at international, regional or local conferences. Most of these have gone on to STEM careers or post-secondary education in science or medicine. I am most proud, however, of the pathways to STEM I have developed to promote low-income students. I have created Fellowships and research technician positions since arriving at Rhodes to enable lower-income students to receive financial support for undergraduate research. I was also part of a small group of professors to expand this support with an NSF S-STEM grant. These funds enable us to provide tuition, research stipends and cohort programming to lower income students, hopefully increasing their future success as STEM professionals.

##### **In what ways have you helped promote diversity and inclusion in URSCA?**

My family has an unusual amount of diversity. It was typical, for example, to spend Thanksgiving with my Jewish aunt at her Beverly Hills mansion followed by Christmas in Compton with my African-American cousins. From an early age, I have been acutely aware of challenges arising from color and money, but also the privilege afforded by my white skin. It is astonishing that even among my closest family our outcomes were so heavily impacted by the prejudice of others. I promote diversity and inclusion in undergraduate research at every opportunity by actively recruiting students of color, advertising their successes, and by developing both fellowship and technician positions to turn work study into meaningful research experiences. My long-term goal, however, is to establish a pipeline to reinvigorate science education in the local Memphis public schools. To achieve this goal, we have obtained two NSF grants. I am PI on an NSF Noyce grant providing scholarships to students who want to teach STEM at inner city K-12 schools. My role is to provide future and current STEM teachers with research skills for the classroom. This involves summer workshops, in-class visits and providing undergraduate STEM education majors research experiences. I also collaborate with a Computer Science professor on an NSF S-STEM grant to recruit and retain STEM majors from local schools that we are currently not serving because of the high price of tuition. 18 students have gone through this program (89% female, 33% African American, 22% Hispanic) with 100% persistence in STEM majors. I believe that we face problems like climate change and world hunger because, as a society, we have never invited everyone to help find solutions. The most important goal of the next few decades should be getting every voice into the conversation through education and opportunity.

**How do you anticipate your skills will help successfully uphold the Division Representative charge?**

As a faculty mentor, I was part of a team developing a network mentoring model for new faculty. The goal was to replace the single mentor model by guiding new faculty to extend their network of support both on and off campus. We created structure and activities to foster community within the new hires. We then implemented our program with teams of two mentors working with 6-8 first-year faculty cohorts. The skills I developed in this role included developing and implementing a strategic plan to provide year-long activities for new faculty, mentoring across disciplinary boundaries and working with a team of mentees to develop goals that played into their unique strengths. In my previous term in CUR, I was heavily involved in the MIRIC program. I facilitated a 'Starting from Scratch' group and monthly Journal Clubs. Recently, I also helped to develop a rubric to facilitate learning outcomes in this section. In MIRIC, I have developed skills in promoting course-based undergraduate research and bringing groups of people together virtually to share ideas and develop content. This has led to additional opportunities for me to lead workshops for other colleges and groups. In the steering committee for Primarily Undergraduate Institutes in the American Society for Plant Biology, I have been involved in coordinating the PUI Workshop at the yearly ASPB meetings. Recent topics have included research funding, bringing research into the classroom and building an effective research program using undergraduates. Organizing these workshops involves putting together panels of experts, organizing activities in the workshop such that participants can leave with tangible products, creating assessments for the participants and facilitating the program itself. These activities have also allowed me to increase my own personal network by working with Program Officers at various funding agencies and individuals who can showcase certain talents.

**If you have served a previous term as Division Representative (previously Division Councilor), are there any particular contributions during your previous term(s) that you would like to highlight?**

During my previous term, I am most excited about my work with MIRIC and hope to be able to continue. Aside from serving as an affinity group leader and hosting Journal clubs, I was able to design a "mini-CUREs" affinity group to promote alternate CURE styles and helped create a syllabus help guide mentees in the Starting from Scratch affinity group. I have also been working with local public schools to try and pilot a K-12 MIRIC affinity group and hope to be able to make that a reality.

# Susan Klinedinst, Schreiner University

## *Biology Division Nominee*

---

### **NOMINEE STATEMENTS**

#### **Please comment on your involvement in undergraduate research activities in the context of your institution and its mission.**

I joined the faculty of Schreiner University in the fall of 2013 and have been supporting and championing undergraduate research ever since. As a small liberal arts school with an enrollment of 1,300 students and limited research infrastructure, I perceived these challenges not as obstacles but as opportunities. Advocating for undergraduate research as a high-impact practice, I successfully secured funding to transform an old teaching lab into a dedicated biology research lab and acquire new equipment. These enhancements significantly boosted student interest and participation in undergraduate research within the biology program. Initially, only 3-4 students were engaged in mentored research outside the classroom. Currently, we have 12 students actively participating (down from the pre-COVID high of 18). As a faculty mentor, I've guided 42 students in their undergraduate research endeavors, and many have presented their findings at local and regional conferences. In 2016, Schreiner was awarded an HSI-STEM grant with the goal of increasing participation in quality research experiences across all STEM fields. Serving as the HSI-STEM Undergraduate Research Coordinator throughout the grant's duration, I successfully implemented both a summer and academic year research program. The success of the STEM Undergraduate Research program led to its expansion campus-wide in 2022. This year the program is supporting 10 students representing 8 different departments, where I continue to serve as the coordinator. I have also initiated faculty development opportunities to enhance undergraduate research in the classroom. This academic year, we have seen a substantial increase, with 10 courses implementing CUREs, up from just 1 in 2016. Aligning with Schreiner's mission to prepare students for meaningful work and purposeful lives in a changing global society, I firmly believe that involvement in undergraduate research, both inside and outside the classroom, fulfills each aspect of our mission.

#### **In what ways have you helped promote diversity and inclusion in URSCA?**

As the Undergraduate Research Coordinator at Schreiner University, a Hispanic-Serving Institution, I have dedicated the past 7 years to enhancing the inclusivity of undergraduate research experiences for all students. Recognizing the importance of accessibility and comprehension, I have implemented various initiatives. To demystify the research environment, I annually organize a Lab Crawl at the beginning of the academic year. This event allows interested students to explore research labs, familiarize themselves with the spaces and equipment, and gain a better understanding of ongoing projects. In an effort to ensure equitable opportunities, applications for our research programs intentionally exclude a GPA component. I believe in assessing students holistically, focusing on their enthusiasm, dedication, and potential for growth in a research setting. Our undergraduate research programs under my coordination incorporate weekly meetings. These sessions not only involve discussions on literature, communication of results, and research ethics but also address crucial aspects such as the hidden curriculum. Given that a significant portion of our student body is comprised of first-generation students, I make a concerted effort to emphasize topics like self-efficacy, research confidence, identity, and the importance of diversity. Since 2016, our research programs have engaged 75 students, with 63% of participants being students of color. These outcomes underscore our commitment to fostering diversity and inclusion in undergraduate research experiences.

**How do you anticipate your skills will help successfully uphold the Division Representative charge?**

Having served as the CUR Biology Division Representative for the past 3 years and actively supported and advocated for undergraduate research at Schreiner University, I am well-positioned to contribute significantly to the charge of CUR Division Representatives. During my initial years as an Assistant Professor, I mentored a few students annually. Recognizing the transformative impact of undergraduate research, I transitioned into a dedicated champion for this cause. I initiated small-scale improvements, securing funding to renovate a teaching lab into a dedicated biology research space and acquiring necessary equipment. Over the past 7 years, I have coordinated diverse research opportunities on campus. Last year, I took on the leadership of an Undergraduate Research Faculty Learning Community, focusing on integrating research experiences into individual courses across all disciplines. This initiative not only involved communicating the benefits of undergraduate research to colleagues but also engaging with the administration to secure additional funding and opportunities. My advocacy and coordination efforts have contributed to increased awareness, participation, and inclusion of undergraduate research at Schreiner University. This experience positions me well to support CUR's strategic plan goals, leveraging my past successes in advancing undergraduate research on my campus to foster community, provide networking opportunities, and deliver educational content for the benefit of the CUR Biology Division and its members.

**If you have served a previous term as Division Representative (previously Division Councilor), are there any particular contributions during your previous term(s) that you would like to highlight?**

In my current term as a Biology Division Representative, I have actively participated in key committees, including the Student Travel Grants, Mentor Awards, and MIRIC Subcommittees. Notably, I am proud to have assumed the role of Chair for the Student Travel Grants Committee this year. These experiences have deepened my understanding of the division's functions and have allowed me to contribute meaningfully to the responsibilities and initiatives of CUR. I look forward to leveraging this experience in a continued effort to advance the goals and mission of the Biology Division in any future terms.

# Ghanshyam Heda, Mississippi University for Women

---

## *Biology Division Nominee*

### **NOMINEE STATEMENTS**

#### **Please comment on your involvement in undergraduate research activities in the context of your institution and its mission.**

I am actively involved with training undergraduates (UG) in laboratory research in biology (more specifically in Cystic fibrosis) since 2009. During this period several of my UG researchers have published their work in peer-reviewed journals. Students have presented their work in form of posters and oral presentations at the national and regional levels. These UG researchers brought laurels by winning awards for their presentations. Over 80% of UG students trained in research moved on to graduate and medical school. A detailed information can be sent to you in form of a CV that I have prepared on my contributions towards UG research.

#### **In what ways have you helped promote diversity and inclusion in URSCA?**

Students who are trained in Cystic fibrosis research laboratory at the Mississippi University for Women (MUW) are from diverse background. They include high school and college students, male and female, black, white, Hispanic, students from US and foreign nationals. For training a diverse body of students, I was awarded with Mississippi State's "Excellence in Diversity and Inclusion Award" in 2021.

#### **How do you anticipate your skills will help successfully uphold the Division Representative charge?**

I have a vast network of collaborations with scientists in India, U.K., JAPAN, Europe. Within USA, I collaborate with scientists within the state and other states. With these collaborations, I am in a better position to help my UG researchers in advising and providing networking opportunities. My years of experience in research and teaching will allow me to help in preparing strategies and planning various divisional activities for CUR.

#### **If you have served a previous term as Division Representative (previously Division Councilor), are there any particular contributions during your previous term(s) that you would like to highlight?**

No, I have not served in any capacity with CUR.

# Tessa Durham Brooks, Doane University

---

## *Biology Division Nominee*

### **NOMINEE STATEMENTS**

#### **Please comment on your involvement in undergraduate research activities in the context of your institution and its mission.**

My institution, Doane University, is a PUI of about 1000 students. I started a tenure-track position in 2009. Our biology major includes a three-course capstone research requirement. I have mentored 64 capstone research projects. I have been active in seeking extramural funding and since coming to Doane have won ten grants from foundations, the state INBRE and EPSCoR programs, and the NSF. This has enabled me to support a post-doctoral scholar, two technicians, 11 high school researchers, and 40 additional independent projects in addition to contributing in various ways to the research infrastructure on my campus and within the state. My current grant-funded project is to help support a network of institutions in the adoption of a program to build computational thinking skills through image analysis research. I am currently teaching our first capstone research course as well as our first-year three-credit inquiry-based course for the department. This gives me access to the research activity of our students from entry to graduation. I have been active in promoting research collaboration and inquiry-based learning in the state through the Nebraska Association of Teachers in Science and the Nebraska Academy of Sciences.

#### **In what ways have you helped promote diversity and inclusion in URSCA?**

I have promoted the development of TRIO and McNair programs on our campus. We currently have TRIO, LSAMP, and S-STEM programs that I have helped support. I am a member of SACNAS and am working on building the participation of students with marginalized identities within this organization. I am a member of the Committee on Outreach, Diversity, Inclusion, and Education of the Maize Genetics Cooperative. As part of that membership, I have helped craft inclusive conference guidelines and have served as a member of the editorial board, which has involved recommending articles on DE&I to our members. I also piloted an effort to write scientist profiles with students to build science identity within maize genetics. This resulted in a publication authored by three of my former students on a first-gen Nebraska scientist, George Beadle. I have undergone CIMER mentorship training and am active in reading the literature on and participating in workshops involving inclusive teaching. I have incorporated inclusive teaching practice into my teaching and research design. I am active in investigating my own teaching and mentoring practice and have conducted research on the role of reflection in building belongingness in the classroom and am currently studying methods of building self-efficacy in computational thinking ability.

#### **How do you anticipate your skills will help successfully uphold the Division Representative charge?**

I am in a good position to support the development of faculty at the current stage of my career. This is something I enjoy and my leadership and service roles reflect this. I am a member of our institution's promotion and tenure committee. I am currently building a research network across multiple states through the NSF IUSE grant I am the lead PI on (DIVAS Alliance) that supports faculty in building image analysis into their research programs. To achieve this, we are explicitly cultivating community as a key element of achieving the gains in student self-efficacy we aim to achieve in this project. I have initiated and led many research and education collaborations with secondary and post-secondary education. I am part of the scientific committee to define themes and programming for the International Plant Phenotyping Symposium that will be held in Nebraska next

year. I am our institutional CUR representative (a new role for me) and am running to serve in the leadership of the Nebraska Academy of Sciences next year. I feel that I am in a good position to serve CUR at this time and that the connection points I have cultivated within my career will enable me to act synergistically to connect members to resources in a meaningful way.

**If you have served a previous term as Division Representative (previously Division Councilor), are there any particular contributions during your previous term(s) that you would like to highlight?**

N/A

# Abdullah Salim, The University of Tennessee

---

## *Biology Division Nominee*

### **NOMINEE STATEMENTS**

#### **Please comment on your involvement in undergraduate research activities in the context of your institution and its mission.**

My engagement in undergraduate research at the University of Tennessee Knoxville (UTK) reflects a deep commitment to advancing the mission of our institution and aligns seamlessly with the principles upheld by the Council on Undergraduate Research (CUR). As an Undergraduate Research Assistant in the lab of Dr. Albrecht von Arnim, I immersed myself in cutting-edge research focused on gene expression and translational regulation in eukaryotic organisms. This work not only contributed to UTK's pursuit of excellence in genomic science and technology but also allowed me to actively participate in the dissemination of knowledge through presentations at various undergraduate research competitions. In collaboration with Dr. Helene J. Sinnreich, I undertook a unique research fellowship involving the study of Holocaust survivors' testimonies. This project not only expanded our understanding of public health conditions in historical contexts but also exemplified the University's commitment to fostering interdisciplinary research and contributing to broader societal discussions. Furthermore, my role as a Research Assistant under the guidance of Dr. Terry C. Hazen demonstrated UTK's dedication to environmental science and sustainability. Investigating the utilization of local ultra-microbacteria species for breaking down complex carbon sources underscored our institution's commitment to innovative solutions for real-world challenges. In my concurrent role as an Undergraduate Teaching Assistant in the Leadership Studies Department, I developed and presented leadership content tailored for students engaged in research and STEM-related activities. This resonates with UTK's mission of producing well-rounded, forward-thinking graduates capable of making meaningful contributions to their fields. By seeking this position as a CUR Division Representative, I aspire to extend my commitment to undergraduate research at a national level, fostering community, and contributing to the realization of CUR's strategic plan, mission, vision, and values.

#### **In what ways have you helped promote diversity and inclusion in URSCA?**

In my role as a Diversity Advisor Council Member in the Biochemistry, Cellular, and Molecular Biology (BCMB) Department at the University of Tennessee Knoxville (UTK), I actively contributed to fostering diversity and inclusion in undergraduate research, scholarship, and creative activities (URSCA). Through my efforts, I played a pivotal role in advancing these principles within the academic community. Firstly, I conducted and reviewed department-wide diversity and inclusion surveys to gain insights into the experiences of under-represented students within the BCMB department. By identifying specific challenges and hurdles faced by these students, I helped create a comprehensive understanding of the diversity landscape in URSCA. Building on the survey findings, I actively engaged in suggesting initiatives and programs aimed at increasing and sustaining an inclusive environment for all students involved in undergraduate research. This included proposing actionable strategies, such as a.) increased mentorship for first generation Americans and first generation college students, b.) collaborative study spaces for everyone in the BCMB department, and c.) more venues for feedback giving, to address the identified issues, ensuring that URSCA becomes a more accessible and equitable space for individuals from diverse backgrounds. Furthermore, as part of the Diversity Advisor Council, I took on responsibilities related to coordinating messaging and broadcasting efforts related to diversity. By disseminating information about ongoing initiatives, promoting diverse voices and achievements, and encouraging a culture of inclusivity, I contributed to creating a supportive and welcoming atmosphere for all participants in URSCA.

In summary, my role on the Diversity Advisor Council reflects my commitment to promoting diversity and inclusion in URSCA at UTK. Through surveys, initiative suggestions, and communication coordination, I actively worked to address challenges and create an environment that values and supports the diverse perspectives and contributions of all individuals involved in undergraduate research.

**How do you anticipate your skills will help successfully uphold the Division Representative charge?**

Given my extensive background in undergraduate research, diverse experiences in both biochemistry and leadership studies, and active engagement in promoting diversity and inclusion, I am well-positioned to effectively uphold the charge of a CUR Division Representative. **Networking Opportunities:** My experiences as an Undergraduate Research Assistant, Research Fellow, and Teaching Assistant have allowed me to build a robust network within academic and research communities. I am adept at fostering connections and collaborations, ensuring that members of the CUR division have ample networking opportunities to share knowledge, ideas, and best practices. **Activities and Educational Content:** Through my roles in research and teaching, I have developed a nuanced understanding of creating and delivering educational content. I can contribute by organizing activities that enhance the educational experience for members, such as workshops, seminars, and skill-building sessions. My background in biochemistry and leadership studies positions me to offer diverse perspectives in crafting enriching educational content. **Community Building:** My experience as a Diversity Advisor Council Member and engagement in various research projects has honed my ability to create and foster inclusive communities. I understand the importance of ensuring that the CUR division is a welcoming space for individuals from diverse backgrounds. By leveraging my background, I can actively contribute to the creation of a supportive and collaborative community within the organization. **Alignment with CUR's Mission, Vision, and Values:** Having actively contributed to the missions of UTK and the BCMB Department, I am accustomed to aligning my efforts with institutional goals. I will ensure that activities and programs organized within the CUR division are in harmony with the overarching strategic plan, mission, vision, and values of CUR. In summary, my skills in networking, educational content development, community building, and alignment with organizational values uniquely position me to successfully uphold the charge of a CUR Division Representative.

**If you have served a previous term as Division Representative (previously Division Councilor), are there any particular contributions during your previous term(s) that you would like to highlight?**

N/A

# Samantha Giordano-Mooga, University of Alabama at Birmingham

---

## *Biology Division Nominee*

### **NOMINEE STATEMENTS**

#### **Please comment on your involvement in undergraduate research activities in the context of your institution and its mission.**

I am the Director for Undergraduate Research and Honors in the School of Health Professions at UAB. I work with students to help them find research mentors as well as mentor students of my own. I have currently mentored over 50 undergraduate researchers and have seen many successful transitions to professional degree programs and graduate programs. My Honors program consists of 40-50 students in teams of 3-5, where they learn and build leadership and teamwork skills but also conduct research with mentors throughout the School of Health Professions. Students in this program have attended national conferences and published papers through their research. As a PI myself, I enjoy mentoring students and helping them to use research and science based inquiry to increase critical thinking and problem solving skills. These activities support the mission of research and student success in the School of Health Professions, but more importantly, my own personal mission of seeing students reach their potential.

#### **In what ways have you helped promote diversity and inclusion in URSCA?**

Diversity and inclusivity are top priorities for my own research group as well as the School of Health Professions Research and Honors director. I embrace each student for who they are, what their goals are, and how I can help them to reach their goals. My research focuses on achievement and stress levels among undergraduate students from different races. Understanding specific challenges and stressors to different communities can increase student success and allow us to offer students specific kinds of help. As the Director for Honors and Research, I have implemented travel awards, to help students travel to conferences without finances acting as a barrier, and summer research stipends, for students in underrepresented groups to conduct research over the summer semester. These supportive measures support students from a higher level. On a personal level, I am always a listening ear and want to be there to help all students and support all students.

#### **How do you anticipate your skills will help successfully uphold the Division Representative charge?**

I am a self proclaimed, master planner. I enjoy planning events--but specifically creating goals and deadlines to effectively complete goals. I am very good at project management and know I would be helpful when planning events and activities. As an educator first, I use high impact teaching practices to increase student engagement, and would use these sorts of practices for educational content needed for CUR. I also have taught research courses and courses focused on understanding scientific literature and am happy to share content from these courses. Lastly, I am a community builder, that is the most important part of my job as an undergraduate educator. A supportive community for undergraduate researchers, supports students as people and as researchers. Networking and connecting students to mentors, peer mentors and faculty is a privilege and something I truly enjoy. I am excited for the opportunity to continue to network with others through CUR.

#### **If you have served a previous term as Division Representative (previously Division Councilor), are there any particular contributions during your previous term(s) that you would like to highlight?**

No response provided.

# Jinjie Liu, Michigan State University

## *Biology Division Nominee*

---

### **NOMINEE STATEMENTS**

#### **Please comment on your involvement in undergraduate research activities in the context of your institution and its mission.**

My experience working with undergraduate students is mainly through classroom teaching (CURE) and research lab mentoring. I do not have an administrative role specially working with undergraduate students. In this case, maybe I am not an ideal candidate serving as a CUR representative. But I hope to become more involved in as I progress in my career.

#### **In what ways have you helped promote diversity and inclusion in URSCA?**

I have been mentoring undergraduates in both research laboratory and classroom settings. I have developed a semester-long CURE for an entry level cell and molecular biology laboratory course at Michigan State University and have been teaching this course since the fall semester of 2018 (except for three semesters due to the pandemic). This CURE course is open for all life science major students at MSU, providing an inclusive research opportunity for the students, and especially for those who had never considered conducting research. Since its establishment, this course has served over 360 students in participating research experience for students from diverse background. In the research lab, I mentor undergraduates from the primary undergraduate institution through Research Experience for Undergraduate student (REU) program, foreign institution from international exchange program, and my home institution Michigan State University. Additionally, I have attended undergraduate research networking activities and symposiums and shared my research and career experience with the students. I also served as a judge for the undergraduate research symposium at MSU.

#### **How do you anticipate your skills will help successfully uphold the Division Representative charge?**

I have been involved in the MIRIC networking activities since 2020, a program that has provided me with the opportunity to learn and exchange ideas. As I do not have any colleagues actively conducting CUREs in my department, MIRIC has become my community. I have enjoyed networking with CURE colleagues and am very thankful for all the mentors and leaders for their dedication to the community. I have been in this community for about three years, and I would like to contribute back to the MIRIC community. I would like to work and learn from the MIRIC leaders, contribute ideas, take responsibilities in the activities, and continue to make the MIRIC a welcoming and enriching place. I hope my experience in course development, learning facilitation, and research mentoring can be useful for the MIRIC.

#### **If you have served a previous term as Division Representative (previously Division Councilor), are there any particular contributions during your previous term(s) that you would like to highlight?**

N/A