

# Sigma Xi Today

A NEWSLETTER OF SIGMA XI, THE SCIENTIFIC RESEARCH HONOR SOCIETY

## Call for Nominations: Sigma Xi Elections

Sigma Xi, The Scientific Research Honor Society is seeking nominations for qualified candidates to fill the president-elect and treasurer positions and vacancies for representation of regions and constituencies for terms beginning July 1, 2022. Active full members of Sigma Xi are eligible to run for office. An inactive member may become active at any time through payment of current dues.

Election to treasurer carries a full four-year term beginning July 1, 2022, through June 30, 2026. Election to president-elect carries a full three-year term, each year with distinct title, duties, and responsibilities. Failure to complete any part of the three-year term will end the term in full:

### President-elect:

July 1, 2022–June 30, 2023

### President:

July 1, 2023–June 30, 2024

### Immediate past president:

July 1, 2024–June 30, 2025

**Nominations for the president-elect and treasurer positions should be submitted to** [elections@sigmaxi.org](mailto:elections@sigmaxi.org) **by March 2, 2021.**

**For all other positions, submit nominations to** [elections@sigmaxi.org](mailto:elections@sigmaxi.org) **by June 30, 2021.**

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Sigma Xi Today is managed by  
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## From the President

### A Historic Occasion

At the time of my writing this letter, two significant events have occurred. First, Sigma Xi has successfully executed its first virtual Annual Meeting and Student Research Conference. This year's meeting, titled Hacking the Brain: The Intersection of Art and Neuroscience, was a unique experience showcasing the artistic components and applications of scientific research.

The participation statistics were amazing! We had the highest number of participants in five years, including international participants from more than 10 countries. We had more than 300 student projects presented and over 45 percent of the professional presenters were women. We had the honor of presenting the Gold Key Award to Dr. Walter E. Massey, who had an outstanding conversation afterward with 2017 Nobel Prize winner Kip Thorne, moderated by NPR Science Correspondent Joe Palca. We were entertained by award-winning science rapper Baba Brinkman and inspired by John P. McGovern Science and Society Award winner and former astronaut Bonnie Dunbar. This year's Annual Meeting also saw the fruition of Immediate Past President Geraldine Richmond's vision of Sigma Xi Fellows with the induction of the inaugural cohort. This event would not have been possible without the conference sponsors, which included more than 30 academic institutions and organizations. The Burroughs Wellcome Fund lead the sponsorship of this conference. They are a longtime partner of Sigma Xi, and we appreciate their continued support.

The second event that happened during our Annual Meeting is the announcement that Kamala Harris is set to become the first female Vice President of the United States. An alumna of Howard University, with a B.S. in economics, she has achieved a level of leadership for women unheard of in the history of the United States. Although not a scientist, she is a woman in STEM as defined by the National Science Foundation. More important, she represents a rapidly growing cadre of women in STEM who are rising to national and international leadership.

I am sure that our conference participants and our award recipients would agree that this is a great time in our country, but also an uncertain time. With the foundations of Sigma Xi, companions in zealous research, we will solve the COVID-19 crisis, address climate change, and improve our society. Sigma Xi remains a force for truth in science, and we will continue to champion scientific research as we have done for the past 134 years.



Sonya Smith

## Grants in Aid of Research Recipient Profile: Dominic Mier

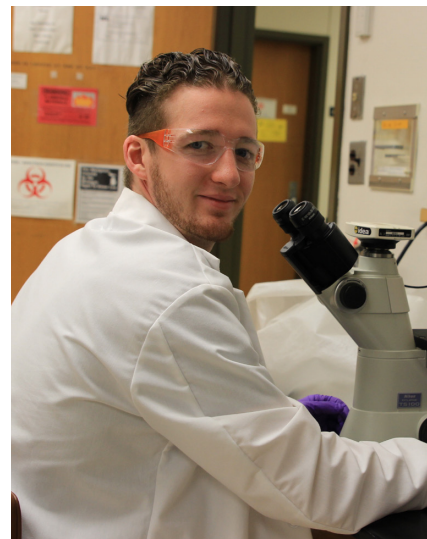
**Grant:** \$1,000 in Spring 2019

**Education level at time of the grant:** Graduate student

**Project Description:** In the lab Dominic studies the minor spliceosome. The spliceosome is in charge of removing noncoding introns from RNA and joining the remaining exons, forming a mature transcript that can be properly translated to protein. The minor spliceosome specifically removes U12 introns, a small subsection making up less than 0.5 percent of all introns in an organism. Research on the minor spliceosome has shed light on several human diseases in recent years, highlighting the importance of further insight into its components. Dominic's research question involved investigating the role a specific protein, ARMC7, played in the minor spliceosome. Dominic and his team identified a mutant that seemed to be caused by an insertion into the ARMC7 gene locus, but map-

ping wasn't able to confirm precisely where the causative mutation was. After receiving the grant funding, they were able to design a CRISPR-Cas9 system to attempt to partially knock out ARMC7 function, which would allow them to investigate its role. There have yet to be any mutants recovered, but they have moved into further characterization by investigating what proteins ARMC7 may interact with. He hopes this will give him further insight into the role it plays in the cell.

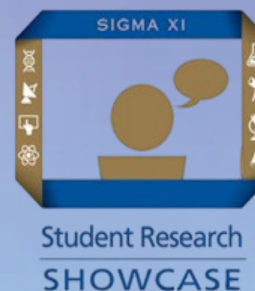
**How has the project influenced Dominic as a scientist?** "This project has really fostered my growth as a scientist," Dominic says. This was his first big project. "It taught me a lot about research, but also the fortitude necessary in a research environment," he states.



**Where is he now?** Dominic is currently wrapping up his graduate studies. He has begun searching for jobs and is excited about all the opportunities he may have to contribute to research in the field of biology.

### Call for Abstracts: 2021 Student Research Showcase

*Students are invited to submit abstracts of their research by March 26 for the 2021 Student Research Showcase, Sigma Xi's online science communication competition.*



The eighth annual online competition challenges high school through graduate school students to create a website containing a slideshow, video, and abstract about their research. The Student Research Showcase is a unique opportunity for students to develop effective science communication skills, which every researcher should have.

The showcase invites submissions in the following research categories: Agricultural, Soil, and Natural Resources; Anthropology; Cell Biology and Biochemistry; Chemistry; Ecology and Evolutionary Biology; Engineering; Environmental Sciences; Geosciences; Human Behavioral and Social Sciences; Math and Computer Science; Microbiology and Molecular

Biology; Physics and Astronomy; and Physiology and Immunology.

Presentation websites must be submitted by April 16 and judging will take place April 26–May 10, 2021. Judges will select top presenters in each research category. During the judging period, more than 60 Sigma Xi members volunteer as judges to evaluate students' submissions and engage in digital conversations with presenters through their websites. Top presenters will be selected in the high school, undergraduate, and graduate divisions and will receive up to \$500 awards. A public vote selects one presentation for a \$250 People's Choice Award. All participants receive a certificate of participation.

**Sigma Xi 2021 Student Research Showcase**

**Learn more at** [www.sigmaxi.org/srs](http://www.sigmaxi.org/srs)

## Virtual Annual Meeting and Student Research Conference Discussed Science–Art Collaborations

Sigma Xi members, researchers, artists, and students came together virtually November 5–8 for the 2020 Sigma Xi Annual Meeting and Student Research Conference. The theme of this year's meeting was Hacking the Brain: The Intersection of Art and Neuroscience, what art and science achieve together that neither could accomplish alone. The conference was attended by more than 800 research professionals, students, and exhibitors.

The event began with a business meeting for delegates, who represented Sigma Xi chapters and the Membership-at-Large constituency. The Society's Board of Directors and Assembly of Delegates unanimously voted in favor of adopting a Diversity, Equity, and Inclusion resolution. Sigma Xi leaders and president-elect candidates provided updates and discussed business of the Society.

Plenary speakers included Sigma Xi's 2020 Gold Key award winner Walter E. Massey, who reflected on his career and addressed social justice and diversity in STEM. His remarks were

followed by a discussion with Nobel Laureate Kip Thorne and NPR Science Correspondent Joe Palca. Additional plenary speakers included all but one of Sigma Xi's 2020 award winners.

Keynote sessions included Barbara Landau (Dick and Lydia Todd Professor of Cognitive Science at Johns Hopkins University), who gave a talk titled "When an Amnesic Artist Remembers." Rachael Cusick discussed "Radiolab Presents: G," Radiolab's 2019 documentary series on intelligence that had her diving into the search for genius. Anjan Chatterjee (University of Pennsylvania) addressed the emerging field of neuroaesthetics and argued that our brains respond automatically to our aesthetic environment. The closing keynote session was presented by Larry S. Sherman (Oregon Health and Science University) who integrated live music segments in his discussion on why "Every Brain Needs Music."

Approximately 400 high school, undergraduate, and graduate students attended the meeting and presented their research during the Student Re-



Walter E. Massey

search Conference. Sigma Xi members evaluated the students on their scientific thought, method, and communication skills. Judges selected top presenters in each division and research discipline for awards including a \$150 monetary gift, a commemorative medal, and nomination to Sigma Xi associate membership, with the initiation fee and first year's dues waived.

### Save the date

2021 Annual Meeting and Student Research Conference  
November 4–7 in Niagara Falls, New York

## Call for Nominations: Sigma Xi Elections

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The following positions carry a three-year term beginning July 1, 2022, and ending June 30, 2025.

### Board of Directors:

- North Central Region
- Southwest Region
- Area Groups, Industries, State & Federal Laboratories Constituency Group
- Comprehensive Colleges & Universities Constituency Group

### Associate Directors:

- Northeast Region
- Baccalaureate Colleges Constituency Group
- Canadian/International Constituency Group
- Mid-Atlantic Region

**Committee on Nominations:** three-year term beginning immediately following the 2021 elections.

- Membership-at-Large Constituency Group
- Research & Doctoral Universities Constituency Group
- Northwest Region
- Southeast Region

Please visit [www.sigmaxi.org/2021-elections](http://www.sigmaxi.org/2021-elections) to view a list of duties and responsibilities for each position. Self-nominations are welcomed and will be considered. The elections will take place immediately following Sigma Xi's Annual Meeting on November 2021.