

EDITOR: VRINDA P. GANTI, GRADUATE ASSISTANT

## URSCO Newsletter

UNCG Undergraduate Research, Scholarship and Creativity Office | Fall 2021

16TH ANNUAL THOMAS UNDERGRADUATE RESEARCH AND CREATIVITY EXPO

APRIL 14, 2022 ABSTRACTS WILL BE ACCEPTED JANUARY 26 — FEBRUARY 23

#### SAVE THE DATE!

The expo is the campus-wide celebration of undergraduate research, scholarship, and creative activities. All undergrads engaged in scholarly inquiry are encouraged to participate. Those involved in course-based undergraduate research projects are also encouraged to present. Students are eligible to compete for program recognition, which includes monetary awards. Categories for these awards include:

 Business, Education, Social and Behavioral Sciences

 Humanities

 Mathematics, Life and Physical Sciences

 Performing Arts
 Visual Arts Exhibition

• Emerging Scholars (UNCG Residential College Students )

#### Newsletter Highlights

- Important Dates
- SNCURCS 2021
- ABRCMS
- McNair
   Scholars
- STAMPS
- Faculty Fellows
- URCA Recipients: FaLL-Spring 2021/22
- URCA Recipients: Spring 2022
- Transcript Notation



G R E E N S B O R O

# **Important Dates**

#### ~ Spring 2022~

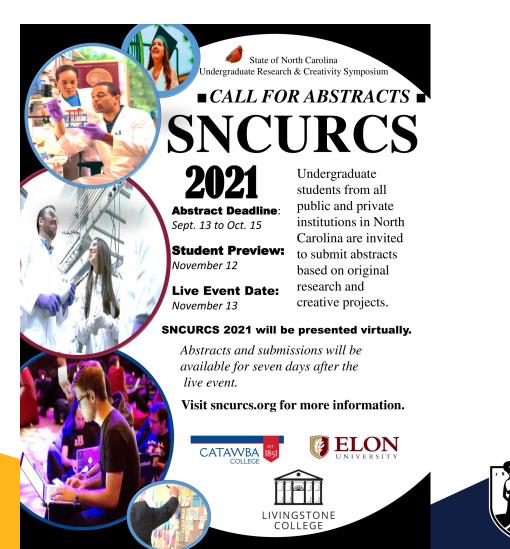
- January 10: Classes begin.
- January 26 February 23: Abstracts accepted for the 16th Annual Thomas Undergraduate Research and Creativity Expo.
- January 17: Dr. Martin Luther King Jr. holiday. Classes Dismissed.
- March 7 11: Spring Break
- **April 14:** 16th Annual Thomas Undergraduate Research and Creativity Expo.
- April 15: Spring holiday. Classes dismissed
- April 27: Last day of classes.
- April 29 May 5: Final exams.



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### SNCURCS ~2021~

Twelve UNCG students presented their research at the 17th annual State of North Carolina Undergraduate Research and Creativity Symposium (SNCURCS). The expo was again hosted virtually by the North Carolina Independent Colleges and Universities (NCICU) Elon University, Catawba College and Livingstone College on Saturday, November 13, 2021. There were 320 presentations at this year's SNCURCS. SNCURCS provides undergraduate scholars in all fields a forum to share the results of their work through posters, oral presentations, performances, and works of art.



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## **SNCURCS** Presentations

Student	Mentor	Presentation Title	
Aqsa Asghar ; Cecily Horstman ; Abigail Herrera-Leal	Elisa A.M. Vargas	Brazilian American Children's Experience of Gratitude	
Zachary Bunch	Sally Koerner	Impacts of invasion on the insect communities of Montanan rangelands	
River Hedgepeth	Natalie Sowell	The Gender Gallery: An Expansive Look at Gender Through the Lens of Interdisciplinary Documentary Theatre	
Runzi Li	Shabnam Hematian	Dioxygen Reactivity of Copper(I)-Manganese(I Porphyrin Assemblies	
Madison Loudermilt; Conner Wallace	Steve Fordahl	Fasting Enhances Dopamine Release and Restores the Rate of Dopamine Uptake, Slowed by a High Fat Diet	
Rene Marzuk	Karen Kilcup	Rescuing Environmental Children's Literature Created by Writers of Color and Child Authors i Nineteenth-Century America	
Dylan Murphy	Andy Hudson	Psychoactive Verbs in Clarinet Pedagogy: A Cas Study Utilizing a New Work by Sharneisha Joyne	
Krista Savage-White	Hewan Girma	Race and Identity: Finding the North Star Podcast	
Maisha Waafa	Jonathan R. Chekan	Discovery of a Conserved Protease Across Diverse Natural Product Biosynthetic Pathways	

Clara Kennedy , Visual and Performing Arts major received the 2021-2022 George Barthalmus Undergraduate Research Award.

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## MARC U-STAR

UNCG's Maximizing Access to Research Careers Undergraduate Student Training in Academic Research (MARC U-STAR) Fellowship program offers talented students underrepresented in the biomedical sciences an opportunity to prepare for graduate school.

#### UNCG's MARC U-STAR Fellows work in research labs during their junior and senior year and receive:

- A yearly stipend and tuition is paid at the in-state level
  Undergraduate Research Experiences
- Funding to engage in year-round research projects
  - Paid summer research experiences
    - In a UNCG faculty mentor's lab
  - With a research group at another institution
    Specialized courses and workshops
  - Travel funds to attend scientific conferences
  - Opportunities to publish and present their work

The UNCG MARC Fellows virtually attended the 2021 Annual Biomedical Research

Conference for Minority Students (ABRCMS) from November 10-13, 2021. ABRCMS is one of the largest communities of underrepresented minorities in STEM. Students attend this conference to present their research, enhance professional development skills, explore graduate schools, and network. During the conference, attendees from over 350 colleges and universities participate in poster and oral presentations in twelve STEM disciplines.

> This year, 7 MARC Fellows presented their research at the ABRCMS.



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### **ABRCMS** Presentations

Student	<b>Faculty Mentor</b>	Presentation Title	
*Jonathan Dean	Kimberly Petersen	Towards the Enantioselective Synthesis of Lactones via the Pinner Reaction	
*Jade Lyons	Ayalew Osena	Overexpression of Arabidopsis thaliana PSY Gene in Cassava for Enhanced Carotenoid Biosynthesis	
Caroline Nelson	Yashomati Patel	Grapefruit Flavanone and Lipid Storage: What's the Link?	
*Jennifer Obike	Nicholas Oberlies	PROTACs: Synthesis of E3 Ligase Ligand (Pomalidomide) with Rigid Linkers	
Jaziah Rispress	Zhenquan Jia	Effects of Carbon Nanodots on Tumor Necrosis Factor Alpha Induced Inflammation in THP-1 Monocytes	
Sydney Thompson	Norman Chiu	Mass Spectrometric Analysis of RNA Protein Interactions in Glioblastoma	
Kala Youngblood	Kimberly Petersen	Synthetic Methods for Non-symmetric Phenazines	

\*3 MARC Fellows won \$300 awards for their outstanding presentations.

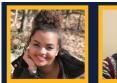


and Creativity Office

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### McNair Scholars Program

**NEW FALL 2021 INDUCTEES** The UNCG-McNair Scholars Program is a federal TRiO program funded by the US Department of Education designed to prepare undergraduates for pursuit of a PhD. **UNCG-McNair** provides undergraduate students with opportunities to complete research with faculty mentors, attend the **UNCG-McNair Summer Research** Institute, explore graduate school options, and prepare for graduate level studies. A new cohort of scholars was inducted. Welcome and congratulations to the Fall 2021 inductees of the McNair Scholars Program.







Alexis Bailey Sociology

Jordao Blackwell Dana Broadus English

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McNair Program

**CONGRATULATIONS TO THE** FALL 2021 UNCG MCNAIR SCHOLAR INDUCTEES

History









**Breanna Rogers** sychology Psychology

Sky Strickland Psychology

**Christian White** Kinesiology

#### SUMMER RESEARCH INSTITUTE

Central to the mission of the UNCG-McNair Scholars Program is the opportunity to provide each McNair Scholar with undergraduate research activities under the guidance of a Faculty Mentor in the Scholar's academic field. During the eight-week Summer Research Institute (SRI), McNair scholars conducted independent research, prepared for the Graduate Record Examination, participated in a writing lab and completed an academic professionalization course to prepare for the graduate school application process. Please visit the following website to learn more about the SRI 2021 scholar and their research projects: go.uncg.edu/mcnair

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## **McNair Scholars**

Summer Research Institute Program

Scholar	Field of Study	Research Topic	
Alvaro Alvarez	Biochemistry	Identifying calcium regulating mechanisms that may contribute to the cold-acclimated bullfrog's survival to oxygen and glucose deprived environments.	
Antacia Bell	Nursing	Examining the disparities of minorized black maternal women in the prevalnce of pregancy complications.	
Asyia Benton- Blake	Marketing (Business Analytics)	Examining the use and impact of Minority Images in Current Market and Branding Strategies.	
Colby Borges	Biology (Chemistry)	In vitro antimicrobial effects of Cinnamomum species on Methicillin- resistant Staphylococcus aureus.	
Joshua Burns	History & Secondary Education	Impact of educational programs and policies stemming from the 1960s and the impact they had on Western North Carolina.	
Adanna Iloabachie	Psychology (Chemisry & Biology)	What principles or rules have to be violated for the ownership of an object to be considered cultural appropriation.	
Mariann Juarez	Atrsto Physics	A Computational Exploration of the Effects of Disk Structure and Host Star Properties on Chemistry in Planet-Forming Disks.	



## **McNair Scholars**

#### Summer Research Institute Program

Scholar	Field of Study	Research Topic	
Sky Kihuwa-Mani	Biology (Chemistry)	Breathing muscle function after periods of prolonged apnea due to hibernation in bullfrogs.	
Kathy Ly	Biology (Chemistry)	The role of honey bee presence and flower choice in supporting native pollinators in urban areas.	
Caraline Malloy	Psychology	Examing Group Membership Effects on the Positive Relationship Between Facial Trustworthiness and Likability.	
Quentin Merritt	Physics & Mathematics	Heavy Ion Collisions.	
Temilayo Ogungbemi	Psychology	Effect of ORE (Other-Race Effect) on Face-Name Associations.	
Queaonia (Quella) Reid Human Development and Family Studies		Black Europe: The African Diaspora in Wales.	
Ahmad Romero	Biology	Vitamin C in epigenetic silencing.	
Qorah Thorner	Political Science (Communication Studies)	Acknowledging the Needs for Gen Z: Opening Spaces forn Connection and Care.	
Macaah Tillery	Psychology (African American Diaspora Studies)	Parent- Child relationship in African American homes and how they differitiate between the male and females.	
Portia (Nicole) Washington	Psychology	Shared or separate syntax? The effects of noun-adjective order on Spanish-English bilinguals.	
Tynashia Whitaker	Speech Pathology and Audiology	Perceptions of African American English: Reducing the Potential for Misdiagnosis.	



## **STAMPS**

The STAMPS (Science, Technology and Math Preparation Scholarships) Program is supported by the National Science Foundation and it offers scholarships for academically talented undergraduate students in the sciences. The primary goal of the STAMPS program at UNCG is to provide financial and community support for undergraduate students who are majoring in Biology, Chemistry, Computer Science, Geography, Mathematical Sciences, and Physics and Astronomy. Students are awarded scholarships based on a demonstration of both a significant promise for success in science/math and a measurable financial need. In addition to financial support STAMPS incorporates a variety of community-building measures including peer mentors, a science colloquium series, tutoring, field trips to research facilities, and undergraduate research opportunities

Student	Major	Faculty Mentor
Tanner Addison	Biology	Malcolm Schug
Gregory Butler	Mathematics	Maya Chhetri
Beck Carly	Biochemistry	Kim Petersen
Kamal Deterville	Computer Science	Steve Tate
Lilly Eubanks	<b>Environmental Studies</b>	Jay Lennartson
Dominique Gould	Biology	Ramji Bhandari
Amelia Hanson	Biology	David Remington
Carter Jayden	Biochemistry	Kim Petersen
Karabuning Kupradit	Biology	Joe Santin
Blanca Mendez Morales	Biology	Joe Santin
Muhammad Zahid	Computer Science	Steve Tate
Salomon Perez Delgado	Physics	Steve Tate
Benjamin Pettee	Physics	Promod Pratap
Hilda Ramirez	Math	Maya Chhetri
Curtis Robinson	Biology	Ayalew Osena
Craig Smith	Computer Science	Steve Tate
Nicole Thompson	Chemistry	Nadja Cech
LaShauna Thorpe	Chemistry	Nadja Cech
Rebecca Yavuz	Biochemistry	Shabnam Hematian

#### **STAMPS Scholars**



### URSCO Faculty Fellows 2021-2022

The goal of the URSCO Faculty Fellows program is to identify, support, and disseminate new ideas and pedagogical practices that increase the accessibility of Undergraduate Research on our campus.

This year, three UNCG faculty members, **Dr. Michiel Van Veldhuizen**, **Ms. Sam Harlow**, and **Ms. Joan Sutton** will serve as URSCO Faculty Fellows along with **Dr. Joanne Murphy**, Classical Studies, who is serving as Senior Fellow. The Faculty Fellows will work alongside URSCO Director, Dr. Lee Phillips, to develop and refine additional strategies for *integrating research in the curriculum*.

The Faculty Fellows program, which has been running since AY 2017-2018, has supported 15 UNCG faculty members as they redesigned their classes and organized training and information workshops open to all faculty. Faculty from across the University have participated as Fellows or attended our workshops that we hold each semester. Represented departments include Art, Communication Studies, Anthropology, Classical Studies, English, History, Media Studies, Kinesiology, Geography, Community and Therapeutic Research, Biology, and the University Libraries. The URSCO Faculty Fellows program was key in providing a model for the redesigning for 42 classes in the Humanities in 13 subject areas through *Transforming the Humanities* that was funded by the Andrew W. Mellon Foundation (2018-2019). Over 800 students participated in these classes.

This year the Faculty Fellows program is dedicated to supporting the new *Minerva Academic Curriculum* to assist faculty in redesigning classes that enroll a high number of non-majors.

#### • Dr. Michiel Van Veldhuizen, Classical Studies

- Van Veldhuizen will redesign CCI 205 Classical Mythology, which carries a MAC marker in Global Engagement and Intercultural Learning. He will incorporate a Course based Undergraduate Research Experience into the class by scaffolding research assignments focused on a related theme throughout the semester that will culminate in a final project.
- Joan Sutton, Community and Therapeutic Recreation Samantha Harlow, University Libraries
  - Sutton and Harlow will redesign Community and Therapeutic Recreation (CTR) 101: Leisure and American Lifestyles that is taught asynchronously and online. They will create a Course based Undergraduate Research Experience that focuses on MAC Health and Wellness competencies.

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### **URCA Recipients** ~Fall-Spring 2021/2022~

Student	Faculty Mentor	Department	Project Title
Caroline Armfield	Brett Nolker	School of Music	Common Perceptions of Representation Within the Music Classrooms of Indigenous Communities
Bianca Avila	Gabriela Stein	Psychology	Skin tone satisfaction and ethnic racial socialization in Latinx adolescents
Nari Beatty	Steve Fordahl	Nutrition	Effect of a High Fat Diet on Palatable Food Choice and Stress-Induced Feeding
George Blackburn	Traci Parry	Kinesiology	The Effect of Tumor Burden on Cancer Cachexia Muscle Wasting
Ashley Brown	Mitch Croatt	Chemistry and Biochemistry	New Reaction Discovery: Reactivity of Cyanocarbenes with Electron-Rich Systems
Zachary Bunch	Sally Koerner	Biology	Impacts of invasion on the insect communities of Montanan rangelands
Heather Church	Heather Coleman	Specialized Education	Virtual Parent Coaching and Analyzing the Reported Experiences of Parents of Children with Autism
Grace Clark	Brittany Cassidy	Psychology	Examining Effects of Group Membership and Facial Trustworthiness on Face Memory
Asia Diggs	Sudha Shreeniwas	Human Development	Ethnic minority frontline workers' views of the COVID-19 pandemic and immunization



### **URCA Recipients** ~Fall-Spring 2021/2022~

Student	Faculty Mentor	Department	Project Title
Princess Ejindu	Sharon Morrison	Public Health Education	Strategic Delay or Adherence?: A Study of Black/African immigrant college student perceptions and behaviors associated with COVID-19 vaccination
Tricia Levi	Gideon Wasserberg	Biology	The Effect of Attractive Fungal Isolates on the Growth and Development of Phlebotomus papatasi Larvae
Runzi Li	Shabnam Hematian	Chemistry and Biochemistry	A Chromogenic ABTS Redox Indicator for Applications in Organic Media
Nadia Maji	Gideon Wasserberg	Biology	The role of saprophytic bacteria in inducing egg hatching in Phlebotomus papatasi sand flies, vector of old-world Cutaneous Leishmaniasis
Rene Marzuk	Karen Kilcup	English	The Envious Lobster: A Collection of American Children's Nature Writing, 1824-1923
Monica McDaniel	Alice Haddy	Chemistry and Biochemistry	Assessing the Calcium and Chloride Requirements of Photosystem II during Photosynthetic Oxygen Production
Toni McKnabb	Tyreasa Washington	Social Work	Family's Impact on the Development of African American Children in Kinship Care
Shima Mohamed	Brittany Cassidy	Psychology	Examining Facial Masculinity as a Cause of Backlash against Aspiring Female Leaders

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### VRCA Recipients ~Fall-Spring 2021/2022~

Student	Faculty Mentor	Department	Project Title
Dylan Murphy	Andrew Hudson	School of Music	Psychoactive Verbs in Clarinet Pedagogy: A Case Study Utilizing a New Work by Sharneisha Joyner
Nathaniel Rivers	Tyreasa Washington	Social Work	Family's Impact on the Development of African American Children in Kinship Care
Paula Sanchez- Hernandez	Gabriela Stein	Psychology	Examining Protective Cultural Values in the Uptake of a Community Health Worker Setting for Latinxs
Krista Savage-White	Hewan Girma	African American and African Diaspora Studies	Podcast: Finding the North Star
Simone Watkins	Laura Pipe	Teachings Innovations Office	Indigenous Safe Zone at UNCG



### URCA Recipients ~Spring 2022~

Student	<b>Faculty Mentor</b>	Department	Project Title
Angelina Xiong	KyoungShin Park	Kinesiology	Efficacy of Rhythmic Exercise with Music in Adults with Cognitive Decline and Care Partners
Beh Reh	Ramji Bhandari	Biology	Paternal perchlorate exposure effects on male fertility and offspring development
Brendan Mulligan	Asa Eger	History	The Iron Ring: The Role of Castles in the Colonization of Wales
Brinlee Mitchell	Elena Karpova	Consumer, Apparel, and Retail Studies	New Paths to a Sustainable Fashion Future: Transition or Transformation?
Caraline Malloy	Aileen Reid	Educational Research Methodology	Evaluation of the NSF INCLUDES Alliance: STEM PUSH Network
Chandni Lal	Aileen Reid	Educational Research Methodology	Evaluation of the Biology Integration Institute (BII): Genomics and Eco-evolution of Multi-Scale Symbiosis (GEMS)
Claire Haneberg	Rebecca Macleod	School of Music	An Investigation of Composer Race/Ethnicity of Compositions Included in State Orchestra Adjudication Festivals
Colby Shelton	Robyn Le Blanc	Classical Studies	Interpretation of Ancient Roman Coinage at Pompeii
Emma Schueren	Tracy Nichols	Public Health Education	Using Interactive Narratives to Reduce Stigma: Comparing Types of Reproductive Stigma in Healthcare



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# URCA Recipients

#### ~Spring 2022~

Student	<b>Faculty Mentor</b>	Department	Project Title
Jason Fahey	Shaylene Nancekivell	Psychology	Children's Beliefs About Ownership of Digital Information
Кеггу Соре	Jin Su	Consumer, Apparel, and Retail Studies	Sustainability in Fashion in a Post-COVID World: Investigating Generation Z College Students' Knowledge, Perceptions, and Behavior toward Sustainable Fashion Apparel
Leo Ivey	Bryan McLean	Biology	Testing Dehnel's Phenomenon in Deer Mouse (Peromyscus maniculatus) populations in the Eastern United States
Logan Sprinkle	KyoungShin Park	Kinesiology	Efficacy of Rhythmic Exercise with Music in Adults with Cognitive Decline and Care Partners
Maria Bonilla-Cooksey	Heather Coleman	Specialized Education Services	Team Teaching in an Early Childhood Interdisciplinary Program
Michael Brigham	Plaxedes Chitiyo	Geography, Environment, and Sustainability	A survey of community gardens in Greensboro North Carolina: Equity implications
River Hedgepeth	Natalie Sowell	School of Theatre	The Gender Gallery: An Expansive Look at Gender Through the Lens of Interdisciplinary Documentary Theatre
Sophia Rosenberg	Gregory Grieve	Religious Studies	Video Games and the Problem of Evil: A "Xeno-Virtual- Ethnography" of the Video Game Valheim



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### **Transcript Notation**

The University of North Carolina at Greensboro recognizes undergraduates who have participated in significant research and/or creative inquiry projects. Students may request\* this notation once they have met the criteria.

Required of all:

- Minimum of two semesters (or at least 8 weeks in a summer research program) engaged in mentored research/creative inquiry
- Endorsement of Research/Creative Inquiry Mentor and/or Department
- Presentation at UNCG's Thomas Undergraduate Research and Creativity Expo
- Engagement in at least two URSCO sponsored or co-sponsored student workshops
- Completion of survey of your research experience

at least 2 of the following:

- Presenting Author at (1 or more from this list counts as 1 of the 2):
  - State of North Carolina Undergraduate Research and Creativity Symposium (SNCURCS)
  - SoCon Undergraduate Research Forum (SURF)
  - Posters on the Hill (Washington, DC)
  - National Conference for Undergraduate Research (NCUR)
- Presenting Author at a disciplinary conference
- Receive and Complete an URSCO Undergraduate Research and Creativity Award (URCA)
- Thomas Undergraduate Research and Creativity Expo award winner and/or recognition of excellent research/creativity as an undergraduate within your department/program
- Receive a regional or national research/creative inquiry-focused award
- Senior Honors Project
- Author (or co-author) a peer reviewed publication (or in review with mentor verification)
- Author/compose (or co-author) a Musical or Theatrical Production
- Work juried into an off-campus group art exhibition
- Curated or organized a group or solo exhibition--on campus or off-campus
- Engaged in a substantial choreographic, performance, or dance studies project
- Author/compose (or co-author) a Musical Production
- Lyricist/librettist of a Musical Theatre Production
- Engaged in a substantial performance, playscript or musical composition, direction, design, or technical project for a dramatic, musical, dance, film, or opera production project

\* All applications will be processed through and approved by the Undergraduate Research, Scholarship and Creativity Office.

<sup>3</sup> **G R E E N S B O R O** Undergraduate Research, Scholarship *and* Creativity Office

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#### URSCO is a unit within the University Teaching and Learning Commons



130 Shaw Residence Hall (on the quad) 1310 Walker Ave Greensboro, NC

## For more information about what UNCG's undergraduate scholars are up to, visit the URSCO blog!

#### THE URSCO BLOG



By Hope Voorhees / October 4, 2021

We're Going to Need a Bigger Molecule

Repost from UNCG Research Magazine Kala Youngblood comes from a small, rural Virginia town. She describes it as a beautiful...

Read More



By Hope Voorhees / September 8, 2021

Ritual use of animals in the Wari empire

We interviewed Joshua Malloy, a recent graduate who majored in

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