17TH ANNUAL
RESEARCH & CREATIVE ACTIVITY EXPOSITION
MARCH 24, 2023
10:30AM - 2:30PM
STUDENT UNION BALLROOM
SCHEDULE OVERVIEW

10:30AM-12:00PM  POSTER SESSION #1
PRESENTERS LISTED IN ALPHABETICAL ORDER BY FIRST AUTHOR’S LAST NAME
PAGES 3-9

12:00PM-1:00PM  LUNCH & HALFTIME SHOW
FEATURING PERFORMANCES BY OUR TALENTED STUDENTS REPRESENTING THEATRE, DANCE, ENGLISH, AND RECORDING INDUSTRY
STUDENT BIOS ON PAGES 10 - 16

1:00PM-2:30PM  POSTER SESSION #2
PRESENTERS LISTED IN ALPHABETICAL ORDER BY FIRST AUTHOR’S LAST NAME
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Poster Session 1
10:30am-12:00pm

MINA ABDULKAREEM
FACULTY MENTOR: DR. BENG GUAT OOI
#2497 - Characterization of Melamine-Oxalate Crystals Using Thermogravimetric Analysis and Spectroscopy

JANNA ABOU-RAHMA
FACULTY MENTOR: DR. KEVIN BICKER
#2334 - Mechanism of Action of Antifungal Peptoids

AISHAT ADEGOBOYE, BETELHEM A. BULCHA
FACULTY MENTOR: DR. MISA FAEZIPOUR
#2372 - Brain Simulation and Response to Different Personality Traits - A Case Study of Children Aged 1 to 5.

RAHMI AINI, ALEXA SUMMERSIL
FACULTY MENTOR: DR. M. ELIZABETH BARNES
#2429 - Student reports of Religious Cultural Competence in Evolution Education (ReCCEE) is associated with gains in students’ evolution acceptance.

GBEMISOLA AKINTEYE, AKINYEMI AKINDUTIRE, SUZANNE HICKS
FACULTY MENTOR: DR. SAEED FOROUDASTAN
#2421 - Career Advantages of Business Education Courses for Science Master’s Degree Students

NIRVANA ALMADA
FACULTY MENTOR: DR. KEYING DING
#2448 - Amine Alcohol Coupling Reactions Facilitated by First Row Transition Metal Complexes with a New PNN Pincer Ligand

SADIKA ANDERSON
FACULTY MENTOR: MISTY JONES
#2499 - Electronic Music and Controllerism Performance

EDEN ANDERSON, COLE EASSON
FACULTY MENTOR: DR. REBECCA SEIPELT-TIEMANN
#2369 - _E. coli_ and Biodiversity in the Stones River Watershed

EMMA ANKAR, ASHLEY LANDAVERDE
FACULTY MENTOR: DR. GAIA RANCATI
#2449 - A Multidisciplinary Approach to the Customer Experience in Coffee Stores

ANNA ARNOLD, SHAYLA SULLIVAN, SYDNEY LIVELY, SUMMER MILLER
FACULTY MENTOR: DR. SEOCKMO KU
#2409 - Application of Multiple Parallel Fermentation Using Sorghum in Far East Asian Alcoholic Beverage Production
CARTER AYERS, ERIN MCCLELLAND, MATT NALLEY
FACULTY MENTOR: DR. REBECCA SEIPELT-THIEMANN
#2442 - Examining MHC-specific Adaptation of Fungal Pathogen _Cryptococcus neoformans_ using Genomic and Transcriptomics Approaches

VICTORIA BASCOU
FACULTY MENTOR: DR. CARTER F. SMITH
#2432 - Should There Be a Reform of the Coroner and Medical Examiner Systems?

SABITA BASNET, COLE EASSON
FACULTY MENTOR: DR. REBECCA SEIPELT-THIEMANN
#2383 - Biodiversity in the Stones River Watershed is Positively Associated with Canopy

ANGELA BENNINGHOFF
FACULTY MENTOR: DR. PHILIP PHILLIPS
#2460 - "I Am Helen: A Feminist Retelling of the Woman Who Launched a Thousand Ships"

DAVID BOBICK, BAILEY LUGO
FACULTY MENTOR: DR. NATE PHILIPS
#2318 - Analysis of Hemp Specific Nutrient Solutions

CARSON BRUCE
FACULTY MENTOR: DR. JOSEPH AKINS
#2357 - The Creation of a Digital Upright Piano Sample Library

XINTONG CAO, PENGYU ZHU, MINYUAN ZHAO
FACULTY MENTOR: DR. LU XIONG
#2375 - Using Tree-based Methods to Predict Online Shoppers' Purchasing Intentions

WILL CHILDRESS
FACULTY MENTOR: DR. MEI HAN
#2351 - Folk Songs to Wind Band: A Study Using James Barnes Chance's _Variations on a Korean Folk Song_

EMILIE CONNERS
FACULTY MENTOR: DR. LUCY MATTHEWS
#2506 - The Effects of The Body Positivity Movement on College Women’s Body Image and Health
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<tr>
<td>HAMPTON COPELAND, AMY BROWN, CURTIS DEARING, GARRETT TESSMER, APRIL WEISMILLER</td>
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<td><strong>FACULTY MENTOR:</strong> DR. SOUVIK BANERJEE</td>
<td>#2465 - Molecular Modeling Guided Design and Synthesis of Unique Small Molecule Autotaxin Inhibitors for Applications in Post-Stroke Rescue</td>
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<td>LILY GERMANO, ARIEL HIGGINS</td>
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<td><strong>FACULTY MENTOR:</strong> DR. ALYSSA LOGAN</td>
<td>#2358 - Youth education in the equine industry provided by a national association</td>
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<td>JOHNATHAN DUKE</td>
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<td><strong>FACULTY MENTOR:</strong> DR. JORGE VARGAS</td>
<td>#2467 - An Engineering Approach to Improving MFSK Radar</td>
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<td>TAYLOR HARTMAN</td>
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<td><strong>FACULTY MENTOR:</strong> DR. KHEM POUDEL</td>
<td>#2395 - Big Data Optimization Comparison using Apache Spark and Apache Airflow</td>
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<td>JAMES EVANS, CHEYENNE JONES</td>
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<td><strong>FACULTY MENTOR:</strong> DR. APRIL WEISMILLER</td>
<td>#2328 - Investigating a New Oncogenic Pathway in Rhabdoid Cancers</td>
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<td>SCOTT HARTSELL, CALEB GRIFFY, NOLEN COLLINS</td>
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<td><strong>FACULTY MENTOR:</strong> DR. XIN YANG</td>
<td>#2352 - Utilization of A Traditional Machine Learning Method to Classify Autism Spectrum Disorder</td>
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<td>MIRANDA FAIN</td>
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<td><strong>FACULTY MENTOR:</strong> DR. YANGSEUNG JEONG</td>
<td>#2435 - Identification of skeletal trauma inflicted by scavengers in Murfreesboro, TN</td>
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<td>NASH HEARN</td>
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<td><strong>FACULTY MENTOR:</strong> DR. JOSHUA PHILLIPS</td>
<td>#2536 - An Analysis of Clustering Methods on Images</td>
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<td>SYDNEY FERGUSON, DANIEL L. BRYANT</td>
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<td><strong>FACULTY MENTOR:</strong> DR. ANTHONY FARONE</td>
<td>#2470 - Anti-inflammatory effects of Aurone-derived Triazoles on a Mouse Macrophage Cell Line</td>
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<td>AMANDA HEATH, JORDAN E. KIRBY</td>
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<td><strong>FACULTY MENTOR:</strong> DR. SARAH BLEILER-BAXTER</td>
<td>#2521 - Adapting a Mathematical Creativity Reflection Tool for Group Use: A Project Overview</td>
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CAROLYNN HOBBS  
FACULTY MENTOR: DR. ANGELA BOWMAN  
#2524 - The Experience of Gender Construction in Male Competitive Cheerleaders

TAYLOR KIMBRO  
FACULTY MENTOR: DR. ANDREW OWUSU  
#2478 - Examining the Connection Between Nicotine Use and Physical Activity Among Adolescents in Tennessee

MAYOWA ISIOLAOTAN  
FACULTY MENTOR: DR. GAIA RANCATI  
#2508 - Gender Stereotyping and Cognitive Biases in Digital Voice Assistant Shopping

JORDAN KIRBY  
FACULTY MENTOR: DR. SARAH BLEILER-BAXTER  
#2338 - Instructor Perceptions of Student Example-Use

GRACIE JOHNSON  
FACULTY MENTOR: DR. MENG LIANG ZHANG  
#2356 - The Marriage of Nanoparticles and Peptoids

JENELLE KLINGAMAN, ARIEL HIGGINS, RHONDA HOFFMAN  
FACULTY MENTOR: DR. ALYSSA LOGAN  
#2451 - Comparison of Conditioned and Non-conditioned University Horses After Semester Break

MATTHEW JOHNSON  
FACULTY MENTOR: DR. KEVIN BICKER  
#2315 - Characterization of Antifungal Peptoid Dendrimers

LORI KLUKOWSKI, FONYA SCOTT, SARA SALISBURY  
FACULTY MENTOR: DR. RYAN SETH JONES  
#2447 - Describing How Teacher Questioning Elicits Student Thinking in an Interdisciplinary STEM Lesson

CHEYENNE JONES, JAMES EVANS  
FACULTY MENTOR: DR. APRIL WEISMILLER  
#2368 - Exploring New Oncogenic Pathways in Malignant Rhabdoid Tumor

ELIZABETH KOWALCZYK  
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#2331 - Understanding the Discrepancy in Perceptions Between Forensic Experts and Lay Individuals and their Consequences
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<td>#2398 - Comparison of Different Methods for Pricing European and American Options</td>
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<td>#2462 - Comparing Offline Evaluation Metrics for Conversational Recommender Systems</td>
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<td>#2382 - Using the Peptoid Library Agar Diffusion (PLAD) Assay to Identify New Antimicrobial Peptoids Against <em>Pseudomonas aeruginosa</em>.</td>
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<td>#2427 - DEEP LEARNING FOR ALZHEIMER'S DISEASE</td>
<td>Dr. Khem Poudel</td>
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<td>#2440 - Study of Sign-Invertibility of Graphs with Many Cycles</td>
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<td>#2415 - An ODE Model of A Breast Cancer Tumor: HER2+</td>
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<td>#2341 - Art Exhibit</td>
<td>Mr. Houston Fryer</td>
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<td>#2330 - Made by Mother</td>
<td>Dr. Carrie Pavel</td>
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<td>#2455 - Antibiotic Resistance eDNA in the Stones River Watershed</td>
<td>LACON PARTON</td>
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<td>#2365 - Discrimination Against Black Women in Reproductive Healthcare</td>
<td>BROOKLYNN PICKLE</td>
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<td>HANNAH PRICE, ALYSON SNYDER ARIEL HIGGINS</td>
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<td>#2487 - Genito-Pelvic Pain/Penetration Disorders: Diagnosis, Treatment and Beyond</td>
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<td>#2457 - Exploring the Relationship between STEM Graduate Teaching Assistants’ Perceived Teaching Autonomy and Pedagogical Discontentment: An Explanatory Mixed</td>
<td>KADENCE RIGGS, CHELSEA ROLLE</td>
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<td>#2500 - The Impact of Caregiver-Child Relationships During Development on the Coming out Process, Perceived Support, and Mental Health in Sexual Minority Adults</td>
<td>SARAH ROBERTS</td>
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<td>ALAHNA SHEW, ETHAN SWIGGART, IRIS GAO</td>
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<td>#2537 - Novel bacterial strains influence the physiological growth and development of Spinach (Spinacia oleracea)</td>
<td>JOSEPH SYDLO, YELYZAVETA ZUY</td>
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<td>#2531 - Exploring the Antioxidant Activity of Kefiran: Implications and Applications</td>
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<td>FACULTY MENTOR: DR. CIERA SCHOONOVER</td>
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Poster Session 1
10:30am-12:00pm

Z'KAYLA THOMAS
FACULTY MENTOR: DR. JESSICA GABY
#2480 - Influence of Diet on Body Odor and Social Judgments

WISDOM THOMPSON
FACULTY MENTOR: DR. SEKOU FRANKLIN
#2518 - The Cold War in the Caribbean

MARY TRAN
FACULTY MENTOR: DR. KEVIN BICKER
#2355 - Antifungal Peptoid Optimization via an Iterative Structure-Activity Relationship (SAR) Study

ZOEY WARD
FACULTY MENTOR: DR. SAMUEL HARUNA
#2424 - Influence of Cover Crop on Soil Hydraulic and Physical Properties after Growth Termination

DAMAUJAH WEAVER-ATWATER, KATE MATHEWS
FACULTY MENTOR: DR. GAIA RANCATI
#2511 - Superbowl Commercials' Effectiveness in Creating a Diverse and Inclusive Brand Image: A Neuromarketing Approach

CHRISTOPHER WINFREY, PIRO MELEBY
FACULTY MENTOR: DR. LEI MIAO
#2445 - Using Big Data and Machine Learning to Rank Traffic Signals in Tennessee
Performance Overview

12:00 - Strings by Jasmine Dillon

12:05 - Sky Never Ends

12:25 - Music performances by Sofia Lynch & Emily O'Neal

12:40 - Play readings by Lillian Reid, Christopher Cooper, and Mackenzie Johsnon

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THE LINEUP

**DANCE**

**Jasmine Dillon**
Marketing Coach, Founder of Eagle Business

**THEATRE**

**Jen Cunic**
Playwright & Director
Sky Never Ends

**Julia Vairetta**
Actor
Sky Never Ends

**Nyla Story**
Actor
Sky Never Ends

**Caitlin McMahan**
Actor
Sky Never Ends

**Naomi Laurent**
Actor
Sky Never Ends
Performance Overview

12:00 - Strings by Jasmine Dillion

12:05 - Sky Never Ends

12:25 - Music performances by Sofia Lynch & Emily O’Neal

12:40 - Play readings by Lillian Reid, Christopher Cooper, and Mackenzie Johnson
Jasmine Dillon is a contemporary dancer who has been dancing for 17 years. She has studied ballet, jazz, hip hop, pom, lyrical, contemporary, West African and Latin. She has choreographed for many dance teams, dance camps, intensives, and the productions Moana, Matilda, and Newsies. She has recently been afforded the opportunity to perform at the Frist Art Museum in Nashville, TN and the Contemporary Art Museum in Jacksonville, FL with the Kara Walker art exhibit, “Cut to the Quick”. In the summer of 2022, she attended a West African dance intensive in Senegal, Africa, and the American Dance Festival on a full scholarship. Jasmine enjoys teaching jazz, creative movement, and hip hop where her passion for children and dance shine. She is currently enrolled at Middle Tennessee State University studying Psychology and Dance Education. Currently, she is a performer for the MTSU Dance Theatre and the MTSU Performing Arts Company. In the near future her plans are to own a School of the Arts to provide a safe space for children to explore the arts.

Strings is about the emotions I’ve felt through past and present relationships. The movement you will see was created from a journal I started in 2016. I consider this piece to be an ongoing work as I mature and experience other relationships; therefore, the ending is unknown.

Sky Never Ends is a lyrical play exploring the blurred lines of existence. It is the story of a young hunt named Luca "Bringer of Light" who is struggling to make sense of their own life in relation to the life of the world—both tangible and looming in shadow. “Sky” looks deeply into the interplay of spirit, soul, mind, and body—exploring how we as people might claim our whole selves. The story takes place in the Rocky Mountains during the turn of winter in the mid-1300s amidst the ruins of a nomadic hunting camp. Leaning into the deep connection with creation, the project will be performed outdoors, among the trees, grass, sky, and dirt. This piece is rooted in the art of oral storytelling, music, and movement.

The portion of the play being presented at Scholar’s Week is a compilation of all the introductions and origin stories in the play. The scenes include the introduction to the world of the play, the beginnings of Luca’s story, the origin of Zahleh, and the origin of Abital "Great Shadow Spirit"
CREATIVE PERFORMANCE HALFTIME SHOW  
12:00-1:00PM  
STUDENT UNION BALLROOM

Jen Cunic (Playwright/Director) is a Senior Theatre Major at MTSU graduating May 2023. Jen believes deeply in the power of story to bring healing and light to our whole beings through igniting hopeful imagination. Jen is humbled and grateful for the opportunity to share this story as the culminating project at the end of her 9-year undergraduate journey. She is grateful to Lauren Shouse for her kindness, encouragement, and support in serving as the faculty mentor for this project, and to the incredible cast of “Sky” that is bringing this story to life.

Julia Vairetta (Nishant) is a sophomore here at MTSU. She is majoring in theater, with a minor in agriculture. Julia found her passion for theater in high school and has since had the pleasure of joining MTSU’s 2021 production of Stop Kiss as the female understudy. She’s spent the last few semesters dabbling in projections tech and sound engineering in the theater, and now returns to acting for this wonderful play. Julia would like to thank her friends and family, for their endless support in her endeavors, as well as her fellow actors and director, for welcoming her into this fantastic piece.

Nyla Story (Abital) is an 18-year-old Freshman Theatre Major at Middle Tennessee State University. Nyla begins her college acting career by making their debut as “The great shadow spirit” Abital in Sky Never Ends. With musicals usually being at the forefront of their theatre focus, Nyla has been given the opportunity to act in her first full-length play. Nyla would love to give special thanks to their girlfriend Lily for being so supportive and encouraging during the making of this show, her director Jen for making this production possible, and their wonderful friends.

Caitlin McMahan (Lilith) is a Senior Theatre Major. Caitlin’s most recent roles were Molly Aster in MTSU’s “Peter and the Starcatcher” Tina Denmark in TN Tech University’s “Ruthless the Musical”, and Asher in MTSU’s The Giver. She would like to thank her family for always being incredibly supportive and the everyone working on the show for the great experience!

Naomi Laurent (Itzal) is in her second year in the MTSU Theater program. This is her second show with the department. She is very excited for this show and to keep growing here!

Tiffany Haynes (Luca) is a sophomore at Middle Tennessee State University and is majoring in Theater Education. She is playing the role of Luca. Tiffany hopes you enjoy the show!
Emily O’Neal began performing in her local community in North Florida and writing songs at age 13. She immediately fell in love with the process of songwriting and it became an outlet for expressing her emotions. Emily’s songwriting accolades include being labeled as “One To Watch” by Nashville Songwriters Association International, being a semi-finalist for the Music City Song Star competition, and being chosen as a 2021 BMI John Lennon Scholarship winner for her single Paint Me. Now living in Tennessee, O’Neal is a songwriting major at Middle Tennessee State University and continues to create and release new music.

Performing:
Villain (2:40) and Watercolor (3:40)

Sofia Lynch is a singer/songwriter based in Nashville, TN. Born in Columbia, South Carolina, the young musician began writing songs at age 9, and released her first EP, titled “In My Mind” at age 14. Her music has garnered thousands of streams across digital platforms, and she has worked with Grammy award-winning producers and songwriters. She is currently working on her second studio album, and her work can be heard at sofialynchmusic.com.

Performing:
Lately (3:27), Gettysburg (3:52), and Mr. Brightside (Cover) (3:15)
Lillian Reid is a senior at Middle Tennessee State University studying English and Sociology, a MTSU Peck Award recipient, and a recipient of the Homer Pittard Creative Writing Scholarship. Her play “Loose Ends” was published in the 2022 Southern Literary Festival Anthology. In her free time, Lillian enjoys trying new coffee, loving on animals, and spending time in nature.

(Working) Play Title: *Porch Watching*

Synopsis: After the death of Mary’s parents, she must learn how to balance the passionate, adventure filled life she once knew with the loneliness and grief of life as an orphan.

Christopher Cooper is a Junior Theatre Education major at Middle Tennessee State University. While the majority of his theatrical experience has been consumed by performance, he can often be seen directing, music directing, and scenic designing; he is highly passionate about playwriting – so much so that he just added a writing minor! A virtual staged reading of his play Eclipse was developed and presented in partnership with Nashville Repertory Theatre / The Theater Bug in 2021. As well, he had the great privilege of collaborating with local youth artists to write Quaraneened with The Theater Bug in 2020. He is ecstatic to add Falling to this list. All theatrical development is a collaborative effort; Chris would like to think his parents for their endless flexibility, Dr. Barnett and peers for their constant contributions to workshopping, and director Caiti Milligan and cast for their passion and will to commit to a new, little story.

Play Title: *Falling*

Synopsis: The death toll is five hundred ninety-six. I repeat...The bodies of five hundred ninety-six birds have been found. In the wake of an absurd tragedy in Derby Line, Vermont, spectacularized Izzy Carter copes with her recovery process as she manages her own collegiate endeavors and the human catalysts around her. Falling is a humorous and enthralling exploration of trauma and the ways we push past the dark and soar above.
Makenzie Johnson

Bio: Storytelling lies at the center of all my pursuits. As a Video and Film Production major, I thought screenwriting would be my only career venture; however, upon discovering what the theatre department has to offer at MTSU, I quickly became obsessed with playwriting. Learning from many artistic mediums is what I identify most with as a writer. I mostly write about the Appalachian south because it is where I am from. I grew up in the mountains of east Tennessee, but what I desire most is to expand my experience by traveling more. As I result, my writing shall expand, too.

Play Title: Hollers in the Holler

Synopsis: Gatlin and Forest, two brothers usually confined to their property, decide to venture under the forbidden barbed wire that divides their land from uncleared mountain landscape. They search for the river their father used to take them to, back when they had supervision and were allowed to venture that way. Alone, though, they struggle to find the route, leaving their mother and a semi-trustworthy police chief to try and get to them before any of the unseen dangers of the forest do.

A very special THANK YOU to all our creative performers!
### Poster Session 2
1:00pm-2:30pm

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<td>PATIENCE AKANWOGBA</td>
<td>#2526 - The Relationship Between Substance Abuse and Violence Among Tennessee High School Students</td>
<td>Dr. Angie Bowman</td>
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<td>KENDALL BENEDICT, HUNTER BRADY</td>
<td>#2454 - Viral Disinfection of Porous Materials Using Chlorine Dioxide Gas</td>
<td>Dr. Anthony Newsome</td>
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<td>MARZEA AKTER, JADE MURRAY, JACOB GRONES</td>
<td>#2538 - Effect of Acute Oxytocin Administration on Social Behavior in Male and Female Mice</td>
<td>Dr. Tiffany Rogers</td>
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<td>AVERY BIDDLE</td>
<td>#2384 - Collaborative Dance Film</td>
<td>Dr. Aaron Allen Jr.</td>
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<td>ERIKA ALLEN, DR. KAROLINA NIEBERLE, ANDY TEETERS, SHAUN BURGESS ANNA ROBINSON, HANNAH HIGHTSHUE, BROOKE BUSBEE, TARA KIRKPATRICK</td>
<td>#2314 - Leader and Follower Identity Invention: How internal and external constraints influence identity dynamics</td>
<td>Dr. James Houston</td>
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<td>DEVYN BLACKMORE, BREANNA O’NEAL, LASHAUNA COLLIER, AUTUMN MERRITT, KEHINDE ADEYEMI</td>
<td>#2550 - Adolescent 5: A Prospective Family Life Education Program for Adolescents with Terminally-Ill Parents</td>
<td>Dr. Rebecca Oldham</td>
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<tr>
<td>BENJAMIN ANTWI; JAKE PRY, PH.D, MPH</td>
<td>#2496 - Are chronic disease indicators associated with living near treatment, storage, and disposal facilities (landfills) in the southeastern United States?</td>
<td>Dr. Kahler Stone</td>
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<tr>
<td>CATHERYN BOLICK</td>
<td>#2362 - Evaluating Parkin-Dependent Changes in RNA Expression During Periods of Mitochondrial Stress Induced by Depolarizing Agents</td>
<td>Dr. David Nelson</td>
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<td>EMMA BEARD</td>
<td>#2468 - Literacy in Latin America</td>
<td>Dr. Katie Schrodt</td>
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<tr>
<td>SAV BUIST</td>
<td>#2344 - Crows, Ravens, Magpies, and Jays, and the Stolen Things They Say: The Mechanisms of Vocal Mimicry in Corvids</td>
<td>Dr. Danielle Brown</td>
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**Poster Session 2**

1:00pm - 2:30pm

**GABRIELLE CHESAK, CYNTHIA CHAFFIN**
FACULTY MENTOR: DR. ANGIE BOWMAN

#2551 - Rural Stigma Toward Those Who Use Drugs: A Comparison of Law Enforcement and Community Members

**ERIK DEMPSEY, DOMANIQUE RICHARDS, TAYLOR ARMISTEAD**
FACULTY MENTOR: DR. ELIZABETH SMITH

#2364 - How the Benefits of Culinary Interventions in a Post-Secondary Educational Environment Influences Eating Habits

**JENNIFER CUNIC**
FACULTY MENTOR: MS. LAUREN SHOUSE

#2393 - "Sky Never Ends."

**EMAA ELRAYAH, CHRIS HANSEN**
FACULTY MENTOR: DR. JENNIFER HERRINGTON

#2553 - Development of Size-Discrete PLGA Nanoparticles for Uterine-Targeted Drug Delivery

**MAIMOONAH DABSHEE, VANESSA TATE, MORGAN FARRINGTON**
FACULTY MENTOR: DR. KRISTI STRINGER

#2350 - A Mixed Methods Community-Based Participatory Research Project to Assess Support for the Alabama Injection Associated Infection Elimination Act

**CASEY EPTING, RAHMI AINI, SARA BROWNELL**
FACULTY MENTOR: DR. ELIZABETH BARNES

#2504 - An experimental study testing the effect of biology instructor identity on reducing students’ perceived conflict between evolution and religion

**JACOB DAVIS, TASHINA FUGATE**
FACULTY MENTOR: DR. CARRIE PAVEL

#2559 - Give and Take Crate - Mobile Retail Pop-up

**SAMANTHA FLETCHER, KRISTIN FRYE**
FACULTY MENTOR: DR. JENNIFER LOVETT

#2337 - Identity and Positioning During a Technology-Enhanced Mathematics Task: Who Takes the Stage?

**VALERIE DAVIS**
FACULTY MENTOR: DR. JESSICA ARBOUR

#2420 - Mapping an Unseen Landscape: An Analysis of Scale Texture in Two Darter Fishes

**FRANK DREMEL**
FACULTY MENTOR: DR. BILL CRABTREE

#2563 - Re-recording The Beatles’ Abbey Road for Dolby Atmos
Poster Session 2
1:00pm-2:30pm

**ALYSSA FREEMAN, KADENCE RIGGS, CHELSEA ROLLE**
FACULTY MENTOR: DR. GRANT GARDNER

#2407 - Defining a Research Agenda Related to STEM Graduate Student Teaching Professional Development

**YASEEN GINNAB**
FACULTY MENTOR: DR. FRANK BAILEY

#2321 - Analyzing the Ability of Astragalus tennesseensis to Accumulate Selenium

**OLIVIA GAMBLE**
FACULTY MENTOR: DR. JAISHREE RANGANATHAN

#2540 - Mental Health Website Research

**KENDRA GIVENS, DAVID LUDWIG**
FACULTY MENTOR: DR. JOSHUA PHILLIPS

#2374 - StrXL: Modeling Potentially Infinite Length Sets of Data with Machine Learning

**AURA GANSTER, HARRIS SMITH, T. GARRETT JUSTICE**
FACULTY MENTOR: DR. SEOCKMO KU

#2388 - Study of Saccharomyces boulardii as a Probiotic Starter Culture in Makgeolli Production

**MIRANDA GIVENS, FAITH ZIEGLER, GABRIELLE CHESAK**
FACULTY MENTOR: DR. ANGELA BOWMAN

#2495 - The impact of the COVID-19 pandemic on the prevalence of substance use among Tennessee adolescents

**BEN GARRETSON, DANIEL WETTER, ERIN WESTERMAN, KAYLIN GARTON**
FACULTY MENTOR: DR. SAEED FOROUDASTAN

#2422 - MTSU Motorsports: A Hands-On Engineering Experience

**LUKE GORMSEN**
FACULTY MENTOR: DR. WILLIAM ROBERTSON

#2354 - Analysis of Electrical Coaxial Cable Ring Resonators

**KARMINA GHOBRIAL, COLE EASSON**
FACULTY MENTOR: DR. REBECCA SEIPELT-THIEMANN

#2358 - Examining the Effects of Turbidity on Biodiversity in the Stones River Watershed

**LAWRENCE GRIZZLE**
FACULTY MENTOR: DR. DAWN MCCORMACK

#2464 - Ancient Egyptian Chronology: Exodus Enigma
**Poster Session 2**  
1:00pm-2:30pm

**Phoenix Harris**  
**Faculty Mentor:** Dr. Charles Higgins  
#1655 - Quiet Day Curve

**Sarah Harris**  
**Faculty Mentor:** Dr. Angela Bowman  
#1657 - Student Preferences and Best Practices inline Nutrition and Food Science Education at Southeastern University

**Hunter Hudson, Riley Fyre, Hunter McMath**  
**Faculty Mentor:** Dr. Saeed Forouastan  
#1793 - Going Solar: MTSU and the 2022 Solar Splash Competition

**Hunter Hudson, Daniel Hanner, Maximilian Rauch**  
**Faculty Mentor:** Dr. Saeed Forouastan  
#1795 - Experimental Vehicle Program at MTSU engages students in the next phase of human space exploration

**Marina Khalil**  
**Faculty Mentor:** Dr. Rebecca Seipelt  
#1792 - Alternative Splicing of F36H2 Exon 3 in Response to Osmotic Stress in Nematodes

**Saman Kittani**  
**Faculty Mentor:** Dr. Xiaowei Shi  
#1766 - Communication-induced Resilience and Its Effects on Stress
GRESHAM GROVES  
FACULTY MENTOR: DR. CIERA SCHOOOver 
#2543 - An Analysis of Mental Health Disorders Often Associated with an Increased Risk of Suicide: Risk Factors, Comorbidities, and Treatments

SAMMI HAMDAN, KYLE DUBRAY, JORDAN TREUTEL, RAJENDRA PAUDYAL  
FACULTY MENTOR: DR. KHEM POUDEL 
#2426 - Using Machine Learning to Clean MEG Data

DANIEL HANNETT, CARLY CHURCH, RAFI LOCKHART  
FACULTY MENTOR: DR. SAEED FOROUDASTAN 
#2416 - 2023 MTSU NASA Human Rover Exploration Challenge

LILLIAN HARDIN, CODY OLSEN, CALEB ADOLF  
FACULTY MENTOR: DR. SAEED FOROUDASTAN 
#2413 - Going Solar: MTSU And The 2023 Solar Splash Competition

RAND HASAN, COLE EASSON  
FACULTY MENTOR: DR. REBECCA SEIPELT-THIEMANN 
#2361 - The Stones River Watershed has Little Chlorine Pollution and Moderate Biodiversity

EMILY HUNTSMAN  
FACULTY MENTOR: DR. ROBERTA CHEVRETTE 
#2347 - Using Cluster Criticism to Understand how _Euphoria_ Resonates with the Youth

KAELA WOLKIEWICZ, ETHAN SWIGGART  
FACULTY MENTOR: DR. YING GAO 
#2572 - Extraction efficiency of goldenseal (Hydrastis canadensis L.) using different solvents and plant tissues

SEVINCH KAMARIDINOVA, COLE EASSON  
FACULTY MENTOR: DR. REBECCA SEIPELT-THIEMANN 
#2387 - Investigating the Biodiversity - Forest Land Use Relationship in the Stones River Watershed

MARINA KHALIL, MADISON HATCHER, SOFIA BOTROS, ALYSSA EVERHART  
FACULTY MENTOR: DR. STEPHEN WRIGHT 
#2397 - Screening for Bacteriophage Capable of Infecting Tetragenococcus halophilus

REVANTH KUMAR KOMMU, MOVINUDDIN  
FACULTY MENTOR: DR. KHEM POUDEL 
#2394 - Credit Card Batch Processing in Banking System
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<td>Changes in Carbon and Nitrogen Stable Isotopes and Fatty Acid Biomarkers in Various Life Stages of the Laboratory Mayfly (<em>Neocloeon triangulifer</em>)</td>
<td>Dr. Mary Magada-Ward</td>
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<td>239</td>
<td>Seasonal Variation in Size, Carbon and Nitrogen Stable Isotopes, and Fatty Acid Biomarkers in Tetragnathid Spiders</td>
<td>Dr. Ryan Otter</td>
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<td>Dogmatism, Negotiation, and Wittgensteinian Therapy</td>
<td>Dr. Mary Magada-Ward</td>
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<td>248</td>
<td><strong>Supplemental essential amino acids, fatty acids, and marine-based calcium does not impact horse hoof growth</strong></td>
<td>Dr. David Nelson</td>
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<td>249</td>
<td>Investigating the Regulation of Cited1 and its Significance in IFNγ-Stimulated Macrophage Polarization</td>
<td>Dr. David Nelson</td>
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<td>Inside/Out: A Compilation of Spatial Audio</td>
<td>Mr. Michael Fleming</td>
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<td>249</td>
<td>Algorithms for the Discrete Gauss Transform</td>
<td>Dr. Jing Kong</td>
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<td>Effects of Fragrance Price on Perceived Job-related Competence</td>
<td>Dr. Jessica Gaby</td>
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<td>241</td>
<td>HealthCare Text Analytics using Recent ML Techniques</td>
<td>Dr. Khem Poudel</td>
</tr>
<tr>
<td>247</td>
<td>Experimental Analysis of Electrical Coaxial Cable Ring Resonators</td>
<td>Dr. William Robertson</td>
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Poster Session 2
1:00pm-2:30pm

FORAM PATEL
FACULTY MENTOR: DR. JOSHUA PHILLIPS
#2326 - Validating the 1GB1 Folding Pathway Using Greedy-Proximal A*

JOCELYN RAJKOWSKI
FACULTY MENTOR: DR. ANGIE BOWMAN
#2534 - Patient Perceptions on the Use of Artificial Intelligence in Healthcare: Rutherford County, Tennessee

YASH PATEL
FACULTY MENTOR: DR. JOSHUA PHILLIPS
#2544 - Performance Comparison of Some Machine Learning Methods on Chronic Kidney Disease

ANGELA RICHARDSON, ALICIA BURNS, BRIAN SEGOVIA, ELIZABETH SLAVINSKY
FACULTY MENTOR: DR. ELIZABETH SMITH
#2353 - A High Protein Intake Versus Low Protein Intake While in a Calorie Deficit

SHRUTHI PERNAA, BRIZA MARIE DEDICATORIA
FACULTY MENTOR: DR. MENG LIANG ZHANG
#2446 - The unique capability of DART-MS for the detection of less volatile components in ignitable liquids

SOPHIA ROBERTS, MARISSA PICKETT
FACULTY MENTOR: DR. ALISA HASS
#2345 - Don't Sweat It: An Exploration of Effective Heat Risk Communication to Today's Youth

HEATHER PIERGIES
FACULTY MENTOR: DR. ANGIE BOWMAN
#2469 - Physical Activity and Health-Related Quality of Life in Adolescents: Relationship Outcomes and Protective Factors

JENNIFER SANCHEZ
FACULTY MENTOR: DR. KAHLER STONE
#2548 - An examination of Public Health Impact: Centers for Disease Control COVID-19 funds in Tennessee

MONISRI PUNEPALLE RAVEENDRA
FACULTY MENTOR: DR. JOSHUA PHILLIPS
#2541 - Specific Field Extraction from Receipts using BERT and CLIP: A Comparative Study

LISA SCHRADER
FACULTY MENTOR: DR. KEVIN KRAHENBUHL
#2371 - Focusing on the Positive: The Impacts of Flourishing Mental Health on Student Academic Performance
| #2367 | The Relationship Between Dating-Related Violence and Mental Health Outcomes Among High School Students in Tennessee | ALONDRA SERRANO  
FACULTY MENTOR: DR. ANDREW OWUSU |
| #2530 | "Healthy for Life Initiative" | ELIZABETH SKELTON  
FACULTY MENTOR: DR. SANDRA POIRIER |
| #2355 | Synthesis and Biological Characterization of Cyclic Peptoids Against _Cryptococcus neoformans_ and _Candida albicans_ | ROSS SIBLEY  
FACULTY MENTOR: DR. KEVIN BICKER |
| #2335 | Synthesis and Biological Characterization of Cyclic Peptoids Against _Cryptococcus neoformans_ and _Candida albicans_ | HARRIS SMITH, GARRETT JUSTICE, STERLING ROGERS, TONY JOHNSTON  
FACULTY MENTOR: DR. SEOCKMO KU |
| #2529 | Assessing sorghum’s viability as a flavoring grain in whiskey production | PIPER SMITH, SYDNEY CHAPMAN, OWEN COLLINS  
FACULTY MENTOR: DR. ELIZABETH ANN SMITH |
| #2400 | Electrolyte Supplements: Useful for University Horses? | ALYSON SNYDER, ARIEL HIGGINS, RHONDA HOFFMAN  
FACULTY MENTOR: DR. ALYSSA LOGAN |
| #2476 | The Association Between Mental Health and Alcohol Usage Among High School Students in Tennessee | EH THA YU SOE, MIRANDA GIVENS  
FACULTY MENTOR: DR. ANDREW OWUSU |
| #2522 | Exploring Patterns of Identity Protective Cognition about Evolution among Undergraduate Biology Students | MADISON STEWART, SARA BROWNELL  
FACULTY MENTOR: DR. ELIZABETH BARNES |
| #2491 | Comparison of Food Waste Management Practices at MTSU using Waste Reduction Model (WARM) | GITA SWAMINATHAN, RILEY STEVENSON  
FACULTY MENTOR: DR. MINA MOHEBBI |
| #2340 | Relationship Between Diet and Grade Point Average in College Students | GARRETT TESSMER, JOSHUA THAMMATHONG, SOUVIK BANERJEE  
FACULTY MENTOR: DR. APRIL WEISMILLER |
JOSHUA THAMMATHONG, GARRETT TESSMER, KAYLEE CHISAM, APRIL WEISMILLER
FACULTY MENTOR: DR. SOUVIK BANERJEE
#2486 - Design and Development of Novel Pyrimidine and Pyrazine based Colchicine Binding Site Inhibitors for Application in Neuroblastomas

LINDSEY TRAN
FACULTY MENTOR: DR. DANIEL ERENSO
#2483 - Creation of electro-magnetic assisted “Star-like” formation from cancer cells using laser trapping technology

VICTORIA TREVINO, SHALYN SEARS, ALEX HAMILTON
FACULTY MENTOR: DR. KATHRYN BLANKENSHIP
#2488 - The Comparison of Two Different Word-Learning Strategies in Undergraduate University Students

JOSEPH VANTREASE
FACULTY MENTOR: DR. BRIAN MUeller
#2327 - Metamorphosis

TECKANOUS VANTREASE
FACULTY MENTOR: DR. KATHRYN BLANKENSHIP
#2363 - Evaluating Dyslexia Knowledge in School Professionals

WESTON WILLIAMS, DOOFAN EKE, ANNA ARNOLD
FACULTY MENTOR: DR. SEOCKMO KU
#2443 - Rapid Foodborne Pathogen Detection via Tri-membrane microfilter bioseperation process

ZOE WILLOTT
FACULTY MENTOR: DR. COSETTE COLLIER
#2406 - Women in Sound: Gender Discrimination in the Music Industry

SYDNEY WILSON, RACHAEL QUINBY
FACULTY MENTOR: DR. CHUCK HIGGINS
#2403 - Analyzing the Spectral Characteristics of Propagation Teepees

SANJU YELISALA
FACULTY MENTOR: DR. JOSHUA PHILLIPS
#2542 - Restaurant Suggestion System Using Sentiment Analysis On Online Menu Item Reviews

ZIHAN ZHANG, YUQI DUAN
FACULTY MENTOR: DR. DON HONG
#2390 - Machine Learning Based Actuarial Models for Medical Loss Prediction
FAITH ZIEGLER, MIRANDA GIVENS
FACULTY MENTOR: DR. ANDREW OWUSU

#2477 – The Relationship Between Body Weight Perception and Actual Body Weight
KAILAH BOYER
#2315

AUDREY ISOM
#2419

SOPHIA BULLINGTON
#2336

MIKAE JONES
#2442

BOBBY DAVIS
#2389

JACEN MOREL
#2463

EMILY DYE
#2399

GAVIN MYERS
#2471

JADA DYE
#2405 -

TRISTEN SEPUTIS
#2485
TALESE VAUGHN
#2501

DYLAN WINEGAR
#2531

JERSEY YANCEY
#2552