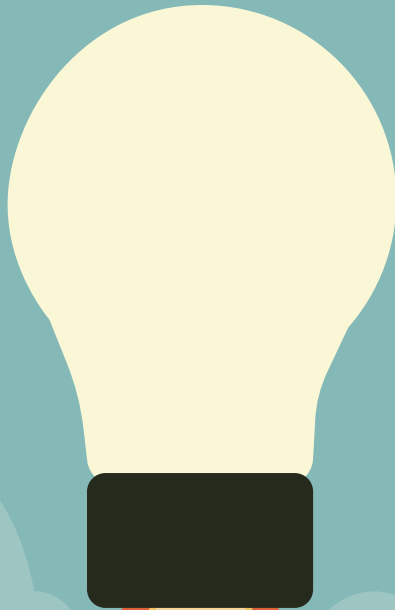


# 22nd Annual UROP

Undergraduate Research Symposium



**Poster Presentations**  
11am to 1pm

**October 18th, 2019**  
GSU Metcalf Ballroom

# Welcome

Welcome to Boston University's 22nd Annual Undergraduate Research Symposium! We are honored to have you engage with our high-achieving students and supportive faculty mentors. They have collaborated over the past year working on groundbreaking research.

The Undergraduate Research Opportunities Program (UROP) is a university-wide program that funds undergraduate students to conduct research with BU faculty members in all disciplines. UROP's mission is to nurture curiosity, to capture imagination, and to cultivate relationships between faculty and students beyond the classroom to shape independent, innovative, and collaborative leaders.

Enjoy and be inspired!

Chip Celenza  
Director

Melissa Johnson  
Assistant Director

Diána Hughes  
Program Administrator

## Acknowledgments

UROP is supported primarily by Boston University's Office of the Provost. We are particularly indebted to Associate Provost for Undergraduate Affairs Elizabeth Loizeaux for her continued encouragement and enthusiasm. We also thank our faculty advisory committee for their efforts in reviewing applications and guiding UROP to achieve its mission. Most importantly, we thank our faculty mentors for providing learning environments for our undergraduates and thus making UROP possible.

In addition, we thank the following financial sponsors for their generosity:

Funds from faculty research grants

Boston University Arts Initiative

National Science Foundation

The Arnold & Mabel Beckman Foundation

Clare Boothe Luce Program of the Henry Luce Foundation

New England Biolabs

Friends & Family of Dr. Mark Riemen

Friends & Family of Dr. Mary Erskine

Dr. Loren E. Wold

# Outstanding Students

Students who have excelled



Nominated by  
Prof. Gerald Denis  
(M&ED Medicine and Pharmacology)

## Allison Casey, CAS '20

BET Bromodomain Proteins Regulate T Cell  
Expression of Multiple Immune Checkpoint  
Molecules



Nominated by  
Prof. Rachana Vajjhala  
(CFA Musicology)

## Anna Harris, CFA '20

The Dangers of Musical Taste: Cycles of Marketing,  
Hierarchy, and Hegemony



Nominated by  
Prof. Olga Gursky and  
Prof. John Straub

## Meera Kumanan, CAS '20

Investigating Structural Reorganization and  
Lipid Interactions of Serum Amyloid A using MD  
Simulations



Nominated by  
Prof. Daniele Paserman  
(CAS Economics)

## Aron Malatinszky, CAS '20

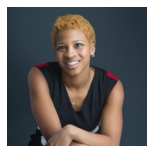
Class Size and Educational Achievement: Evidence  
from Hurricane Katrina Evacuees



Nominated by  
Prof. Adela Pineda  
(CAS Romance Studies)

## Lolo Serrano, CAS '21

Representation of Technology by the Mexican  
Press, 1896-1914: a Tool for Literary Analysis.



Nominated by  
Prof. Emily Barman  
(CAS Sociology)

## Raina Williams, CAS '20

The Effect of Health Impact Investors on the Over-  
all Successes of Health Enterprises

# Outstanding Mentors

Mentors who inspire



Nominated by  
Darian Radzikowski,  
CAS '20

## Andrew David (CAS History)



Nominated by  
Wei-Lun Tsai,  
CAS '20

## Sean Elliott (CAS Chemistry)



Nominated by  
Joshua Taylor,  
CAS '21

## Guido Salvucci (CAS Earth & Environment)



Nominated by  
Yingshihan Zhu,  
CAS '20

## Susanne Sreedhar (CAS Philosophy)

# Presentation Times

Approximately half of the student researchers will be presenting in each poster session.

## Poster Session 1

11am to 12pm









## Poster Session 2

12pm to 1pm

**Stick around to see both!**

# Symposium Key

What do you want to learn?

-  Biological Sciences (1 - 33)
-  Physical Sciences (34 - 85)
-  Social Sciences (86 - 135)
-  Arts & Literature (136 - 153)
-  Sargent College & Public Health (154 - 164)
-  Medical - Basic, Clinical, & Dental Sciences (165 - 208)
-  Computational & Mathematical Sciences (209 - 210)
-  Engineering (211 - 256)

# Map of the Symposium



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*Examining the Chemical Catalysis of Ketohexokinase Through pH Rate Analysis*  
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- Ebubechi Adindu** **23**  
*Evolution of NF- $\kappa$ B as a Transcription Factor: Characterization in the Protist *Capsaspora owczarzaki**  
Mentor: Thomas Gilmore (CAS Biology)
- Niya Adlersberg** **86**  
*Do Teachers use More Informing, Analyzing, and Brainstorming Questions after Participating in the Conversation Compass Professional Development Training?*  
Mentor: Stephanie Curenton (SED Education, Leadership, & Policy Studies)
- Kumail Al Hamoud** **211**  
*Developing a DNA Sequence Alignment Framework for Sequence Pathogenicity Screening*  
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- Sadie Allen** **212**  
*Praxi: A New Cloud Software Discovery Tool*  
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- Bayan Alsairafi** **2**  
*Competition and Cannibalism Determine the Succession of Fungal Communities During Decay*  
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- Roxanna Altus** **3**  
*Defining the Mechanisms of Cytoskeletal Dynamics in Meg3-deficient Myoblasts*  
Mentor: Francisco Naya (CAS Biology)
- David Alvarez** **136**  
*Algebraic Foundations for Multiplicative Degree Expressions in English*  
Mentor: Elizabeth Coppock (CAS Linguistics)

- Tooba Alwani** **165**  
*Establishing the Role of IKK $\beta$  in IGPR-1 Phosphorylation*  
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- Prachi Aneja** **87**  
*The Socio-Economic, Demographic and Attitudinal Factors Affecting the KAP-Gap in Rural India*  
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- Eugenia Angelopoulos** **154**  
*Comparison of Inhibitory Neurons Expressing Calretinin and Parvalbumin Across the Thalamic Reticular Nucleus (TRN) in Schizophrenic and Control Human Brains*  
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- Christopher Anjorin** **4**  
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Mentor: Francisco Naya (CAS Biology)
- Aria Armstrong** **5**  
*Transcriptional Regulation of Abiotic Stress-induced Defense Compound Production in Arabidopsis thaliana*  
Mentor: John Celenza (CAS Biology)
- Mary Ayoub** **166**  
*Impact of Insulin on Live Ex Vivo Prostate Cancer Cell-Bone Interaction Model System in the Presence of Docetaxel*  
Mentor: Erdjan Salih (SDM Periodontology)
- Pallavi Balivada** **213**  
*High Throughput, Automated Prion Phenotype Selection*  
Mentor: Mo Khalil (ENG Biomedical Engineering)
- Jacob Ball** **214**  
*Adaptation of the CIDAR MoClo Bacterial Library for Modular Assembly of Complex Genetic Circuits*  
Mentor: Douglas Densmore (ENG Electrical & Computer Engineering)
- Samantha Barbero** **88**  
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Mentor: Kathleen Corriveau (SED Applied Human Development)

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Mentor: Kirill Korolev (CAS Physics)	
<b>Angelica Benaim</b>	<b>6</b>
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Mentor: Francisco Naya (CAS Biology)	
<b>Carter Berlind</b>	<b>215</b>
<i>Time Window User Interface</i>	
Mentor: Calin Belta (ENG Mechanical Engineering)	
<b>Megan Blagden</b>	<b>7</b>
<i>Effects of Climate Change Across Seasons on Foliar Amino Acids in Red Maple (Acer rubrum) Trees</i>	
Mentor: Pamela Templer (CAS Biology)	
<b>Emily Blaum</b>	<b>167</b>
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<b>Lisa Brontesi</b>	<b>89</b>
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<b>Scott Buresh</b>	<b>37</b>
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<b>Deeya Burman</b>	<b>216</b>
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**Steven Caldwell** **38**

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**Gabriella Card** **169**

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**Allison Casey** **170**

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**Benjamin Chan** **217**

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**Nadine Chen** **137**

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**Nicole Chen** **114**

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**Andrea Cheng** **40**

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**Aishwarya Chitoor** **90**

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**Jasmine Clevenger** **9**

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**Rebecca Cole** **91**

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**Ryan Cully** 220

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**Zhonghao Dai** 221

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**Step 1: Find a research mentor in your field of interest**

**Step 2: Decide on a project**

- Work on your mentor's existing project or design your own!

**Step 3: Complete UROP's online application**

- Feel free to contact UROP to schedule an application review.

- Make sure your mentor sends in their letter of recommendation.

**Step 4: Receive funds to conduct research**

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