Three Minute Thesis

November 6th, 2019
2:00 PM
Main Campus Student Center
About 3MT

The Three Minute Thesis (3MT) is a research communication competition that challenges masters and doctoral students to present a compelling oration on their research endeavors in just 3 minutes to a non-specialist audience. The first 3MT was held at the University of Queensland in 2008 with 160 graduate students competing. Enthusiasm for the 3MT concept has grown and its widespread implementation by universities has led to the development of an international competition. Today, the 3MT competition has grown to over 600 universities across more than 65 countries worldwide. East Carolina University (ECU) is excited to host its sixth annual 3MT event.

3MT Rules:
Each presentation will be judged on comprehension, content, engagement and communication. Each presentation is limited to a 3-minute maximum and competitors exceeding 3 minutes will be disqualified. Presentations are considered to have commenced when a presenter starts their presentation through movement or speech. Although a presenter is allowed to have a single static PowerPoint slide (no slide transitions, animations or ‘movement’ of any description are allowed), no additional electronic media (e.g. sound and video files) or props (e.g. costumes, musical instruments, laboratory equipment) are permitted. All presentation are required to be spoken word (e.g., no poems, raps or songs) and commence from the stage. The decision of the head judge and moderator is final.

3MT People’s Choice:
Each member of the audience can vote for their favorite presenter by writing down their name. Voting ballots will be given out at the beginning of the Championship Round. We ask audience members to submit only one ballot per round.

3MT Departmental Cup:
The Department Cup is given to the Department that has the three highest scoring presenters during the first round of Haats. The Department Cup is sponsored by the North Carolina Biotechnology Center.

Program Sponsors
The Graduate School
Office of Technology Transfer
The Speech Communication Center
The North Carolina Biotechnology Center
Order of Events

2:00 pm – 2:15 pm | Opening Ceremony | Ballroom A

2:15 pm – 3:15 pm | 3MT Heats
           Heat 1 | Ballroom A
           Heat 2 | Room 249
           Heat 3 | Ballroom B

3:15 pm – 3:30 pm | Networking

3:30 pm – 4:00 pm | Championship | Ballroom A

4:00 pm | Closing Ceremony | Ballroom A

[Diagram showing Ballroom A and Ballroom B with 249]
Personnel

Heat 1
Judges
Pam Hopkins – Director, Speech Communication Center, School of Communication, ECU
Austin Pollack – WITN-TV News, Sunrise Anchor and Reporter
Matt McCall – CEO, Infinite Limits Solutions, LLC
Moderator - Emma Goldberg
Time keeper - Abigail Morris

Heat 2
Judges
Jeanne Hoover – Associate Professor and Scholarly Communication Librarian, Joyner Library, ECU
Merrill Flood – Director of Planning & Development, Community Engagement & Research, ECU
Dennis Tracz – Entrepreneur, Pitt county, NC
Moderator - AL Smith-Joyner
Timekeeper - Vanina Wekam

Heat 3
Judges
Elizabeth Hodge – Professor and Assistant Dean for Strategic Initiatives, COE, ECU
Dennis McCluney – Director, Intercultural Affairs, ECU
Dennis Barber – Assistant professor of Management, Miller School of Entrepreneurship, COB, ECU
Moderator – Joanna Rohrbaugh
Timekeeper – Rachel Boyd
HEAT 1

DR. JEKYLL AND MR. HYDE, DO WE HAVE THAT IN MILK?
Calcium Toxicity in Alzheimer’s Disease
Ellen Styons – Department of Biology – Mentor Atta Ahmad, PhD

HEALING KNEE PAIN WITH GELS
Creation of a robust hydrogel for osteoarthritis treatment
Jacob Ludwick – Department of Engineering – Mentor Michelle Oyen, PhD

MEASURING AND DETERMINING THE ASYMMETRY OF THE LEVATOR MUSCLE FEATURES
Evaluation of the Levator Veli Palatini Muscle Asymmetry in Noncleft Population Using MRI and Correlation to Nasopharyngoscopy Findings
Neda Tahmasebifard – Department of Communication Sciences and Disorders – Mentor Jamie Perry, PhD

MASS SPECTROMETRY: THE SHERLOCK HOLMES OF CLINICAL DETECTION
Solving Clinical Mysteries with Mass Spectrometry
Kadesha McIntyre – Department of Biochemistry – Mentor Kimberly Kew, PhD

TREATING A VIRUS WITH A CANCER DRUG
Targeting Exportin-1 Inhibits HTLV-I Infection
Christopher Norton – Department of Microbiology and Immunology – Mentor Isabelle Lemasson, PhD

LIGHTS, CAMERA, ACTION
Evaluating LVP muscle contraction during speech using movie MRI
Eshan Pua – Department of Communication Sciences and Disorders – Mentor Jamie Perry, PhD
HEAT I

THE RUSTY MAT GETS THE OIL
Are iron-oxide mats an effective benzene-be-gone?
Chequita Brooks – Department of Biology – Mentor Erin Field, PhD

CRITICALLY ENDANGERED AND THREATENED BY OVERFISHING AND CLIMATE CHANGE: WHAT CAN BE DONE?
Currently endangered fish species will be further threatened by climate change. Management will need to adapt to changes in critical life events due to new environments for these species to survive.
Brian Bartlett – Department of Coastal Resource Management – Mentor Rebecca Asch, PhD

HALTING THE CASCADE
Development of small-molecule inhibitors of the initiating proteases, Clr and Cls. of the classical complement pathway.
Denise Rohlik – Department of Microbiology and Immunology – Mentor Brandon Garcia, PhD

JUST KEEP SWIMMING
Studying the impact of climate change on species distribution of reef fish spawning aggregations in the Caribbean.
Esra Gocurk – Department of Biology – Mentor Rebecca Asch, PhD

A FISHY SIXTH SENSE
Exploring the Lateral Line in Zebrafish
Alexandra Venuto – Department of Biology – Mentor Tim Erickson, PhD
HEAT 2

SAVING THE SUSHI
Resolving the Mechanisms of Rice Blast Disease
Chris Whittington – Department of Chemistry – Mentor Adam Offenbacher, PhD

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FEELING HUNGRY? HOW ABOUT IMAGINING HUNDREDS OF THRASHING LIVE NOODLES ON YOUR DINNER PLATE?
Squirmy but Gorgeous: The Beauty and Importance of Parasites
Tim Lee – Department of Biology – Mentor April Blakeslee, PhD

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MAKING THE WORLD GREEN AGAIN
Developing new substrates and lipoxygenase biocatalysts for industrial applications
Kei Ohgo, Department of Chemistry – Mentor Adam Offenbacher, PhD

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WORMS GOT YOUR TONGUE?
Parasites in the mouths of frogs may affect communication and mate attraction
Sarah Goodnight – Department of Biology – Mentor Mike McCoy, PhD

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THINKING OUTSIDE THE LOX
Multifaceted approach to inhibitor design in fungal lipoxygenase
Andrea Ullberg – Department of Chemistry – Mentor Adam Offenbacher, PhD

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A TALE OF TWO COMMUNITIES
How Choice and Randomness Affect Where Animals Live
Ellen Titus – Department of Biology – Mentor Mike McCoy, PhD

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HEAT 2

BRIDGING BROKEN BARRIERS
The protein helping you keep it together.
Samuel Lindsay – Department of Chemistry – Mentor Yumin Li, PhD
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THE ROLE OF SIDEROPHORES IN BRUCELLOSIS INFECTIONS
Creating a Methodology Manipulating a Parasite’s Microbes
Kyle Swanson – Department of Biology – Mentor April Blakeslee, PhD
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FERROPTOSIS, IT’S NOT YOUR GRANDPARENTS PROGRAMMED CELL DEATH
Characterizing the relationship between the lipoxygenase-PEBP1 interaction and acute renal failure
Gregg Popovic – Department of Chemistry – Mentor Adam Offenbacher, PhD
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PARASITES: PARTNERS IN MARINE CONSERVATION
Because of the links they form with their hosts, parasites have the potential to serve as indicators for monitoring biodiversity in marine ecosystems.
Christopher Moore – Department of Biology – Mentor April Blakeslee
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HOW LOCAL ENVIRONMENT INFLUENCES THE REACTIVITY OF LIFE’S CHEMICAL REACTIONS
What’s the relationship status between tryptophan and electrons? ... It’s complicated.
Kristin Tyson – Department of Chemistry – Mentor Adam Offenbacher, PhD
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HEAT 3

COUNTING BONES, COUNTING BODIES
An example of portable, digital analysis in the determination of the MNI of mass burials.
Michael Navarro – Department of Anthropology – Mentor Megan Perry, PhD

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THE ARCHAEOLOGY OF THE SOCIAL SAFETY NET AT THE PITT COUNTY POOR FARM
Reconstructing Weaning Practices Using Stable Isotopes
Muriel Grubb – Department of Anthropology – Mentor Charles Ewen, PhD

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PIRATES IN THE GRAVEYARD OF THE ATLANTIC
Continuing Conservation Efforts for the Queen Anne’s Revenge Artifact Collection
Brandon Eckert – Department of Anthropology – Mentor Charles Ewen, PhD

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THE ARCHAEOLOGY OF BREASTFEEDING
Reconstructing Weaning Practices Using Stable Isotopes
Corinne Taylor – Department of Anthropology – Mentor Megan Perry, PhD

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BARBIE OR G.I. JOE
Exploring factors related to lesbian and gay parents' adoption of gender-neutral parenting attitudes.
Brittany Alligood – Department of Human Development and Family Science – Mentor Archana Hedge, PhD

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IN THE BELLY OF THE BEAST
Exploring the evolutionary relationship between pitcher plant flies and the carnivorous plants they call home
Peter Kann – Department of Biology – Mentor Trip Lamb, PhD

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HEAT 3

NITROGEN, CARBON AND LEMURS! OH MY!
Using stable isotope analysis to track dietary patterns among two lemur species in Madagascar.
Nora Sawyer – Department of Anthropology – mentor James Loudon, PhD

COLOR OUTSIDE THE GENES
What genes give poison dart frogs their brilliant colors, and why should you care?
Mallory de Araujo Miles – Department of Biology – Mentor Kyle Summers, PhD

A DIRTY BUSINESS
Investigating how the relationship between an invasive plant and the soil it occupies could be putting native flora out of business
Matthew Hodges – Department of Biology – Mentor Carol Goodwillie, PhD

TIMES UP
Understanding place-based motivators for the patterning of Violence Against Women
Jennifer Pabst – Department of Anthropology – Mentor Ryan Schacht, PhD

MISFOLDED PROTEINS IN ALZHEIMER’S & PARKINSONS DISEASE
Structure!
Sidney Bedsole – Department of Biology – Mentor Atta Ahmad, PhD
Thank You

The 3MT Committee would like to extend a warm thank you to all who participated and attended the 2019 East Carolina University Three Minute Thesis Competition. Without your generosity and expertise, this event would not have been possible. We sincerely appreciate your time and effort in making this event a success!

Please do not forget to view out website for any information on this and future 3MT events at [www.ecu.edu/3MT](http://www.ecu.edu/3MT)