

SCHOLARS WEEK

MIDDLE
TENNESSEE
STATE UNIVERSITY

2019 UNIVERSITY EXPOSITION

FRIDAY, MARCH 22

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FACULTY POSTERS

- 100 "A White Man's Country and a White Man's Government"? Discourses of Race and Masculinity in the Nashville Press Suffrage Coverage, 1910-1920. Jane Marcellus, Faculty, Media and Communication
- 101 Northwest Flow of Groundwater within the Overall Creek Watershed, Rutherford County, Tennessee. Mark Abolins, Faculty, Geosciences; Albert Ogden, Geosciences; Josh Upham, Grad student, Geosciences; Leanna Davis, Geosciences
- 102 American Consultants and the Marketization of Television News in the United Kingdom in the 1990s. Madeleine Liseblad, Faculty, Journalism and Strategic Media
- 103 A Presumed Media Influence Exploration of #MeToo Tweets During the Ford-Kavanaugh Hearing. Ken Blake, Faculty, Media and Communication; Tricia Farwell, Faculty, Media and Communication; Valen Wilcoxon, Grad student, Media and Communication; Jennifer Woodard, Faculty, Media and Communication

UNDERGRADUATE POSTERS

- 300 Said in the Dark, Heard in the Daylight: Unearthing the Secrets of the 1921 Greenwood Massacre. Christopher Hyde, Student, English; Laura Dubek (Faculty sponsor) English
- 301 Facilitating Neural Networks for Multi-Task Learning in Partially and Non-Observable Environments. Lucas Remedios, Student, Computer Science; Joshua Phillips, (author/Faculty Sponsor), Computer Science
- 302 Food Security Status of College Students Attending a Moderate-Sized University. Korissa Hobbs, Student, Human Sciences; Elizabeth Smith, (author/Faculty Sponsor), Human Sciences; Chandra Story, Faculty, Health and Human Performance; Ying Jin, Faculty, Psychology
- 303 The Effects of Divalent Cations on the ATPase Activity of Topoisomerase II. Alexis Brimingham, Student, Chemistry; Donald Burden, (author/Faculty Sponsor), Chemistry
- 304 Probing the Differences in the Emission Profiles of JUUL Electronic cigarettes Based on Nicotine and Nicotine Salts. Kittichoti Simakorn, Student, Chemistry; Ngee Chong (Faculty sponsor) Chemistry

- 305 Relationships between Skin Carotenoids, Body Mass Index, and Fruit/Vegetable Intake. Daniela Vega Little, Student, Human Sciences; Elizabeth Smith, (author/Faculty Sponsor), Human Sciences; Janet Colson, Faculty, Human Sciences;
- 306 N-Substituted Azaaurones: Synthesis and Photochemistry. Asfah Mohammed, Student, Chemistry; Scott Handy (Faculty sponsor) Chemistry
- 307 The Relationship between Sexual Behavior and Substance Use among Tennessee High School. Tatiyanna Sanders, Jasmine Williams, Ashley Mallard (Students, Health and Human Performance); Garvita Thareja, Grad student, Health and Human Performance; Andrew Owusu (Faculty sponsor) Health and Human Performance
- 308 The Effects that Memory has on Chamulas. Kelly Parker, Student, Media and Communication; Rebekka King (Faculty sponsor) Religious Studies
- 309 Examining the Relationship Between Substance Abuse and Violent Behavior Among High School Students in the U.S. Seneka Robertson, Chelsea Cox, Kiyanna Taylor (Students, Health and Human Performance); Garvita Thareja, Grad student, Health and Human Performance; Andrew Owusu (Faculty sponsor) Health and Human Performance
- 310 Dimensional Attention Learning For Working Memory. Ngozi Omatu, Student, Biology; Joshua Phillips (Faculty sponsor) Computational Science
- 311 *Caenorhabditis elegans* as an Infection Model for the Novel Intracellular Bacterium *Candidatus Berkiella cookevillensis*. Chelsey Molina, Student, Biology; Desta Kidane, Grad student, Biology; Paola Molina, Grad student, Biology; Anthony Farone, (author/Faculty Sponsor), Biology; Mary B. Farone, Faculty, Biology
- 312 Is Gratitude the Reason Mindful Couples are Happier? Robyn Sessler, Student, Psychology; Cameron Gordon (Faculty sponsor) Psychology
- 313 Illuminating Structural Differences in Donor-Pi-Acceptor Dyes with (Thio)barbituric Acid Acceptors. Gabriel Gwirtsman, Student, Chemistry; Darshit Patel, Student, Chemistry; Anna Pietrzak, Visiting scholar, Chemistry; Andrienne Friedli, (author/Faculty Sponsor), Chemistry
- 314 Modeling the PINK1/Parkin Signaling Pathway. Neal Halper, Student, Mathematics; Rachel Leander (Faculty sponsor) Mathematics

- 315 Intrasexual Behaviors in the Nonnative Mediterranean House Gecko, *Hemidactylus turcicus*. Clinton Warren, Student, Biology; Matthew Klukowski (Faculty sponsor) Biology
- 316 Relationship between Income and Food Insecurity in African American and White College Students. Naiya Drayton, Student, Health and Human Performance; Chandra Story, (author/Faculty Sponsor), Health and Human Performance; Elizabeth Smith, Faculty, Health and Human Performance; Ying Jin, Faculty, Psychology; Isaac Yi, Grad student, Psychology
- 317 Analysis of Bioactive Crude Polysaccharide Composition in White and Red American Ginseng (*Panax Quinquefolius*) Roots. Michael Dixon-Morgan, Student, Biology; Daniel Bryant, Grad student, Biology; Rajarshi Ghosh, Grad student, Biology; Shannon Smith, Grad student, Biology; Paul Kline, Faculty, Chemistry; Anthony Farone, (author/Faculty Sponsor), Biology
- 318 Preaching to the Choir: 1906 Atlanta. Jason Smith, Student, English; Laura Dubek (Faculty sponsor) English
- 319 Spider Silk: A Brief Overview. Autumn Trail, Student, Textiles, Merchandising, and Design; Rick Cottle (Faculty sponsor) Textiles, Merchandising, and Design
- 320 Hands Up, Don't Shoot: The Massacre in 1968 Orangeburg, South Carolina. Grace Cade, Student, English; Laura Dubek (Faculty sponsor) English
- 321 The Relationship Between Drinking Alcohol Before Sex and Being Physically Forced To Have Sex. Kiana Thompson, Naiya Drayton (Students, Health and Human Performance); Garvita Thareja, Grad student, Health and Human Performance; Andrew Owusu (Faculty sponsor) Health and Human Performance
- 322 Validation and Annotation of Novel Gender-related *Cryptococcus neoformans* Genes Identified by RNA Sequencing. Marissa Turner, Student, Biology; Madonna Ghobrial, Student, Biology; Valerie Risk, Student, Biology; Rebecca Seipelt-Thiemann (Faculty sponsor) Biology
- 323 Analysis of Ginsenoside Content in Tennessee Wild Ginseng by Optimized Standard CODEX Method and High Performance Liquid Chromatography (HPLC). Oscar Valenzuela, Student, Chemistry; Yuhang Guo, Visiting scholar, Agriculture; Ying Gao, Faculty, Agriculture; Mengliang Zhang, (author/Faculty Sponsor), Chemistry
- 324 Fluorescent Tagging of Genomic Parkin in Human Osteosarcoma Cells Using CRISPR Technology. Gabriella Morin, Student, Biology; Jiwoo Park, Student, Biology; Rebecca Seipelt-Thiemann (Faculty sponsor) Biology
- 325 Whole Cell Biocatalysis of Major Ginsenosides in Ginseng Beer Using *Saccharomyces* spp. and *Lactobacillus* spp. Caldwell Charlet, Jordan Beville, (Students, Agriculture); Seockmo Ku (Faculty sponsor) Agribusiness and Agriscience
- 326 One Egg Over-Medium: Applying Marshal McLuhan's Theory to the "Instagram Egg". Alea Hollandsworth, Student, Communication Studies; Patrick Richey (Faculty sponsor) Communication Studies and Organizational Communication
- 327 Augmented Reality to Improve Student STEM Success. Myranda Uselton, Student, Chemistry; Levi Madden, Student, Computer Science; Neal McClain, Staff, James E. Walker Library - Systems Department; Andrienne Friedli, Faculty, Chemistry; John Wallin, Faculty, Computational Science; Amy Phelps (Faculty sponsor) Chemistry
- 328 Examining SNF3's Role in the Virulence of *Cryptococcus neoformans*. Prianca Griggs, Student, Biology; Erin McClelland (Faculty sponsor) Biology
- 329 Châtiment. Stephanie Bottum, Student, Theatre; Claudia Barnett (Faculty sponsor) English
- 330 Insight into Interrelationships among Density, Viscosity, Crystallinity, and Chemical Composition within Hypocrystalline Lavas, Mt. Hood Volcano, Oregon. Abigail Choisser, Student, Geosciences; Warner Cribb, (author/Faculty Sponsor), Geosciences
- 331 Holy Week Uprising and the Legacy of Martin Luther King, 1968-2019. Siera Ransom, Student, Health and Human Performance; Laura Dubek (Faculty sponsor) English
- 332 A Social Network Analysis of Introductory Biology Students' In- and Out-of-Class Study Group Interactions. Gina Bishara, Student, Biology; Joshua Reid, Grad student, Mathematics and Science Education; Grant Gardner (Faculty sponsor) Biology
- 333 Mathematical Modeling of Cellular Growth to Maintain Cell Traits. Jasmin Laurel, Student, Mathematics; Rachel Leander (Faculty sponsor) Mathematics
- 334 CRISPR-based Knock-in of BCAT-deficient *Cryptococcus neoformans*. Bethany Poff, Student, Biology; Niah Frantzen, Student, Biology; Rebecca Seipelt-Thiemann (Faculty sponsor) Biology
- 335 Nucleophilic Substitution Reactions of [*closo*-B10H8-1,10-(IPh)₂]. Tegan Schafer, Student, Chemistry; Mustapha Abdulmojeed, Grad student, Chemistry; Anna Pietrzak, Visiting Scholar, Chemistry; Andrienne Friedli, (author/Faculty Sponsor), Chemistry; Piotr Kaszynski, Faculty, Chemistry
- 336 *Cronobacter sakazakii*, a Possible Intracellular Bacterium in *Acanthamoeba polyphaga*. Atia Ahmed, Student, Biology; Mary Farone (Faculty sponsor) Biology
- 337 Improved Electron Field Emission from Vertically Aligned Carbon Nanotubes Synthesized on Stainless Steel Substrate. Matthew Kurilich, Student, Physics and Astronomy; Suman Neupane (Faculty sponsor) Physics and Astronomy
- 338 Developing a Method to Analyze Protein Protein interaction in *C. elegans*. Jessica Rodriguez, Neal Halper, (Students, Chemistry); Justin Miller (Faculty sponsor) Chemistry
- 339 Assessment of Pesticide Impacts on Soil Microbial Viability Using Fluorescence, Nitrate, and Carbon Dioxide Assays. Maria Fernanda Laureano Tostes Coimbra, Student, Chemistry; Zachary Forbes, Student, Biology; Kelsie Summers, Student, Biology; Cameron Oldham, Student, Biology; Erik Manovic, Student, Chemistry; Ilija Zecevic, Student, Chemistry; John DiVincenzo, (author/Faculty Sponsor), Chemistry
- 340 MTSU Rover Team: Human-Powered Exploration. Kylan Burse, Student, Engineering Technology; Saeed Foroudastan (Faculty sponsor) Engineering Technology
- 341 Early and Late Season Kudzu (*Pueraria montana* var. *lobata*) Age Variability Effects on Total and Nutrient-specific *in situ* Rumen Degradation. Joseph Gulizia, Student, Agriculture; Kevin Downs (Faculty sponsor) Agribusiness and Agriscience
- 342 Comparative Ginsenoside Analysis of Red and White American Ginseng (*Panax quinquefolius*) Roots by HPLC-CAD. George Schroeder, Student, Biology; Rajarshi Ghosh, Grad student, Chemistry; John DuBois (Faculty sponsor) Biology
- 343 A Comparative Approach of Virtual Curation and Metric Analysis of Human Skeletal Remains. Regan Edwards, Student, Biology; Devin Adcox, Student, Sociology and Anthropology; Hannah Newcomb, Student, Sociology and Anthropology; Tiffany Saul (Faculty sponsor) Sociology and Anthropology
- 344 Synthesis and Size Dependent Magnetic Properties of Iron Oxide Nanoparticles. Isaiah Sterkel, Student, Physics and Astronomy; Saeed Kamali, Faculty, Physics and Astronomy; Suman Neupane, (author/Faculty Sponsor), Physics and Astronomy
- 345 Why Perceived Body Image May be Key to Addressing Obesity among High School Students in the United States. Aundria McCadney, Akira Jones, Kianna Garner (Students, Health and Human Performance); Garvita Thareja, Grad student, Health and Human Performance; Andrew Owusu (Faculty sponsor) Health and Human Performance
- 346 How Machiavelli's *The Prince* Relates to Incumbent Elections.

- Miura Rempis, Student, Political Science; Patrick Richey (Faculty sponsor) Communication Studies and Organizational Communication
- 347 The Effect of Elicitor Stimulation on Industrial Hemp (*Cannabis sativa*) Varieties in a Hydroponic System. Rachel Bailey, Student, Biology; John DuBois (Faculty sponsor) Biology
- 348 Fluorescent-Tagging of Genomic PINK1 in Human Osteosarcoma Cells Using CRISPR/Cas9 Technology. Hannah Jones, Charles Teeples (Students, Chemistry); David Nelson, Faculty, Biology; Rebecca Seipelt-Thiemann, (author/Faculty Sponsor), Biology
- 349 Purification and Composition of Polysaccharides Isolated from *Cannabis sativa* Cherry Hemp Root. Kami Dyer, Student, Chemistry; Daniel Bryant, Grad student, Biology; Evidence Nwangwa, Student, Chemistry; Rajarshi Ghosh, Grad student, Biology; Anthony Farone, Faculty, Biology; Paul Kline, (author/Faculty Sponsor), Chemistry
- 350 Chaos in Cincinnati: An Examination of a 2001 Race Riot in my Hometown. Maddison Falter, Student, English; Laura Dubek (Faculty sponsor) English
- 351 Solvatochromism in a Series of Dyes with Rhodanine or Tetracyanofuran Acceptors. Wesley Kirkland, Student, Chemistry; Mary Sadek, Student, Chemistry; Anna Pietrzak, Student, Chemistry; Andrienne Friedli, (author/Faculty Sponsor), Chemistry
- 352 The Endosymbiotic Bacterial Community of the Causative Agent of White Nose Syndrome, (*Pseudogymnoascus destructans*) of Bats. Ashton Reece, Student, Biology; Kylie Moe, Student, Biology; Matt Grisnik, Grad student, Biology; Donald Walker, (author/Faculty Sponsor), Biology
- 353 Fungal Endophyte Isolation and Identification from *Vitis aestivalis* Norton/Cynthiana Grapevines from Virginia and New York. Zachary Lay, Student, Biology; John Dubois, Faculty, Biology; Tony Johnston, Faculty, Agriculture; Rebecca Seipelt-Thiemann, (author/Faculty Sponsor), Biology
- 354 Effects of Vaping Conditions on the Formation of Volatile Organic Compounds in Electronic Cigarette Emissions. Luke Philipose, Student, Biology; Ngee Chong (Faculty sponsor) Chemistry
- 355 The Past is Prologue: What 1957 Little Rock Teaches Us about Our Schools Today. Skylar Smith, Student, English; Laura Dubek (Faculty sponsor) English
- 356 Reduction of Benzils (1,2 diketone) to Benzoin: Reactivity and Regioselectivity. Kerri Harger, Student, Biology; Scott Handy (Faculty sponsor) Chemistry
- 357 Remember Your Retiquette. Jessica Wright, Student, Political Science; Patrick Richey (Faculty sponsor) Communication Studies and Organizational Communication
- 358 Gene Discovery and Annotation of *Gardnerella vaginalis*, a Bacterium Associated with Bacterial Vaginosis and Pre-term Labor. Marina Ibrahim, Student, Biology; Rebecca Seipelt-Thiemann, (author/Faculty Sponsor), Biology; Tim Miller, Faculty, Computational Science
- 359 Using CRISPR to create reconstituted strains in *C. neoformans* BCAT gene. Madison Childers, Student, Biology; Erin McClelland, (author/Faculty Sponsor), Biology
- 360 Somatic Embryogenesis from *Vitis aestivalis* 'Norton/Cynthiana' Grape Tissue Callus Derived from Anther and Ovary Explant Tissues. Rebekkah Riley, Student, Biology; Sara Moore, Student, Biology; John DuBois (Faculty sponsor) Biology
- 361 Trayvon Martin: A Contemporary Narrative of American Race Relations. Laurel O'Neill, Student, English; Laura Dubek (Faculty sponsor) English
- 362 Synthesis of a Novel Phosphorus Flame Retardant Incorporating Poly(Tetramethylene Oxide). Nolton Woods, Student, Chemistry; Dwight Patterson (Faculty sponsor) Chemistry
- 363 Link between Prosody Sensitivity and Reading Comprehension: A Combined ERP and Individual Difference Approach. Brenna Wolfe, Student, Chemistry; Timothy Nelson, Faculty, Literacy Studies; Cyrille Magne, (author/Faculty Sponsor), Psychology
- 364 Murder in the Sanctuary: The 2015 Charleston, South Carolina Massacre. Summer Matthews, Student, English; Laura Dubek (Faculty sponsor) English
- 365 #SayHerName and Black Female Empowerment. Ayauna Blair, Student, African Studies and English; Laura Dubek (Faculty sponsor) English
- 366 Examining the Relationship between Bullying and Suicide in High Schools. Tatum England, Destine Gilliland, Abike Egbeniyi, Miaya Edwards (Students, Health and Human Performance); Garvita Thareja, Grad student, Health and Human Performance; Andrew Owusu (Faculty sponsor) Health and Human Performance
- 367 The Role of Electron-Electron Interactions in Metal-Insulator Transitions. Aric Moilanen, Student, Physics and Astronomy; Hanna Terletska (Faculty sponsor) Physics and Astronomy
- 368 Analyzing Students' Understanding of Isomorphism. Marilin Kelley, Student, Mathematics; Jennifer Lovett, Faculty, Mathematics; James Hart, Faculty, Mathematics; Jennifer Lovett (Faculty sponsor) Mathematics
- 369 Graduate Teaching Assistants' Cognition Related to Teaching: A Validation of Five Instruments. Dirhat Mohammed, Dhruvi Lad (Students, Biology); Grant Gardner, (author/Faculty Sponsor), Biology; Joshua Reid, Grad student, Biology
- 370 Genetic Regulation of a Camphor Mediated Light Switch. Steffany Jenkins, Student, Biology; James Robertson (Faculty sponsor) Biology
- 371 The Relationship between Feeling Unsafe at School and Depression among Tennessee High School Students. Tahirah Qadir, Allison Poteete, Macy Taylor, Melissa Davis, Felicia Pursley (Students, Health and Human Performance); Garvita Thareja, Grad student, Health and Human Performance; Andrew Owusu (Faculty sponsor) Health and Human Performance
- 372 Is Physical Activity a Major Factor for Obesity Among High School Students in the US Compared to Diet? Martravius Randall, Sara Almoumineen, Nimo Mohamed, Waad Alhazmi (Students, Health and Human Performance); Garvita Thareja, Grad student, Health and Human Performance; Andrew Owusu (Faculty sponsor) Health and Human Performance
- 373 History Lessons: The Scottsboro Boys, Powell v Alabama, and Civil Rights. Kiana Carter, Student, English; Jonathan Mitchell, Student, English; Laura Dubek (Faculty sponsor) English
- 374 Inaugurating a New President and a New Era of Resistance. LaQuisha Lewis, Student, Literacy Studies; Laura Dubek (Faculty sponsor) English
- 375 Designing a Mammalian Macrophage: Cn culture System to Study cChanges in Gene Expression in Host Macrophages. Jada Murrell, Student, Biology; David Nelson (Faculty sponsor) Biology
- 376 Isolation of Antibacterial Compounds Found in *Vitis aestivalis* Fungal Endophytes... Kayley Stallings, Student, Biochemistry and Fermentation Science; Paul Kline (Faculty sponsor) Chemistry
- 377 Identification of Novel Gender-related Virulence Genes in *Cryptococcus neoformans*. Zenar Barwari, Student, Biology; Rebecca Seipelt-Thiemann (Faculty sponsor) Biology
- 378 Evaluation of a Kid-Friendly Chili Recipe in a National School Lunch Program Participating School. Melissa Austin, Student, Human Sciences; Lindsey Cherry, Student, Human Sciences; Lisa Sheehan-Smith (Faculty sponsor) Human Sciences
- 379 Investigating the Ability of Spice Extracts to Inhibit Bacterial Growth and Histamine Accumulation Associated with Scombroid Food Poisoning. Merna Ghobrial, Student, Biology; Rebecca Seipelt-Thiemann, (author/Faculty Sponsor), Biology; Mary Farone, Faculty, Biology
- 380 Dyeing to Know: A Natural Approach to Dyeing Textiles. Don Srisuriyo, Student, Biology; Scott Handy (Faculty sponsor)

Chemistry

- 381 The Construction and Testing of a Compact Acoustic Experimental Apparatus. Isaac Shirk, Student, Physics and Astronomy; William Robertson (Faculty sponsor) Physics and Astronomy
- 382 Examining the Role of F56F11.4 in Sperm of *Caenorhabditis elegans*. Robert Owen, Student, Biology; Lynn Boyd, (author/Faculty Sponsor), Biology
- 383 Injustice of Freddie Gray. Michael Crawford, Student, Computer Science; Laura Dubek (Faculty sponsor) English
- 384 Fast Screening of Explosives by Direct Analysis in Real Time Mass Spectrometry. Virginia Benefield, Student, Forensic Science; Jared Frazier, Student, Chemistry; Mengliang Zhang, (author/Faculty Sponsor), Chemistry;
- 385 Learning from the Student's Perspective. Sarah Dixon-Morgan, Student, Political Science; Ryan Korstange (Faculty sponsor) University Studies
- 386 Race, Bullets, and Videotape: Making Sense of Oscar Grant's Death. Lily West, Student, English; Laura Dubek (Faculty sponsor) English
- 387 Novel Gene Verification and Annotation in Clinically-Associated Strains of *Cryptococcus neoformans*. Daviesha Carter, Student, Biology; Rebecca Seipelt-Thiemann, (author/Faculty Sponsor), Biology; Erin McClelland, Faculty, Biology
- 388 Thermal Desorption DART-MS Analysis of Ignitable Liquids with Chemometrics. Isabella Barnett, Student, Forensic Science; Mengliang Zhang, (author/Faculty Sponsor), Chemistry; Frank Bailey, Faculty, Biology
- 389 Examining Mindsets about Different Ability Domains Relevant to College. Autumn Martin, Student, Psychology; Ryan Korstange (Faculty sponsor) Psychology
- 390 Characterization of the Antifungal Peptoid, AEC5, as a Potential Therapeutic Agent against *Cryptococcus neoformans*. Sabrina Spicer, Student, Chemistry; Kevin Bicker (Faculty sponsor) Chemistry
- 391 Heritage or Hate: Questions of Representation and Race in America. Zachary Burns, Student, English; Laura Dubek (Faculty sponsor) English
- 392 Synthesis of Phosphorous/Nitrogen Mixed Donor Ligands and Their Iron and Cobalt Complexes. Kerolos Bushra, Student, Chemistry; Paeton Poynter, Student, Chemistry; Keying Ding (Faculty sponsor) Chemistry
- 393 Resisting Invasion: Evaluating the Interaction between Exotic Weevils and Native Gladecress. Robert Dixon, Student, Biology; Joshua Grinath, (author/Faculty Sponsor), Biology; Matthew Cohen, Staff, Biology; Chris Herlihy, Faculty, Biology
- 394 CRISPR-based Genetic Modification for a Flightless Housefly (*Musca domestica*). Ansley Morgan, Student, Biology; Rebecca Seipelt-Thiemann (Faculty sponsor) Biology
- 395 The Village: Cultivating Active Citizenship among Undergraduate Social Work Students. Penelope Storm, Augusta Hyberger, Kaylee Lindgren, Chasidy Lauderdale (Students, Social Work); Justin Bucchio (Faculty sponsor) Social Work
- 396 Synthesis of Biologically Active Benzofuranone Molecules Using Acid Catalyzed Friedel-Crafts Cyclization. Matthew Spock, Student, Chemistry; Scott Handy (Faculty sponsor) Chemistry
- 397 Restoration and Preservation of Irish Tower Houses: A Regional Study Conducted in County Tipperary, Ireland. Matthew Cureton, Student, Management; Stacey Graham (Faculty sponsor) History
- 398 Research about Loss Reserving Method in PandC Insurance. Chuanlong Zhang, Student, Mathematics; Don Hong (Faculty sponsor) Mathematics
- 399 Lights, Camera, Action: The Birth of a Nation and the Forrest Riot. Wendell Smith, Student, English; Laura Dubek (Faculty sponsor) English
- 400 Using CRISPR to Knock out a Gene Encoding a Virulence-related

Non-Coding RNA in Trout Pathogen *Flavobacterium*

- psychrophilum*. Alaa Mohammed, Chase Burton (Students, Biology); Rebecca Seipelt-Thiemann (Faculty sponsor) Biology
- 401 Isolation of 23B as a Potential Therapeutic Agent against *Cryptococcus neoformans*. Joseph Rosen, Student, Biology; Erin McClelland (Faculty sponsor) Biology and Scott Handy (Faculty sponsor) Chemistry
- ## GRADUATE POSTERS
- 500 Examining News Media References of Mental Illness in the Wake of Mass Shooting Events Occurring in the United States. Joshua Hollibush, Student, Media and Communication; Jason Reineke (Faculty sponsor) Journalism
- 501 Language of Racial Reconciliation and Social Justice: Corpus-Based Analysis and Implications for Teaching. Jennifer Grow, Student, Literacy Studies; Mohammed Albakry, (author/Faculty Sponsor), Literacy Studies
- 502 Relationship between Phonology, Prosody, and Reading Skills. Jessica Steele, Student, Psychology; Tess Fotidzis, Student, Literacy Studies; Cyrille Magne (Faculty sponsor) Psychology
- 503 The Effects of Thermoelectric Cooling on Solar Panels. Elijah Little, Student, Engineering Technology; Charles Perry (Faculty sponsor) Engineering Technology
- 504 Workload and Kinematics of Horses during Underwater Treadmill Exercise. Elysia Arnold, Student, Horse Science; Holly Spooner, Faculty, Horse Science; Naomi Minardi, Industry collaborator: Equine PerformMAX, Horse Science; Rhonda Hoffman, Faculty, Horse Science; Holly Spooner (Faculty sponsor) Horse Science
- 505 A Prussian Blue Zinc Oxide Carbon Nanotube Composite for Rapid Hydrogen Peroxide Assaying. Raja Pandey, Student, Chemistry; Yuhang Guo, Visiting scholar, Biology; Ying Gao, Faculty, Agriculture; Charles Chusuei, (author/Faculty Sponsor), Chemistry;
- 506 Characterization of Mitochondrial YME1L Protease Oxidative Stress-Induced Conformational State. Chad Brambley, Student, Molecular Biosciences; Justin Marsee, Student, Chemistry; Neal Halper, Undergrad student, Chemistry; Justin Miller, (author/Faculty Sponsor), Chemistry
- 507 Withdrawn
- 508 Civic Participation and News Industry Disruption: Assessing Societal Effects of Shifting Business Models. Laura Brown, Student, Journalism and Strategic Media; Ken Blake (Faculty sponsor) Communication Studies and Organizational Communication
- 509 Genome-wide Association Study Identifies Genomic Loci Affecting Fillet Firmness and Protein Content in Rainbow Trout. Ali Ali, Student, Biology; Rafet Al Tobasei, Postdoctoral fellow; Daniela Lourenco; Tim Leeds; Brett Kenney; Mohamed Salem, (author/Faculty Sponsor), Biology
- 510 Security analysis of Role-based access control methods in NoSQL Databases. Heena Khan, Student, Computer Science; Dr. Suk Seo (Faculty sponsor) Computer Science
- 511 New Uses for Recycled Wastewater in Murfreesboro. Nova Sullo, Student, Engineering Technology; Charles Perry (Faculty sponsor) Engineering Technology
- 512 The Forgotten Resource: Analyzing the Architecture of Historic Roller Rinks. Olivia Lane Tillner, Student, History; Carroll Van West (Faculty sponsor) History
- 513 Identification of Antifungal Peptoids towards *Candida albicans* via High Throughput PLAD Assay. Robert Green, Student, Molecular Biosciences; Kevin Bicker (Faculty sponsor) Chemistry
- 514 AngularJS and ReactJS: Paradigm for Front-End Web Development. Charles Tetteh-Quaye, Student, Computer Science; Suk Seo (Faculty sponsor) Computer Science
- 515 Evaluating Physical Ergonomics in MTSU Classrooms. Brianna

- Smith, Student, Engineering Technology; Mina Mohebbi (Faculty sponsor) Engineering Technology
- 516 Building a Framework for Image Translation Using the YOLO Method. Muhammad Abed, Student, Computer Science; Suk Seo (Faculty sponsor) Computer Science
- 517 Withdrawn
- 518 Phonocardiography Data Compression using Discrete Wavelet Transform. Md Tanzil Hoque Chowdhury, Student, Computational Science; Khem Poudel, Student, Computational Science; Dr. Yating Hu, (author/Faculty Sponsor), Engineering Technology
- 519 Anti-Inflammatory Potential of Aurones in a Murine Macrophage Cell Line. Shelby Lowrie, Student, Biology; Doha Ahmed, Undergrad student, Biology; Arjhun Kafle, Student, Chemistry; Matthew Fuller, Student, Biology; Daniel Bryant, Student, Biology; Anthony Farone (Faculty sponsor) Biology
- 520 Tracking the Melting of Ice through Coastal Antarctica: A Look into Antarctic Climate Shift. Gabrielle Armour, Student, Geosciences; Racha El Kadiri (Faculty sponsor) Geosciences
- 521 News Feeds and Salience: How Social Media Use Feeds News Awareness. Benjamin Burnley, Student, Media and Communication; Jason Reineke, (author/Faculty Sponsor), Media and Communication; Kenneth Blake, Faculty, Journalism and Strategic Media
- 522 Calculus II Students' Definitions of Function: Attention to Correspondence. Samuel Reed, Student, Mathematics and Science Education; Candice Quinn, Student, Mathematics and Science Education; Jennifer Lovett (Faculty sponsor) Mathematics
- 523 A Human-Following Robot for Household Fall Detection. Simeon Adebola, Student, Engineering Technology; Lei Miao (Faculty sponsor) Engineering Technology
- 524 Relationship among Response to Instruction and Intervention (Rtl2) and Job Satisfaction of Tennessee School Psychologists. Mark Warner, Student, Psychology; Monica Wallace (Faculty sponsor) Psychology
- 525 Application of Blockchain Technology to the Microgrids. Manoj Basnet, Student, Engineering Technology; Dr. Charles Perry (Faculty sponsor) Engineering Technology
- 526 Creation of an Immersive Experience for Virtual Reality. Valentina Khoruzhaya, Student, Recording Industry; John Merchant (Faculty sponsor) Recording Industry
- 527 Industry's Future for 3D Printing. Christopher Winfrey, Student, Professional Science; Charles Perry (Faculty sponsor) Professional Science
- 528 Exploring Sound Field Microphones for Use in the Creation of Stereo, Surround and Immersive Content. Michael Bevers, Student, Recording Industry; John Hill (Faculty sponsor) Recording Industry
- 529 Measurement Invariance between Classical Test Theory (CTT) and Item Response Theory (IRT) on Reading Comprehension. Ping Wang, Student, Literacy Studies; Jwa Kim, (author/Faculty Sponsor), Literacy Studies; Casey Brasher, Faculty, Elementary and Special Education; Amy Elleman, Faculty, Literacy Studies
- 530 A RegTech Research: Better the Insurance Information Regulation System Using Machine Learning and Web Technologies. Jie Long, Student, Mathematics; Wenwen Qin, Student, Mathematics; Lu Xiong (Faculty sponsor) Mathematics
- 531 The Influence of Regionalism in Popular Recording: Spotlight on Memphis and Nashville. Ross Rice, Student, Recording Industry; William Crabtree (Faculty sponsor) Recording Industry
- 532 Gut Microbiome Analysis of Fast- and Slow-growing Rainbow Trout (*Oncorhynchus mykiss*). Pratima Chapagain, Student, Biology; Brock Arivett, Student, Biology; Mohamed Salem (Faculty sponsor) Biology
- 533 Assessing and Harnessing the Full Capabilities of DeltaV Distributed Control System Software. Oluwagbenga Ogunso, Student, Engineering Technology; Chong Chen (Faculty sponsor) Engineering Technology
- 534 Parallelizing Seam Carving for Content-Aware Image Resizing using OpenSHMEM. Bukola Omotoso, Student, Computer Science; Suk Seo (Faculty sponsor) Computer Science
- 535 Bloch Surface Wave Excitation using Maximum Length Sequence Gratings. Khem Poudel, Student, Computational Science; William Robertson, (author/Faculty Sponsor), Computer Science
- 536 Withdrawn
- 537 Cobalt Catalyzed Acceptorless Dehydrogenative Homocoupling of Primary Alcohols to Esters. Bedraj Pandey, Student, Chemistry; Keshav Paudel, Student, Molecular Biosciences; Keying Ding (Faculty sponsor) Chemistry
- 538 Waves and Spirals of Teacher Assistant (TA) Change. Tina Carter, Student, Mathematics and Science Education; Anna Grinath, (author/Faculty Sponsor), Mathematics and Science Education
- 539 Perceptions of Veterinarians on the Use of Nutritional Supplements in the Horse Industry. Naomi Oliver, Student, Horse Science; Holly Spooner (Faculty sponsor) Horse Science
- 540 SAE Mini Baja Project - MTSU EVP Lab. Behrooz Merikhi, Student, Engineering Technology; Brandon Stahl, Undergrad student, Engineering Technology; James Fassnacht, Undergrad student, Engineering Technology; Saeed Foroudastan (Faculty sponsor) Engineering Technology
- 541 A Secure Hybrid Password Authentication Method Based on Images and Text. Luis Chunga, Student, Computational Science; Suk Seo (Faculty sponsor) Computational Science
- 542 Subversiveness Masculinity in Children's Animation: Hey Arnold, Avatar: The Last Airbender and The Loud House. Kristen Sales, Student, Media and Communication; Jane Marcellus (Faculty sponsor) Journalism
- 543 Preserving Hidden Histories and the Frierson Chapel Historic District. Sarah Williams, Student, History; Quinlan Odom, Student, History; Jessica Smyth, Student, History; Carroll Van West (Faculty sponsor) History
- 544 A Chemogenomic Approach to Understanding the Anti-fungal Action of a Bioactive Aurone Compound. Fatmah Alqahtani, Student, Molecular Biosciences; Mary Farone, (author/Faculty Sponsor), Biology; Scott Handy, Faculty, Chemistry; Zachary Taylor, Undergrad student, Chemistry
- 545 What Every Company Should Consider Before Entering Into an eSport Sponsorship Agreement: A Practitioner Perspective. Mohammed HutHut Alqahtani, Student, Health and Human Performance; Brandy Palmer, Student, Health and Human Performance; Steve Estes (Faculty sponsor) Health and Human Performance
- 546 Enumeration of a Novel, Intranuclear, *Obligate* Parasite of Free-Living Amoeba for Further Study of Host-Pathogen Interactions. Kelly Saine, Student, Biology; Mary Farone (Faculty sponsor) Biology
- 547 Personal Emergency Response System: Effective Care for the Elderly. Christian Lawrence, Student, Professional Science; Misa Faezipour (Faculty sponsor) Engineering Technology
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- 576 Characterizing the role of the sperm specific proteasomal subunit RPN-6.2 in *Caenorhabditis elegans*. Joshua Evers, Student, Biology; Lynn Boyd (Faculty sponsor) Biology
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- 578 The Incorporation of a Live Horn Section into Electronic Music Production. Thomas Nixon, Student, Recording Industry; Misty Jones Simpson (Faculty sponsor) Recording Industry

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