#### UNDERGRADUATE RESEARCH CENTER



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## MTSU RESEARCH MAGAZINE "TAKING SHAPE" HIGHLIGHTS UNDERGRADUATE OPPORUTNITIES

The Office of Research and Sponsored Programs is pleased to unveil the Spring 2021 edition of the *MTSU Research* magazine focused on undergraduate opportunities.

Appropriately titled "Taking Shape", the stories focus on budding scholars who share their stories and successes. As the articles in this issue attest, engagement in undergraduate research and creative activity allows students to grow their scholarly capacity, gain valuable skills, work alongside some of our most esteemed faculty, and stand out when applying for jobs or graduate programs.

We invite you to read these stories of some outstanding undergraduate researchers, their mentors, and their projects, and realize the remarkable experiences that undergraduate research at MTSU affords students. A special thank you to the students and faculty mentors who made this magazine a reality.

Please click <u>here</u> to view the Research Magazine.



#### **URC'S MISSION**

The Undergraduate Research Center's (URC) mission is to be the central hub for communication about undergraduate research grant programs and other related opportunities on and off campus, to distribute university funds for undergraduate research and creative projects, and to promote dissemination of results through travel grants and by offering opportunities for students to present their research findings.



**Scholars Week 2021** will take place from April 12-16 and will showcase a variety of in-person and virtual events at the college and university levels as we celebrate MTSU's commitment to research, creative activity, and scholarship. Events will be posted to our <u>website</u> as soon as they are confirmed so check back regularly.

Our annual **Research and Creative Activity Exposition** will include a live poster session on Friday, April 16, in the Student Union, Ballroom C. Presenter and attendee spaces will be limited to adhere to COVID-19 restrictions. Details regarding creative performances are still being finalized. We will also host a virtual poster session from April 12-23, 2021 via Symposium. Please see abstract submission details below.

#### Important Dates for Scholars Week 2021

Abstract submission for the University-Wide Research and Creative Activity Exposition is now open.

**March 15, 2021:** Deadline to submit your abstract. Click <u>HERE</u> for abstract submission instructions. Need help writing your abstract? Check out our Abstract Writing Workshop on page 5.

March 19, 2021: Scholars Week Committee will email notices of acceptance.

March 19, 2021: Symposium\* sign-ups begin for all presenters. Poster printing online sign-up opens (in-person presenters only).

March 22 - April 14, 2021: Poster printing and pick-up.

**April 5, 2021:** Deadline to upload posters to Symposium\* (all presenters).

April 12-23, 2021: Symposium\* goes live for all presenters.

**April 16, 2021:** In-person Research and Creative Activity Exposition, Student Union Ballroom (2nd floor)

#### \*What is Symposium?

Symposium is an engaging virtual platform that will showcase all Scholars Week academic posters, creative projects, and student presentations, along with the ability for viewers to post comments and questions related to individual projects.

A Scholars Week workshop series

## ABSTRACT WRITING & POSTER + PITCH

The URC is excited to partner with the Walker Library and the University Writing Center to provide students with two workshops to help them prepare for Scholars Week.

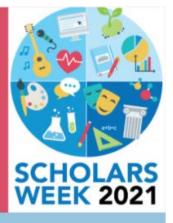
We hope you will join us!

Please see flyers and links within for registration.

#### ABSTRACT WRITING

SCHOLARS WEEK WORKSHOP SERIES

PRESENTED BY: MARY ELLEN SLOANE, WALKER LIBRARY



Need help writing your abstract for Scholars Week?
We can help!
Join us for one of our upcoming workshops.

CLICK ON THE DATES BELOW TO REGISTER!

March 4, 2021 @ 6:00PM March 8, 2021 @ 3:00PM THE MARGARET H. ORDOUBADIAN
UNIVERSITY WRITING CENTER

UNDERGRADUATE RESEARCH CENTER

Present

#### POSTER + DITCH

Creating a poster for Scholars Week?
Creating a research poster for class?
Want to prepare for an upcoming conference?
Interested in improving your poster design and presentation skills?

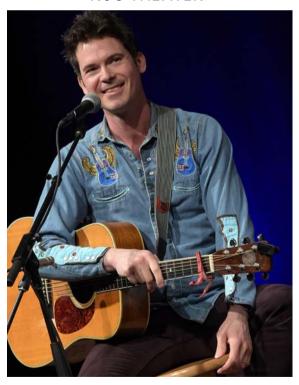
At this workshop, learn the principles of design and elevator pitches, strengthen your design decisions, and find out how to capture your audience.

TUE. MARCH 23, 2021 4 P.M.- 5 P.M. REGISTER HERE save the date

## 2ND ANNUAL URECA LUNCHEON

FEATURING
KETCH SECOR
OF OLD CROW MEDICINE SHOW
- DISTINGUISHED LECTURE UNDERGRADUATE RESEARCH WEEK

20 APRIL 2021 • 11:30 AM KUC THEATER



Sponsored by
MTSU's Distinguished Lecture Fund
and the
Student Organization for the
Advancement of Research

The URC is excited to welcome Ketch Secor to MTSU as the distinguished lecturer for our 2nd Annual URECA luncheon.

For the last twenty years, multi-instrumentalist **Ketch Secor** has been front man and fiddler for **Old Crow Medicine Show**. Described variously as alt-country, folk, and mountain music revivalists, Old Crow is an American roots string band with punk rock attitude and energy.

Born Jay Ketcham Miller Secor, Ketch attended New Hampshire's prestigious **Phillips Exeter Academy** on scholarship. There, he learned to play banjo and fell in love with Bob Dylan. One of the Dylan songs Ketch discovered was a snippet entitled "Rock Me Mama," an outtake from a 1973 Dylan recording session in Burbank, California. Homesick for Virginia, Ketch expanded upon the song, adding verses about long New England winters and hitchhiking south. That song, **later co-copyrighted with Dylan, became "Wagon Wheel" – Old Crow's signature song**, released in 2004, and a No. 1 country hit for Darius Rucker in 2013.

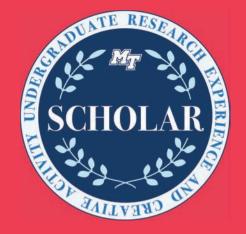
After Phillips Exeter, Ketch attended **Ithaca College** where he immersed himself in the local old-time music scene, officially forming Old Crow. In 1999, the band settled in a backwoods cabin near the college town of Boone, North Carolina. There, busking on a street corner, they were discovered by bluegrass-folk-country-blues legend Doc Watson, who invited them to participate in his annual MerleFest music festival. "That gig," Ketch would later say, "changed our lives." The group moved to Nashville and began recording with labels Nettwerk, ATO Records, and eventually Columbia Nashville.

Old Crow Medicine Show became members of the **Grand Ole Opry** on September 17, 2013. That same year, they
received the Trailblazer Award from the Americana Music
Association and, two years later, won the **2015 GRAMMY Award for Best Folk Album** with their LP, Remedy. Known
for his interest in Appalachian history and musicology,
Ketch recently wrote a **children's book**, *Lorraine* – his
retelling of a Southern folktale, interwoven with the power
of music.

Ketch is also heavily featured in **Ken Burns' documentary Country Music.** 

Tickets for this event will be limited to comply with COVID-19 restrictions. Sign up information will be released on April 1. The event will also be live streamed to the MTSU Community.

### UNDERGRADUATE RESEARCH GRADUATION DISTINCTION



#### LEVELS OF RECOGNITION

**Distinction in Undergraduate Research** 

• Students receive a dark blue, light blue, and white cord

#### Scholar Distinction in Undergraduate Research

• Students receive a dark blue, light blue and white cord AND a medallion (see image to the right)

#### **DISTINCTION CRITERIA**

#### **Distinction in Undergraduate Research** \*Students must fulfill all requirements

- 1 Successful completion of an Assistant level URECA project 50 hours of research or more.
- Poster presentation or creative performance at one of the URC's signature events: Fall Open House, Scholars Week or Summer Research Celebration.
- Active participation for at least one academic year in the Student Organization for the Advancement of Research (SOAR).
- 4 Letter of support from URECA faculty mentor.

#### Scholar Distinction in Undergraduate Research \*Students must fulfill all requirements

- Successful completion of a Scholar level URECA project 100 hours of research or more.
- Poster presentation or creative performance at one of the URC's signature events: Fall Open House, Scholars Week or Summer Research Celebration.
- 3 Active participation for at least one academic year in the Student Organization for the Advancement of Research (SOAR).
- Poster or presentation at the National Conference on Undergraduate Research or published in a peer-reviewed academic journal.
- 5 Letter of support from URECA faculty mentor.

The application can be accessed **HERE**.



Major: Nutrition and Food Science, Dietetics

Faculty Mentor: Tiffany Harrison

**Current Research Focus:** Gelatin and Vitamin C intervention in college football athletes: Retrospective case studies.

**Project Description:** My research project is a retrospective case study on two MTSU football athletes studying the effect of vitamin C and gelatin supplementation, nutrition education, rehabilitation routine on injury healing and return to play.

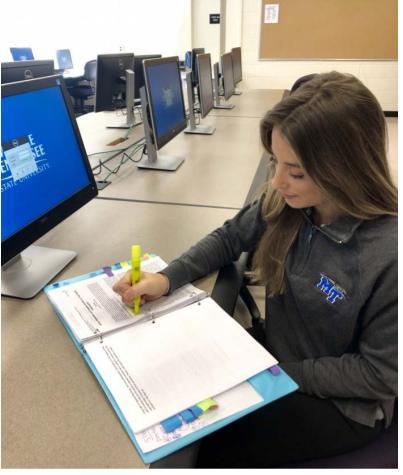
#### Why does this topic interest you?

This topic interests me because it presents an opportunity to find valuable solutions to the slow progression of tissue repair and return to play in athletes. MTSU and other collegiate and professional teams need for their athletes to be healthy and ready to play their sport. Whatever solutions we may find for keeping players healthy and on the field are helpful.

What are your professional aspirations? I aspire to become a Sports Dietitian and work as a director for sports nutrition programs at either the collegiate or professional level.

#### Do you have any advice for future researchers?

My advice is to be brave and confident when seeking research opportunities. You don't have to know everything to conduct research—the whole point in conducting research is to solve new problems and present new information to your field of study.



Join us!

# WANT TO LEARN MORE ABOUT SOAR?

Check out our <u>website</u> and current SOAR <u>student</u> profiles!



#### MTSU is proud to represent the highest number of abstract acceptances in the State of Tennessee for presentation at the

#### National Conference on Undergraduate Research (NCUR 2021@home).

Source: National Conference on Undergraduate Research

State of Tennessee	Acceptances
Austin PEAY State University	1
Columbia State Community College	1
East Tennessee State University	1
Sewanee: The University of the South	1
Vanderbilt University	1
Fisk University	2
Milligan College	2
Rhodes College	4
Trevecca Nazarene University	6
University of Tennessee at Chattanooga	6
University of Memphis	15
University of Tennessee at Knoxville	19
Middle Tennessee State University	22



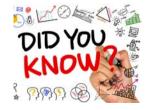
#### Faculty Workshops at NCUR 2021

Did you know that NCUR 2021 isn't just for students? Of course, we encourage faculty, mentors, and administrators to come and support the talented undergraduate research presenters on April 12-14, 2021, but why not take advantage of professional development opportunities as well? Check out our 18 faculty workshops on hot topics ranging from mentoring diverse students and promoting anti-racism work in faculty-research training to maintaining energy in a virtual setting. Faculty rates start at \$45. Register today.

#### OPPORTUNITIES

Check out the following opportunities for summer research!

- Virtual 50th Anniversary Internships, Smithsonian Libraries and Archives | Deadline March 1, 2021
- STEM Virtual Summer Internships, US Army Institute of Surgical Research | Deadline March 1, 2021
- <u>REU in Virtual BigDataX</u>, Illinois Institute of Technology/University of Chicago | Deadline March 1, 2021
- <u>2021 Summer Undergraduate Research Fellowship in Translational Neurobiology</u>, Fralin Biomedical Research Institute, Virginia Tech | Deadline March 1, 2021
- <u>REU in Sustainable Groundwater Resources</u>, San Francisco State University/California State University System | Deadline March 1, 2021
- 2021 Summer Internships, Ohio Bird Sanctuary | Deadline March 1, 2021
- <u>2021 REU in Statistical Modeling with Applications to Geoscience, Florida Tech</u> | Deadline March 1, 2021
- <u>Mellon Scholars Program and Mellon Scholars Summer Workshop (for advanced undergraduates),</u>
  <u>Program in African American History, The Library Company of Philadelphia</u> | Deadline March 1, 2021
- <u>2021 Summer Internships</u>, Transportation Security Laboratory, US Dept of Homeland Security | Deadline March 1, 2021
- <u>Summer Research Intern Program</u>, Space Institute, University of Tennessee | Deadline March 5, 2021
- <u>REU</u> in Treatment-Related Research for Youth with Social, Emotional, and Behavioral Problems, Ohio University | Deadline March 12, 2021
- 2021 REU in Robotics, West Virginia University | Deadline March 12, 2021
- Medical Student Research Program Internship, Van Andel Institute | Rolling reviews in March 2021
- <u>Summer Internship</u>; Slavery, History, Memory, and Reconciliation Project; Jesuit Conference of Canada and the United States/Saint Louis University | Deadline March 14, 2021
- REU in Next-Generation Plant Biology, UC Riverside | Deadline March 15, 2021
- <u>Curatorial Assistant and Digitization Internship</u>, Antique Boat Museum | Deadline April 16, 2021
- <u>2021 Summer Internships, Transportation Security Laboratory, US Dept. of Homeland Security</u> | No application deadline listed.
- REU, Marine Biological Laboratory, University of Chicago | No application deadline listed.



STUDENTS! Are you presenting at a virtual conference this spring and would like assistance in paying for your registration fee?

The URC can help!

The Undergraduate Research Center strives to support students in dissemination of their research. Undergraduates who are accepted to present their research at a regional, state, national, or international conference are eligible to receive financial assistance for registration fees.

Awarded travel funds are payable on a reimbursable basis only.

Please contact Wendi.Watts@mtsu.edu for more information.

#### UNDERGRADUATE RESEARCH AND CREATIVE ACTIVITY AWARDS SPRING 2021

#### **Assistant Awards**

**Ashley Barrientos** - Amplifying BIPOC voices through a creative digital journal: College students sound off on COVID-19, confrontations with systemic racism, and the 2020 presidential election Faculty Mentor: Keonte Coleman, Journalism and Strategic Media

**Ashton Bazzell** - Environmental temperature effects on milk production and daily activity of dairy cattle with respect to different breed

Faculty Mentor: Jessica Carter, Agriculture

**Alison Blanton** - Effects of Heat Stress on Blood Metabolites and Milk Quality in Lactating Holstein and Jersey Cows

Faculty Mentor: Maegan Hollis, Agriculture

**George Boktor** - A Community Oriented Mobile Application For the Acquisition of English by Egyptian–Arabic speaking Coptic Diaspora

Faculty Mentor: Amanda Swenson, English

Hunter Brady - Chlorine Dioxide Gas: Potential for Use as an Anti-viral Agent

Faculty Mentor: Anthony Newsome, Biology

**Briza Dedicatoria** - Investigation of the Weathering Effect on Less-Volatile Component Profiles in Ignitable Liquids

Faculty Mentors: Mengliang Zhang, Chemistry

**Katelyn Gardner** - Beauty During a Pandemic: The Impact of COVID-19 on the Cosmetic Industry Faculty Mentor: Diane Edmondson, Marketing

Javier Hernandez - Charlie Daniels Center Veteran Video Project Faculty Mentor: Hilary Miller, Veterans and Military Family Center

**Patricia Hummel** - Analyzing College Students' Finances and How They Were Impacted By COVID-19 Faculty Mentor: Keith Gamble, Economics and Finance

**Grace O'Connell** - A Compilation of Audio Recordings for Solo Trumpet and Accompaniment Faculty Mentors: Michael Arndt, Music

**Leah Piccirillo** – Utilizing Process Management to Increase Efficiency of Oboe Reed Making Faculty Mentor: David Cyzak, Music

#### UNDERGRADUATE RESEARCH AND CREATIVE ACTIVITY AWARDS SPRING 2021

#### Silver Awards

Rija Asim - Validation and Testing of a Social Motivation Task for Mice

Faulty Mentor: Tiffany Rogers, Psychology

Anika Chowdhury - Cross-Breeding Industrial Hemp (Cannabis sativa) Varieties to Assess Changes in

Cannabinoid Content and Seed Yield Faculty Mentor: John DuBois, Biology

Hannah Hudson - Factors Influencing Teachers' Use of Groupwork in Secondary Mathematics

Classrooms

Faculty Mentor: Elizabeth Dyer, Tennessee STEM Education Center

Lauren Hunsicker - Childhood Reading Experiences and Adult Reading Performance

Faculty Mentor: Emily Farris, Dyslexia Services

Saman Kittani - Cognitive Disruption and Self-talk in Memory Recall

Faculty Mentor: Tom Brinthaupt, Psychology

Jack Maxwell - Investigating the Interaction of the Oncogene MYC with the pBAF Chromatin

Remodeling Complex

Faculty Mentor: April Weissmiller, Biology

Samuel Morgan - Personality and Favor Giving

Faculty Mentor: Tom Brinthaupt, Psychology

Cassandra Perrone - Cloning Successive Generations of Industrial Hemp (Cannabis sativa) to Assess

Cannabinoid Profiles

Faculty Mentor: John DuBois, Biology

Emily Stafford - Effects of varying corn particle size on broiler performance, organ development, and

ileal digestibility from 1 to 21 days of age

Faculty Mentor: Kevin Downs, Agriculture

Aubrey Stanger - Investigation of Pi-extended Aurones

Faculty Mentor: Scott Handy, Chemistry

Amanda Washington - Why They Died: An expanded analytical examination of details surrounding the

999 officer-involved shooting deaths in 2019 in the United States

Faculty Mentor: Ben Stickle, Criminal Justice

Anna Yuhas - Initiation and Cannabinoid Assessment of Trichomes on Industrial Hemp (Cannabis

Sativa)

Faculty Mentor: John DuBois, Biology

## UNDERGRADUATE RESEARCH AND CREATIVE ACTIVITY AWARDS SPRING 2021

#### Gold Awards

Ha Bui - Teachers' familiarity with the new computer science standards and their readiness to implement the subject

Faculty Mentor: Elizabeth Dyer, Tennessee STEM Education Center

#### **Team Awards**

A Comparison of Religious Cultural Competence in Evolution Education (ReCCEE) Online versus In-Person and its Effects on Student Outcomes

Team Members: Chloe Bowen, Alexa Summersill

Faculty Mentor: Liz Barnes, Biology

A Literature Review on Students' Attitudes and Science Communication about Climate Change

Team Members: Madeline Aadnes, Aaron Gatewood

Faculty Mentor: Liz Barnes, Biology

Exploring Undergraduate Biology Students' Attitudes and Science Communication about COVID19 and COVID19 Vaccines

Team Members: Mariana Bryan, Laine Matthews, Thipphaphone Souksavong

Faculty Mentor: Liz Barnes, Biology

The Effect of Language Sample as a Function of Varying Age Groups

Team Members: Rachel Alexander, Janna Spada, Anna Page Wolfe Faculty Mentor: Kathryn Blankenship, Health and Human Performance

#### SUMMER URECA DEADLINE

 $3/25/21\,$  Don't miss the opportunity to apply for summer funding! Visit our website for application details.



email: Jamie.Burriss@mtsu.edu