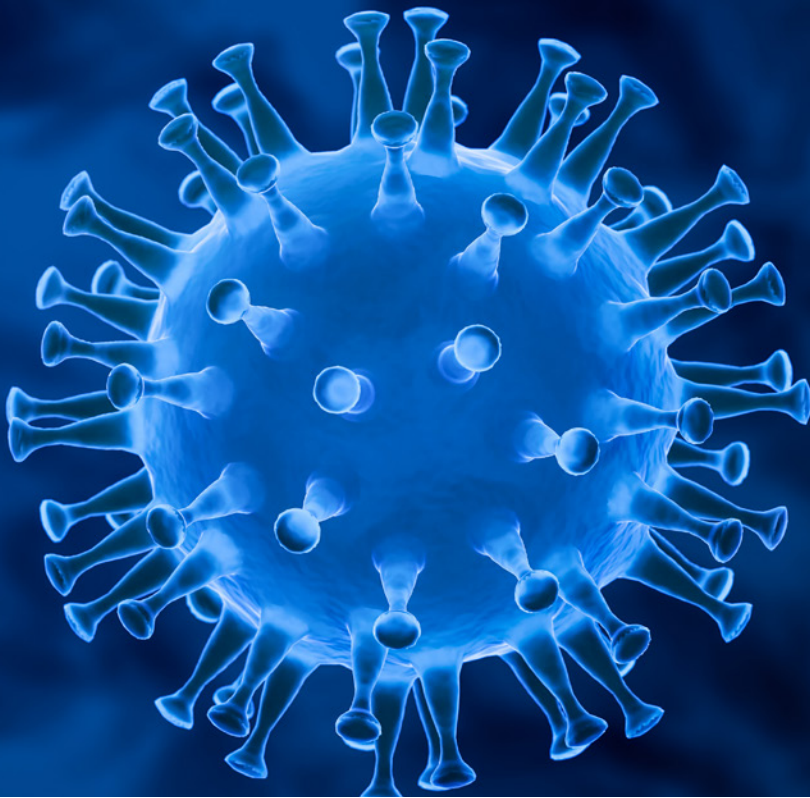


UNDERGRADUATE RESEARCH CONFERENCE | 2020



University of
New Hampshire

Welcome to the UNH Undergraduate Research Conference



JAMES W. DEAN JR.



WAYNE JONES

FOR 21 YEARS, the URC has been UNH's premier celebration of our students' innovative research and academic excellence and our faculty's dedication as mentors and scholars. This year's virtual URC has certainly challenged them to be more creative and determined than ever.

The suspension of in-person classes and on-campus events came as more than 1,800 URC student participants were preparing their final projects and presentations, many of which represented years of hard work, inquiry and experimentation. The rapid response of our faculty and staff to create a virtual URC experience reflects the remarkable character that defines our Wildcat community at its best.

The research projects that you will see online are the result of a shared, unwavering commitment to excellence at UNH, even in the face of a daunting global crisis, and will prepare our students for lifetime success in a dynamic world. As you view the URC virtually, we think you will be as impressed and as proud as we are.

Thank you for visiting the virtual URC, and for supporting New Hampshire's flagship public university.

Best regards,

A handwritten signature in cursive script, reading "James W. Dean Jr.".

JAMES W. DEAN JR.

PRESIDENT

A handwritten signature in cursive script, reading "Wayne Jones".

WAYNE JONES

PROVOST AND VICE PRESIDENT FOR ACADEMIC AFFAIRS

A Welcome from the Hamel Center for Undergraduate Research

WELCOME to the 21st annual celebration of academic excellence at the University of New Hampshire! The URC embodies UNH's mission to offer students a discovery-based education by encouraging inquiry, exploration, and deeper immersion in their fields of study. Student presenters represent disciplines from across the academic spectrum, reflecting the breadth and depth of undergraduate research and scholarship at UNH.

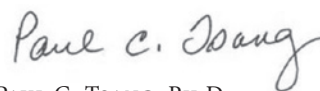
At the Hamel Center for Undergraduate Research, our core mission is to provide resources and financial support for the research, scholarly, and creative projects of UNH students. Our additional role as the administrative home of the URC enables us to broaden our commitment to supporting and showcasing all stages of the research process — including the final stage of communicating research findings to the wider public. For many UNH students, the URC is their first opportunity to present their work to a broad audience. The URC is thus vital in giving students practice in public speaking, communicating complex ideas to a general audience, and developing a deeper understanding of their subject areas. Such experience prepares students to pursue graduate study and to establish and be successful in meaningful careers.

This year, of course, has brought extraordinary challenges — to our world, and to our University. By the March 4th URC registration deadline, 1,861 students — mentored by over 420 faculty members and other research advisers — had registered to present their research and scholarship at more than 20 in-person URC events on the Durham and Manchester campuses. Just one week later, COVID-19 was declared a global pandemic, and one week after that, UNH shifted to remote operations. With the help of UNH's Academic Technology, Hamel Center staff and individual URC event coordinators University-wide made quick work of shifting the URC to a virtual event. Due to such an abrupt shift in planning, not all unique events were able to go forward virtually; and, for a variety of reasons, not all students were able to participate in the virtual URC.

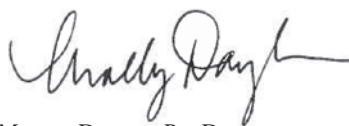
But, thanks to the resourcefulness, creativity, and spirit of our UNH community, the virtual URC was a resounding success, with 1,374 students — a full 74% of those who registered for in-person events — presenting their research, scholarship, and creative work.

In the pages that follow, we want to acknowledge *all* of the in-person events that had been planned for URC 2020, as well as *all* of the students who intended to present at one or more of those events, before the disruptions of COVID-19. **The students who were able to present at the virtual URC are noted with an asterisk (*).**

This year more than ever, we also want to recognize the many members of the UNH community whose dedication and enthusiasm are critical to making the URC possible. You will find their names in the acknowledgements at the back of the book. The partnerships between — and shared investment of — students, faculty, staff, and administrators not only ensure the success of the URC but also demonstrate the strength of the UNH community. Thank you for joining our community as we celebrate our students' remarkable scholarship!



PAUL C. TSANG, PH.D.
Director, Hamel Center for Undergraduate Research
Professor of Molecular, Cellular, and Biomedical Sciences



MOLLY DOYLE, PH.D.
Administrative Director, Hamel Center for Undergraduate Research



AMANDA LEGER, M.A.
URC Coordinator, Hamel Center for Undergraduate Research

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Peter T. Paul College of Business and Economics Paul J. Holloway Prize Innovation to Market Competition

Charles & Miriam Nelson Poster Competition

Thursday, April 16

This poster competition gives all teams entered in the Holloway Prize Innovation-to-Market Competition an opportunity to showcase their research into entrepreneurship. Teams have three minutes to present their business idea, followed by three minutes of Q & A with the judges.

Peter T. Paul College of Business and Economics Paul J. Holloway Prize Innovation to Market Competition

Bud Albin Challenge Round

Friday, April 17

The Bud Albin Challenge acts as the Semi-Final Round of the Holloway Prize Innovation to Market Competition. Twenty teams present their business concepts to a panel of industry judges. From here, six will be selected to move on to the Championship Round.

Senior B.A. & B.F.A. Exhibition

Friday, April 17

This annual show celebrates the achievements of graduating art students from the UNH Department of Art and Art History.

Adviser: Sachiko Akiyama

Kristina Czoschke

Fine Arts

Narrative through Time

Sage Gould

Fine Arts

Identity and Representation through Creative Expression

Allison Hoey

Art: Art History, Fine Arts

Figurative Painting: Exploration and Discovery

Madison Madore*

Fine Arts

Cyanotype in Motion

Tejas Moses*

Fine Arts

Wild Clay

Lansing Ward

Fine Arts

A Study of Photographic Presentation: The Act of Looking

Student Composers' Concert

Friday, April 17

The UNH Student Composers' Concert is an annual event that features the music of undergraduate and graduate students of the Music Department. The music is newly composed, and is almost exclusively performed by fellow music students.

Vajl Adamkowski

Music Education

Duo for Saxophones

Advisers: Michael Annicchiarico, Christopher Kies

Henry Amery

Music

The Farm Is Quiet Now

Adviser: Alex Favazza

Ethan Giles

Music Education

Four Dances for Woodwind Trio: I. Waltz of Beginnings II. Distorted Rhumba III.

Dark Serenade IV. Awakening/Finale

Adviser: Michael Annicchiarico

Kylie Smith

Music Education

Sundown

Adviser: Michael Annicchiarico

Kylie Smith

Music Education

The Loon

Adviser: Michael Annicchiarico

Bryan Whittier

Music

John Greenleaf Whittier Composition 3

Adviser: Michael Annicchiarico

Spencer Wiles

Music

"I Think of You" from a Yet-to-Be-Named Musical

Adviser: Michael Annicchiarico

UNH Manchester Undergraduate Research Conference

Oral Presentations

Tuesday, April 21

The UNHM URC Oral Presentations feature formal scholarly presentations and/or multimedia presentations reflecting the students' research interests.

Rachel Avery*

English, History

Social Dissent and New England Folk Music in the Mid-Twentieth Century

Adviser: Kristen Woytonik

Danielle Johnson*

History

"America Preaches Integration and Practices Segregation": Integration in American Public Schools 1950-1990

Adviser: Kristen Woytonik

Brian Lundgren*

History

Last Refuge: The Jewish Refugee Experience in Shanghai

Adviser: Kristen Woytonik

Mekalia Mason-Rollins

American Sign Language (ASL)/English Interpreting

RA Survival Guide: Supporting the Next Wave of UNHM Res Life Leaders

Adviser: Lisa Enright

Nicole Reed

Neuropsychology

Effects of Multiple Concussive and Subconcussive Impacts on Driving Function under Cognitive Load

Adviser: Daniel Seichepine

Vishnu Soni*

Neuropsychology

A Special Case in Motion-Induced Blindness

Adviser: John Sparrow

Daniel St. Cyr*

History

The Imagery of Memorialization in the Northern Irish Troubles

Adviser: Kristen Woytonik

Interdisciplinary Science & Engineering (ISE) Symposium

Poster Presentations

Wednesday, April 22

The ISE Symposium welcomes and encourages scientific presentations from undergraduate students in all colleges and departments. The event features undergraduate research that contributes to or benefits from an interdisciplinary science and engineering perspective.

Chemical Engineering

Group Leader: Young Jo Kim

Jacob Andrzejczyk

Chemical Engineering

Comparison of Machine Learning Techniques to Improve Free-Energy Landscape Reconstruction

Adviser: Harish Vashisth

Kirk Badger

Chemical Engineering

Metal Organic Frameworks' Potential as Biosensors

Adviser: Craig Chapman

Ryann Boudreau

Bioengineering

Rachel Yee

Biochemistry, Molecular and Cellular Biology

Injectable Gelatin-Silk Fibroin Composite Hydrogels for In Situ Cell Encapsulation

Adviser: Kyung Jae Jeong

Jason Brown

Bioengineering

Decellularized Extracellular Matrix for In Situ Cell Encapsulation for Tissue Engineering

Adviser: Kyung Jae Jeong

Ngan Cameron

Chemical Engineering

Limit Cycle in an Oscillation Electrochemical Reaction

Adviser: Dale Barkey

Noah Fioravante

Chemical Engineering

Biodiesel Production from Edible Oil Using Heteropoly Acid Catalysts at Room Temperature

Adviser: Nan Yi

Mrinal Ganash

Bioengineering

Spore Surface Display of Plastic Degrading Enzymes

Adviser: Kang Wu

Griffin Kane

Bioengineering

Intein-Mediated Approach to Protein Purification on Spores of Bacillus Subtilis

Adviser: Kang Wu

Daniel Kennedy

Ian Root

Bioengineering

Free Oligosaccharide LC-MS/MS Analysis for Prebiotic Glycan Assessment

Adviser: David Ashline

Jason Lam

Bioengineering

The Role of STAT3 in Ovarian Cancer Sphere Formers

Adviser: Sarah Walker

Patrick Lawton

Bioengineering

Molecular Simulation Studies of Kinase Enzymes for Potential Cancer Therapeutics

Adviser: Harish Vashisth

Gabriela Misiewicz

Bioengineering

Analyzing the Roles of STAT3 and STAT5 in Breast Cancer

Adviser: Sarah Walker

Valerie Mores

Chemical Engineering

Copper Crystal Growth

Adviser: Dale Barkey

John Moynihan

Bioengineering

Molecular Dynamics Simulations of Proteins

Adviser: Harish Vashisth

INTERDISCIPLINARY SCIENCE & ENGINEERING SYMPOSIUM, POSTER PRESENTATIONS, CONTINUED

Nathaniel Nichols

Chemical Engineering
Mechanistic Studies of the Decomposition of Various Copper Salts
 Adviser: Nan Yi

Gregory Novotny

Chemical Engineering
Mechanistic Studies of the Anatase-to-Rutile Transition of Titanium Dioxide (MS-ART-TiO₂)
 Adviser: Nan Yi

Emma Roberge

Bioengineering
Quantifying Mass Changes at a PEG Surface Complexed with α Cyclodextrin
 Adviser: Jeffrey Halpern

Adam Rosenbaum

Bioengineering
Engineering Bacteria for the Cost-Effective Production of Antimicrobial Peptides (AMPs)
 Adviser: Kang Wu

Chemistry**Group Leader: Richard Johnson****Benjamin Adams**

Chemistry
Quantitative Determination of Hydroxyl Surface Coverage on Waterborne Polymeric Nanoparticles via Fluorescence
 Adviser: John Tsavalas

Sawyer Cawthorn

Chemistry
Investigation of Controlled on Demand Self-Assembly/Disassembly of Polymer Nanostructures
 Adviser: Erik Berda

Amanda Gaudreault

Chemistry
Exploring Student Ideas of Evaporative Cooling with Liquid-Crystal Paper
 Adviser: Christopher Bauer

Amina Gusic

Chemistry
Evaluating the Quantitative Accuracy and Precision of Mass Spectrometer Analyzers Using Metal Isotopes
 Adviser: Anyin Li

Nicholas Heath

Chemistry
An Online Monitoring Fluidics System with Automated Data Collection for the Quantitative Analysis of Hypochlorite
 Adviser: Anyin Li

Julia Leary

Chemistry
The Synthesis and Electrochemical Analysis of Co-Complexes
 Adviser: Christine Caputo

Michael Moheban

Chemistry
Synthesis of a Novel Class of Compounds: Intramolecular N-heterocyclic Borole Frustrated Lewis Acid/Base Pair
 Adviser: Christine Caputo

Stephen Orlych

Chemistry
Singlet Fission in Polyacenes for Photovoltaic Solar Cells
 Adviser: Craig Chapman

James Wilkes

Chemistry
Synthesis of Co- and Ni-Cyclam Complexes for CO₂ Reduction
 Adviser: Christine Caputo

Ruotong Zhong

Chemistry
A Comparison of Different Precursors of Graphitic Carbon Nitride, Synthesis, and Application in Real Life
 Adviser: Gonghu Li

Civil & Environmental Engineering—Design**Group Leaders: Dave Eshan, Anthony Puntin****Alan Bauman*****Matthew Golden*****Wei He*****Matthew Spurr*****Connor Thompson***

Civil Engineering
Proposed Pedestrian Bridge over the Oyster River
 Adviser: Erin Bell

Ryan Boyle***Brian Duignan*****Gabriel Paster*****Nicole Sanborn***

Civil Engineering
Egmont Channel Range Rebuild
 Advisers: Jean Benoit, Raymond Cook, Anthony Puntin

Jordan Brock***Joseph Giammichele*****Kelsey Glidden*****Chloe Loukes*****Melanie Martell*****Jacob Woodard***

Civil Engineering
Robert J Prowse Bridge Rehabilitation
 Advisers: Erin Bell, Donald Lussier, Anthony Puntin, Brett Rusnock

Nicholas Buonanno***Kyle Hamel*****Benjamin Higgins*****Connor Littlefield***

Civil Engineering
Bodwell Road Bank Stabilization Project
 Adviser: Eshan Dave

Chloe Carter***Nicole Haggerty*****John Nader*****Environmental Engineering****Sawyer Hall***

Environmental Engineering,
 Sustainability
C-Lot Drainage and BMP Design Project
 Adviser: James Houle

Liam Cullinane***Melissa Lyford*****Michael Menary*****Bill Nguyen***

Civil Engineering
NH111 and NH151 Intersection Redesign Project
 Advisers: Kyle Kwiatkowski, Jo Sias

Griffin Curley***Jamie Fitzpatrick*****Jared Grondin*****Oliver Roy*****John Sargent*****Michelle Thibault***

Civil Engineering
Riverwalk Pavilion
 Adviser: Anthony Puntin

Margaret Fillion*
Matthew Hall*
Robert Joscelyn*
Spencer McKinnon*
Thomas Simoncelli*
 Civil Engineering
Tuscan Village Development
 Adviser: Kenneth Flesher

Tyler Gleason*
Daniel Martineau*
Robert Moon*
Elanor Clare Frances Price*
 Civil Engineering
Columbia Pacific Bio-Refinery Pipeline Trestle
 Advisers: Robert Henry, Zack Jenkins

Civil & Environmental Engineering—Investigation & Assessment

Group Leaders: Dave Eshan,
 Anthony Puntin

Ian Avery*
Bennett Newlove*
 Civil Engineering
Ian Bentley*
Zachary Chamberlin*
Joseph Towle*
 Environmental Engineering
Newmarket Waterfront Improvement Project
 Adviser: Anthony Puntin

Matthew Bean*
Alessandro Caruccio*
Evan Shamim*
Ethan Snitker*
 Civil Engineering
Feasibility Study of Recreation Trail Connecting Durham and Newmarket
 Advisers: Kyle Kwiatkowski, Jo Sias

Matthew Carter*
Adam Minkema*
Leland Qua*
 Environmental Engineering
Kyle Ruprecht*
 Civil Engineering
Downtown Stormwater Improvement: Concord, NH
 Advisers: Thomas Ballestero, Michael Collins

Jirias Charabati*
 Civil Engineering, International Affairs
Jacob Simpson*
Samuel Wojichowski*
 Environmental Engineering
Zachary Sullivan*
 Civil Engineering
Dover, NH MS4: Investigation Procedure and Sampling Kit Design
 Adviser: James Houle

Alexander Croteau*
Marco Gioioso*
Brandon Loisele*
Sarah Moriarty*
 Civil Engineering
Investigation of Metal Warehouse Roof Collapse
 Advisers: Zach Chabot, Raymond Cook, Duncan McGeehan, Anthony Puntin

Nicola Elardo*
Meghan Otis*
Lana Pillsbury*
 Environmental Engineering
UNH Water for Zamkutu
 Adviser: James Malley

Patrick Hamill*
Zachary Harvell*
James Murphy*
Lucas Theoharidis*
 Environmental Engineering
Joshua Thibeault*
 Civil Engineering
Hanover, NH 1,4 Dioxane Groundwater Remediation
 Adviser: Paula Mouser

Madison Hastie*
Jacob Veronneau*
 Civil Engineering
Albacore Museum Project
 Advisers: Jean Benoit, Felix Devito

Keaton Peterson*
 Civil Engineering
Zero-Waste in Whitefield, NH
 Adviser: Anthony Puntin

Civil & Environmental Engineering—Research

Group Leaders: Dave Eshan,
 Anthony Puntin

Nicholas Bouchard*
Evan Gwynne Davies*
Brenna Heinley*
Edward Mahoney*
 Civil Engineering
NHDOT Bridge Model
 Adviser: Robert Henry

Sian Davis
 Civil Engineering
Global Opportunity for Tidal Turbines at Bridge Crossings
 Advisers: Erin Bell, Martin Wosnik

Jacob DeLashmutt*
Brinton Dekreon*
Daniel Marek*
 Civil Engineering
Drone Assessment of Potential Rooftop Failure from Snow Loads: A Business Model
 Adviser: Jennifer Jacobs

Cal Govoni*
Jastine Tendi*
 Mechanical Engineering
Sean Hopkins
Daniel Qua*
Alexa Trautz*
 Environmental Engineering
Clara Miller*
 Civil Engineering, Sustainability
Brayden Reichenbach*
 Civil Engineering
CEE 798 Group 20: Algae Power
 Adviser: Felix Devito

Giovanni Guglielmi*
 Environmental Engineering
Environmental and Economic Life Cycle Assessments of Water Droplet Processing and Traditional Waterjet Cutting
 Advisers: Brad Kinsey, Weiwei Mo

Anna Lampman*
Jordan Meaney*
 Environmental Engineering
Ross O'Neil*
Kyle Szewczyk*
 Civil Engineering
Georgetown, ME Culvert Analysis Project
 Adviser: Nancy Kinner

INTERDISCIPLINARY SCIENCE & ENGINEERING SYMPOSIUM, POSTER PRESENTATIONS, CONTINUED

Hannah Miller*

Civil Engineering

The Spatial Distribution of Sediment Characteristics and Mercury Content within Local Impoundments

Advisers: Julia Bryce, Anne Lightbody

Elijah Sorensen***Emma Thibodeau***

Environmental Engineering

Cassidy Yates**Environmental Engineering, Sustainability Meta-Analysis of PFAS in New Hampshire Groundwater*

Adviser: James Malley

COLSA—Biology**Group Leader: Krisztina Varga****Caitlin Borges**

Sustainability, Zoology

Jessica Tremblay

Zoology

Impacts of Cyanotoxins on the Death of Seabirds: Cyanotoxins in By-Caught Red-Throated Loons, Common Loons, and Greater Shearwaters

Adviser: James Haney

Gianna DeMarco

Zoology

The Effect of Predator Cues on Carpenter Ants' Worker Task Efficiency

Adviser: Leslie Curren

Samantha Dionne*

Biomedical Science

Cognitive Abilities of Caribbean Hermit Crabs in Navigating a Known Location

Adviser: Leslie Curren

Emily Dunlop*

Zoology

A Comparison of Welfare Considerations among Captive Animals

Adviser: Jessica Bolker

Ryan Dussault*

Biomedical Science

Synthesis of a Hexadentate Chelator Linker for Attachment to a Mitochondria-Seeking Peptide

Adviser: Roy Planalp

Anika Frink

Zoology

Impacts of Inappropriate Human Possession of Wildlife on the Animal's Well-Being

Adviser: Janet Anderson

Jessica Hodgkins*

Biomedical Science

Identification of the Virulence Factors of Serratia sp. SCBI

Adviser: Louis Tisa

Troy LaPolice*

Biology

The Effect of Transcriptome Assembly Quality on Phylogenetic Relationships

Adviser: Matthew MacManes

Yuri Makar***David Walker***

Biomedical Science

Identification of STAT3 Target Genes that Promote Ovarian Cancer Metastasis

Adviser: Sarah Walker

Johanna Pastoriza*

Neuroscience and Behavior

Computational and Synthetic Exploration of Radiometal Chelators for Nuclear Imaging Applications

Adviser: Roy Planalp

Ryan Puterbaugh*

Biochemistry, Molecular and Cellular Biology

Effects of Mutation on Structure and Binding of the Intrinsically Disordered Protein PopZ

Adviser: Krisztina Varga

Computer Science**Group Leaders: David Benedetto, Matthew Plumlee****Vitali Baranov*****Samuel Hemond*****Bing Yi Liu***

Computer Science

User Physical Activity Identification

Adviser: Jonathan Andree

Antonio Barboza***Tyler Currier*****Brandon Rose***

Computer Science

Brandon Cammett***Ke Chen*****Dane Hoover***

Information Technology

Strafford County Payroll System

Advisers: David Benedetto, Tracy Hayes, Matthew Plumlee

Parker Berberian***Nicholas Kahn*****Gregory Wojtas***

Computer Science

Industrial Application of Time-Sensitive Networking

Adviser: Bob Noseworthy

Mallorie Biron***Sarah Hall*****Mitchell Hersey***

Computer Science

Quantifying DNA-Protein Matches

Advisers: David Benedetto, Anthony Westbrook

Chaitanya Bista***Brian Landolt*****Anthony Rocchio***

Information Technology

The Living Bridge Project: Database and Data Visualization Study

Advisers: Erin Bell, Martin Wosnik

David Bitman***William Clark*****Maxwell Sullivan*****Johnson Trinh***

Information Technology

*Development of a Collaborative**Environment for a New Hampshire Agency*

Adviser: Scott Valcourt

Nicholas Boyd***Jacob Hawkins*****Thomas Yang***

Computer Science

Augmented Reality Telehealth Demonstration Application

Adviser: Scott Valcourt

Benjamin Chamberlain*
Shane Chinburg*
Robert Chisholm*
 Computer Science
Preemptive Involvement and Tracking by Teachers (PITT)
 Advisers: David Benedetto,
 Daniel Shepard

Honey Choksi*
Nicholas Dessanti*
Irene Robb
 Information Technology
Dillon Dow*
 Computer Science
NextStep HealthTech App Development
 Adviser: David Benedetto

Cameron Claiborne*
 Computer Science
Jake Cooper
Davis Osarczuk
 Information Technology
Liberty Mutual Image Analytics
 Adviser: David Benedetto

Maximiliano DelRio*
Benjamin Patton*
 Information Technology
Dylan Wheeler*
 Information Technology, Philosophy
REDSWARMS: Cyber Security Training System
 Adviser: Kenneth Graf

Hannah Dukeman*
Noah Perron*
Taylor Roy*
 Information Technology
Christopher Schwartz*
 Computer Science
Seabed 2030 Affiliate Project
 Adviser: Matthew Plumlee

Benjamin Gildersleeve*
 Analytics and Data Science
Haiyao Ni*
 Computer Science, Management
Andrew Porter*
 Computer Science
Data Science for Storm Events
 Adviser: Laura Dietz

Joshua Guarnieri*
 Computer Science
Nicholas Harrigan*
Joshua Mawuntu*
Taylor Merrifield*
Marko Novcic*
 Information Technology
Automated Attendance
 Adviser: Scott Valcourt

Sarah Hall
 Computer Science
Building a Better Symptom Checker
 Adviser: Laura Dietz

Jack Hamilton*
Matthew Hartman*
Jeffrey Johansen*
 Computer Science
Barrett Morse*
 Information Technology
Cloud-Native Streamline Computation
 Adviser: Matthew Plumlee

Ryan Lefebvre*
 Computer Science
Estimating Energy Expenditure with Machine Learning
 Adviser: Radim Bartos

Noah Levin*
Efras Soputan*
 Information Technology
Drupal in Docker for Incoming UNH CS Students
 Adviser: Scott Kitterman

Francesco Alessandro Mikulis-Borsoi*
 Computer Science
Landing Throttleable Hybrid Rockets with Reinforcement Learning in a 3D Simulated Environment
 Adviser: Marek Petrik

Adam Moynihan*
Ryan Stuart*
 Information Technology
Partly Cloudy
 Advisers: David Benedetto, Martin Ledoux

Leah Rubinstein*
Ivan Tran*
 Information Technology
The Living Bridge Project: Website Usability
 Advisers: Erin Bell, David Benedetto

Earth Sciences

Group Leader: Thomas Lippmann

Cynthia Bova*
 Environmental Sciences
The Effect of a Land-Use Gradient and Sediment Characteristics on Methane Ebullition in Four Headwater Streams
 Advisers: Andrew Robison, Ruth Varner, Wilfred Wollheim

Mackenzie Boyle
 Environmental Conservation and Sustainability
Quinton Hill
 Earth Sciences
Relationships between Soil Chemistry and Particle Size in the Great Bay Estuary, NH
 Advisers: Julia Bryce, Thomas Lippmann

Diane DeVries*
 Environmental Sciences
Comparison of Methane and Nitrous Oxide Emissions along a Nitrate Gradient in the Ipswich River, Massachusetts
 Adviser: Ruth Varner

Brendan Garvey*
 Earth Sciences
Reconstruction of the Terceira Magma Plumbing System
 Adviser: Julia Bryce

Peter Haber*
 Earth Sciences
Using Magnetostratigraphy to Find the Cretaceous-Paleogene Boundary in La Colonia Formation, Patagonia, Argentina
 Adviser: William Clyde

Peter Kondek
Grant Magee
 Environmental Sciences
Chemical Proxies of Oyster Shells in Great Bay
 Advisers: Julia Bryce, Maria Fahnestock

Bonnie Turek*
 Environmental Conservation and Sustainability
Assessing Topographic Mapping Accuracy Using Aerial Drone with Terrestrial and Submerged Aquatic Ground Control Points
 Adviser: Kevin Gardner

INTERDISCIPLINARY SCIENCE & ENGINEERING SYMPOSIUM, POSTER PRESENTATIONS, CONTINUED

Electrical & Computer Engineering**Group Leader: Wayne Smith****Russell Anderson***

Electrical Engineering
Radio Frequency Amplifier for Cellular Signal Application
 Adviser: Michael Carter

Jacob Baker*

Computer Engineering
UNH-IOL Automated Interoperability Board (Firmware)
 Adviser: Qiaoyan Yu

Thor Bartlett***Patrick Chang***

Kai Chatfield-Kinjo*
 Electrical Engineering
Appledore Island Power Grid
 Adviser: Michael Carter

Matthew Beliveau*

Electrical Engineering
IOT - RFID Security
 Adviser: Qiaoyan Yu

Trevor Blampied***Megan Johnson*****Thomas Pham***

Electrical Engineering
Hybrid Engine Rocket Ignition and Control
 Adviser: Kent Chamberlin

Darien Blow***Christopher Flannery***

Electrical Engineering
M4 Automatic Targeting and Stabilization System
 Advisers: Richard Messner, Se Young Yoon

Devin Borchard*

Computer Engineering
Creating an Automated Hydroponic Control System
 Advisers: Todd Guerdat, Mehmet Kayaalp

Jason Bortolussi*

Computer Engineering
NASA TableSat Generation III: QuadSat Swarm
 Advisers: John LaCourse, May-Win Thein

Colin Carlson***Ian Johnston***

Electrical Engineering
The Design, Development, and Testing of a Choice/Serial Reaction Time Apparatus for EEG Instrumentation
 Advisers: Ronald Croce, Wayne Smith

Spencer Couture

Computer Science

Elijah Missildine***Timothy Ryan***

Mitchell Sternberg*
 Electrical Engineering
Automated Foosball Table
 Adviser: Richard Messner

Ioan Diaconu***Mariem Hassan*****Samantha Perez***

Electrical Engineering
Ziyu Liu*

Ryan Reynolds*

Computer Engineering
UNH ECE LunaCats
 Advisers: John LaCourse, MD Shaad Mahmud, May-Win Thein

Ryan Dunn

Electrical Engineering Technology
Current Sensor Bandwidth Tester System Upgrade
 Adviser: Christopher LeBlanc

Olivia Edson***Nha Huynh*****Patrick Marquardt*****Mitchell Mattice***

Electrical Engineering

Fangzhou Xu*

Computer Engineering
ET Nav Swarm
 Advisers: Michael Carter, MD Shaad Mahmud, May-Win Thein

Gaddi Fils Aime***Alvin Lagu*****Corey Weiss***

Electrical Engineering
Improving Autonomous Mapping Algorithms
 Adviser: Se Young Yoon

Christopher Foster*

Electrical Engineering, Philosophy

Catherine Sullivan*

Electrical Engineering
UNH Tidal Energy Cats (TEC): Tidal Energy Conversion Co-Located with Estuarine Bridges for Coastal Infrastructure Resiliency Electrical Research and Design Team
 Advisers: Erin Bell, Michael Carter, Martin Wosnik

Alexander Girard***Lane Krug***

Electrical Engineering
Development of a Next Generation Laser Range Finder
 Advisers: Amy Keesee, Wayne Smith

Perry Hayes***Madelyn Widger***

Electrical Engineering
Proof of Concept of Polyimide Film Flexible Antennas
 Adviser: Nicholas Kirsch

Jonathan LaFrance

Electrical Engineering
UNH-IOL Automated Interoperability Board (Hardware)
 Adviser: Nicholas Kirsch

Ashnav Lal*

Computer Engineering
How to Make Data Centers Cooler and Reduce the Thermal Heat
 Adviser: Kent Chamberlin

Kaitlyn Laliberte***Stephanie Lo***

Electrical Engineering
Developing a Communications Platform Using Software-Defined Radio
 Advisers: Nicholas Kirsch, May-Win Thein

Jessica Lemere

Computer Science
Automation of Ethernet Interoperability
 Adviser: Matthew Plumlee

Benjamin Letourneau*

Electrical Engineering
Hybrid Rocket Engine Flow Regulation Control
 Adviser: Kent Chamberlin

Ryan Morrison*

Electrical Engineering
Radio Frequency Direction Finding Using Ship-to-Ship Communication
 Adviser: Kent Chamberlin

Andrew O'Neil

Information Technology
Ronald Rees*
 Computer Engineering
Tutoring App
 Adviser: Richard Messner

Devanshu Prasad*

Electrical Engineering
Wearable Ring Sensor for Continuous Measurement of Heart Beat
 Adviser: MD Shaad Mahmud

Joshua Rush*

Computer Engineering
Validating the OCP NIC 3.0 PCIe Bifurcation Mechanism
 Adviser: Qiaoyan Yu

Nicolas Sevilla Connelly*

Electrical Engineering
Environmental Control of a Single-Plant Growth Chamber
 Adviser: Michael Carter

Innovation Scholars

Group Leader: Timothy Carlin

Phoebe Adame*

Environmental Engineering

Elena Chan*

Mechanical Engineering

Jordan Labossiere*

Chemical Engineering
Levitation and Its Practical Applications
 Adviser: Michael Locke

Hassan Al-Jewad*

Eric Smith*

Electrical Engineering

Nathanael Frisch*

Computer Engineering

Bryan McKenney*

Computer Science
Responsive Feedback with a Robotic Arm
 Adviser: Jeffrey Lapak

Kendall Boniecki*

Luke Conroy*

Annie Duong*

Ian Lindberg*

Joseph Prescott*

Mechanical Engineering

Lucas Guerrette*

Computer Science

Developing a Low-Cost Thermal Actuator for Space Applications

Adviser: Michael Locke

Ian Bresnahan*

Chemistry, Mathematics

Alice Wade*

Mechanical Engineering

Water Electrolysis

Adviser: Young Jo Kim

Benjamin Brockway*

Matthew Eaton*

Mechanical Engineering

Benjamin Hodsdon*

Civil Engineering

Sunjay Sood*

Environmental Engineering

Drifting Along: Freshwater Drifter and Salinity Reader

Adviser: Josh Humberston

Charles Clark*

Thomas Oliver*

Mechanical Engineering

Emilie Leavitt*

Computer Engineering

Kathleen Terwilliger*

Computer Science

CoBots: Machine Learning

Adviser: Michael Locke

Riley Drew*

Nathaniel McCarvill*

Mechanical Engineering

James Wirth*

Engineering Physics

Olson Center Giveaway

Adviser: Michael Locke

Eli Duggan*

Undeclared

Samuel Mercer*

Chemical Engineering

Tinh Phuong*

Applied Mathematics

Orianne Sinclair*

Computer Science

Distributed Data Processing System for Arduino-Compatible Devices

Adviser: Timothy Carlin

Margaret Enderle*

Ocean Engineering

Design of Instrumentation Port for UNH

Oscillating Flume

Adviser: Savannah Devoe

Matthew Furletti*

Ocean Engineering

Emma Tobbe*

Bioengineering

Building a CTD to Correct Refraction

Errors in Sonar Mapping

Adviser: Val Schmidt

Anna Gombas*

Isabel Medeiros*

Civil Engineering

Garrett Mallard*

Environmental Engineering

Katherine Metzger*

Chemical Engineering

Surging Water in Durham: Measuring

Springtime Water Level Changes in the

Oyster River Watershed

Advisers: Anne Lightbody, Angela Sarni

Jeremy Larkin*

Madeline Strange*

Environmental Engineering

Matthew Libby*

Chemical Engineering

Sarah Young*

Bioengineering

Using a Tethered Balloon to Measure Air

Quality and Atmospheric Structure in

Urban and Rural New Hampshire

Advisers: Allison Bickford,

Anne Lightbody, Charles Smith

INTERDISCIPLINARY SCIENCE & ENGINEERING SYMPOSIUM, POSTER PRESENTATIONS, CONTINUED

Mathematics & Statistics**Group Leader: Orly Buchbinder****Rebekah Alpert***

Statistics

Julissa Freund***Aaron Kearnan*****Catherine Murphy***

Environmental Engineering

Oil Snare

Adviser: Nancy Kinner

Molly Boodey*

Mathematics

*An Examination of Fibonacci Numbers
across Various Mathematical Disciplines*

Adviser: Edward Hinson

Alyson Caruso*

Statistics

*Patient Decisions Regarding Cancer Gene
Panel Testing: An Exploratory Study*

Advisers: Michelle Capozzoli, Margaret

Emmet, Kristen Mahoney Shannon

**Mechanical Engineering—
Competition****Group Leaders: Alireza Ebadi,
Ivaylo Nedyalkov****Matthew Adams****Kyle Adrien****Jacob Downing****Kyle Faucher****Joshua Furgeson****Timothy Johnston****William Maniatis**

Mechanical Engineering

*UNH Precision Racing: Formula SAE**Collegiate Design Series*

Adviser: Todd Gross

Tyler Aversano**Anthony Bedard****Ryan Deschenes****Oliver Fetter****Joshua Gomes****Tanner Hyslop****Samuel Koskela****Cody Letendre****Davis Storey****Liam Taylor****Jacob Weiss**

Mechanical Engineering

UNH SAE Baja

Adviser: Todd Gross

Carly Benik**Nathan Gunter****Silas Johnson****Charlie Nitschelm****Darren Otten****Zachary Raboin****Lucas Simmonds**

Mechanical Engineering

Thomas Collins*

Engineering Physics

Jacob Harrison

Computer Engineering

*UNH SEDS Undergraduate Hybrid**Rocketry Project*

Adviser: Todd Gross

Cody Best***Debarpan Bhowmick*****Courtney Conway***

Mechanical Engineering

ET-NAVSWARM

Adviser: May-Win Thein

Tyler Blish***Andrew Masters*****Brian McAnally*****Zachary Shelby*****Austin Snell***

Mechanical Engineering

Jason Bortolussi*

Computer Engineering

Ryan Contois***Luke McIntire*****Justin Moore*****Timothy Strauss***

Computer Science

Thomas Hall*

Engineering Physics

Kaitlyn Laliberte***Stephanie Lo***

Electrical Engineering

QuadSat Swarm

Advisers: John LaCourse, May-Win Thein

Xuchu Chen

Mechanical Engineering Technology

Evan Conners**Matthew Desilets****David Temeng****Jacob Verneris****Yuqing Zhang**

Mechanical Engineering

UNH Aerocats

Adviser: Alireza Ebadi

Michael Cote***Andres Giraldo*****Nicholas Matte****Nhut Nguyen*****Samuel Vitale***

Mechanical Engineering

Ioan Diaconu***Mariem Hassan*****Samantha Perez***

Electrical Engineering

Ziyu Liu***Ryan Reynolds***

Computer Engineering

Catherine Sandstrom***Rui Sun*****Noah Vogler*****Shiqian Xi***

Computer Science

UNH LunaCats 2020

Adviser: May-Win Thein

**Mechanical Engineering—
Design/Research****Group Leaders: Alireza Ebadi,
Ivaylo Nedyalkov****Jonathon Amrein***

Mechanical Engineering

Jessie Greenhalgh*

Engineering Physics

Joseph Lazzaro*

Electrical Engineering

*Development of a Rogowski Coil to**Measure Auroral Currents*

Advisers: Matthew Argall, Wayne Smith

Roger Balcom***Joseph Crotty*****Nicholas Muise*****Ziran Xu***

Mechanical Engineering

Virtual Reality in a Manufacturing Setting

Adviser: Brad Kinsey

William Bodewes

Nathan Dablain

Mechanical Engineering

One-Handed Bicycle Pump

Adviser: Todd Gross

Kelsey Buck*

Kirk Kaunang*

Thomas Kilgore*

Christian Langendoen-Hannabury*

Andrew Leclair*

Michelle Paradise*

Mechanical Engineering

UNH First Responder Training Tools

Adviser: Anthony Puntin

Isaiah De Leon*

Rautha Jones*

Mechanical Engineering

Power-Assisted Hand Cycle

Adviser: Ivaylo Nedyalkov

Sean Donohue*

Daniel Dorci*

Mykola Matukhno*

Mechanical Engineering

Racket Sports with a Humanoid Robot

Advisers: Momotaz Begum, Paul Gesel,

Igor Tsukrov

Michael Hastings*

Hunter Miller*

Mechanical Engineering

Reach High: Modular Volleyball

Exercise Equipment

Adviser: Ivaylo Nedyalkov

Francesco Lapitino

Mechanical Engineering

Multi-Material Clay 3D Printing

Adviser: Nikhil Padhye

Curtis Linton*

Mechanical Engineering

Developing a Device to Countermeasure

the Negative Effects of Microgravity

on the Body

Adviser: May-Win Thein

Andrew Masters*

Mechanical Engineering

Model Predictive Position Control of a

Quadrotor UAV

Adviser: May-Win Thein

Mechanical Engineering— Industry

Group Leaders: Alireza Ebadi,

Ivaylo Nedyalkov

Tyler Albano

Marshall Halpin

Mechanical Engineering

Truck Bridge Collision Prevention System

Adviser: Todd Gross

Azhar Ali*

Roffiel Farhat*

Mechanical Engineering

Auto-Change Unit for Plasma Cutting

Adviser: Brad Kinsey

Derick Boisvert*

Daniel Coburn*

Mechanical Engineering

Pratt and Whitney Grinding Cell

Automation

Adviser: James Weishseit

Devon Bryson*

Matthew Reggio*

Meghan Stickney*

Zachary Wright*

Mechanical Engineering

Automated Mixing System to Create

Syntactic Foam for Durham Boat

Company

Adviser: Todd Gross

Travis Drewing*

Colby LaChance*

Jacob Mancini*

Jeffrey Street*

Mechanical Engineering

Mobile IV Manufacturing

Advisers: Glenn Shwaery,

Christopher White

Christen Gallant*

Mechanical Engineering

Cyclotron Particle Accelerator Electrode

Cooling Test

Adviser: Ivaylo Nedyalkov

Haocheng Han*

Qiwei Wang*

Mechanical Engineering

Automated Transportation Robots

Designed for Industrial Machine

Adviser: Brad Kinsey

Todd Melanson

Mechanical Engineering

Centrifugal Compressor Analysis

and Design

Adviser: Ivaylo Nedyalkov

Joseph Williams*

Mechanical Engineering

Rotator Cuff Exercise Machine

Adviser: Ivaylo Nedyalkov

Ocean Engineering

Group Leader: Thomas Weber

Megan Barrett*

Cory Barrett*

Timothy Kammerer*

Yongjin Lu*

Computer Engineering

Autonomous Surface Vehicle (ASV)

Advisers: Michael Carter, May-Win Thein

Megan Barrett*

Cory Barrett*

Timothy Kammerer*

Yongjin Lu*

Computer Engineering

Travis Calley*

Matthew Lemire*

Computer Science

Meghan Cincotta*

Shane Harvey

David Miner*

John Ross*

Kristen Simoneau*

Mechanical Engineering

Ian Lander*

Ocean Engineering

Autonomous Surface Vehicle (ASV)

Advisers: Yuri Rzhanov, May-Win Thein

Jacob Bradshaw

Travis Hall

Sarah Zecha

Mechanical Engineering

Model Wind Turbine

Adviser: Martin Wosnik

INTERDISCIPLINARY SCIENCE & ENGINEERING SYMPOSIUM, POSTER PRESENTATIONS, CONTINUED

Travis Calley***Matthew Lemire***

Computer Science

Timothy Holt***Kevin Johnson*****Logan Yotnakparian***

Mechanical Engineering

Remotely Operated Vehicle (ROV)

Advisers: Yuri Rzhahov, May-Win Thein

Cameron Carbone**Austin Hall****James Kelley****Brandon Mello****Amelia Smith**

Mechanical Engineering

Lauren Ritter

Mechanical Engineering, Sustainability

*UNH Tidal Energy Cats (TEC): Tidal**Energy Conservation Co-Located**with Estuarine Bridges for Coastal**Infrastructure Resiliency*

Advisers: Erin Bell, Michael Carter,

Martin Wosnik

Olivia Dube**Kate O'Donnell**

Ocean Engineering

*Nourishment-Driven Drone Survey and**Volumetric Analysis of Seabrook Beach*

Advisers: Diane Foster, Larry Ward

Stephen Ell**William Leibundgut****Maxwell Ullrich**

Ocean Engineering

Adrienne Harris**Savannah Passaretti-Fina****Kyle Sanders**

Mechanical Engineering

Wave-Powered Water Pump

Advisers: Aaron Russell, M Swift

Corina Gudinas

Ocean Engineering

Harrison Sneek

Mechanical Engineering

*Portable Sensors for Observing the**Response of Underwater Piles to Waves**and Tides*

Adviser: Diane Foster

Physics & Astronomy**Group Leader: Ningyu Liu****Tristan Anderson***

Physics

*Dynamic Nuclear Polarization and**Nuclear Magnetic Resonance with**Applications in Medical Physics*

Adviser: Karl Slifer

Lihy Buchbinder

Physics

*Electrochemical Etching of Atomically**Sharp Scanning Tunneling Microscope**(STM) Tips*

Adviser: Shawna Hollen

Landon Buell*

Physics

Examining Attacks on Neural Networks

Adviser: Qiaoyan Yu

Ben Campbell*

Physics, Mathematics

Machine Learning in the String Landscape

Adviser: Per Berglund

Audrey Coleman*

Physics

*Obtaining the GBM Untargeted Search**Confirmation Rate of GRBs*

Adviser: Mark McConnell

Reed Dannar***Cameron Lamarre****Robert Wells**

Engineering Physics

UNH CubeSat

Adviser: Amy Keese

Payson Dunn*

Physics, Classics

*Development of Ion Optics for a Spaceflight**Ion Mass Spectrograph*

Adviser: James Clemmons

Andrew Griglun*

Engineering Physics

*Curved Microchannel Plates for Time-of-**Flight Mass Spectrometers*

Adviser: Harald Kucharek

Isabella Householder*

Physics

*Observations of Van Allen Radiation Belt**Electron Precipitation during Satellite**Conjunctions of FIREBIRD-II and POES*

Adviser: Katharine Duderstadt

Savannah Labounty*

Engineering Physics

Designing a Gamma Ray Collimator

Adviser: Fabian Kislak

Asher Merrill*

Physics

*Searching for the E-3/2 Suprathermal**Ion Tail with Parker Solar Probe's ISIS**Instrument*

Advisers: Jonathan Niehof,

Nathan Schwadron

Max Miller*

Physics

*Estimating Errors from Extrapolating**Finite-Radii Gravitational Wave Merger**Simulations to Infinite Radii*

Adviser: Francois Foucart

Timothy Raeder*

Physics

*Quantifying Radiation Belt Electron**Precipitation and Links to EMIC Waves**Using FIREBIRD II and Van Allen Probes*

Advisers: Shawna Hollen, Chia-Lin Huang

Andrew Reid*

Engineering Physics

*MCX Upper Function and Proofing Fixture**for Sig Sauer*

Adviser: Marc Lessard

Nathan Richard*

Physics

*Automated Classification of Narrow**Bipolar Pulses*

Adviser: Ningyu Liu

Nicholas Richards

Physics

*IBEX-Lo Energy Response to**Interstellar H Wind*

Advisers: Eberhard Moebius, Fatemeh

Rahmanifard

Morgan Sidel*

Physics

*Exploring Earth-Analog Atmospheres with**the James Webb Space Telescope*

Adviser: Mark McConnell

Tornike Shubitidze*

Physics

*Simulating Radio Images of**Lightning Events*

Adviser: Ningyu Liu

Phiona Vall*

Physics

The Effect of the Stellar Wind on X-ray Polarization in High Mass Binary Systems

Adviser: Fabian Kislat

Ryan Williams*

Physics

Decreasing Uncertainty in Nuclear Magnetic Resonance Measurements through the Application of Pappus Chains

Adviser: Elena Long

The Naked Arts— Creativity Exposed!

Act I

Wednesday, April 22

This event exposes the inner creative process of artists working in various disciplines. Presenters will describe the process, research, and other creative aspects undertaken to bring an artistic creation from initial inspiration to the stage or gallery. This may include a performance or excerpts from their work to illustrate their creative scholarship.

Rachel Bergeron*

Fine Arts

Creative Process of Spring Awakening

Advisers: Szu-Feng Chen, David Richman

Kristina Czoschke*

Fine Arts

Narrative through Time

Adviser: Sachiko Akiyama

Allison Hoey*

Art: Art History, Fine Arts

Figurative Painting: Exploration and Discovery

Adviser: Sachiko Akiyama

Howard Lewis*

English

The Falstiad: An American Epic

Adviser: Thomas Payne

Madison Madore*

Fine Arts

Cyanotype in Motion

Adviser: Sachiko Akiyama

Alison McCarron*

Fine Arts, Health Management and Policy

Talking to Myself: Maslow's Hierarchy of Needs Applied to Musical Theatre

Advisers: Szu-Feng Chen,

Deborah Kinghorn

Tejas Moses*

Fine Arts

Wild Clay

Adviser: Sachiko Akiyama

Emma Theberge

Music

Arensky: Composer with Russian Roots and European Branches

Adviser: Daniel Beller-McKenna

UNH Manchester Undergraduate Research Conference

Poster Presentations

Wednesday, April 22

The UNHM URC Poster

Presentations showcase students' independent research and internship projects, service learning activities and civic engagement projects in the learning lab of the city of Manchester.

Maryam Abdi*

Politics and Society

Children and Poverty

Adviser: Stephen Pimpare

Maryam Ahmad*

Biological Sciences, Neuropsychology

Synapse: Bridging the Gap between Music and Technology

Adviser: Aubrie Dionne

Rachel Anastasi

Thomas Gerton

Biotechnology

Bacteriophage SilentRX-Brother Genome Annotation

Adviser: Kyle Mac Lea

Maxx Anderson*

David Merchant*

Roy Velez*

Homeland Security

Zachery Pelletier*

Homeland Security, Justice Studies

Chinburg Properties Inc: The Cochecho Mills Risk Assessment

Adviser: James Ramsay

Monique Archambault*

Emily Reed

Neuropsychology

Service-Learning at Birch Hill Terrace

Adviser: Alison Paglia

Rachel Avery*

English, History

Silence and Memorialization: Erasure of Individuals Subjected to Persecution for Homosexuality during the Holocaust

Adviser: Kristen Woytonik

Bernard Brown*

Computer Science and Entrepreneurship

Python Business Analyzer

Adviser: Hong Jin

Tina Byrd*

Biotechnology

Investigation of the Circadian Rhythms of Life in Polar Regions

Adviser: Kyle Mac Lea

Vanessa Cleary*

Psychology

Assessment of Perspectives on the Current Mental Health Field

Adviser: Nicholas Mian

Dylan Conroy

Joshua Reynolds

Biotechnology

Deconvolution of Brother-of-SilentRX and Other Genome Fragments

Adviser: Kyle Mac Lea

Michelle Crowley

Biology

Food Microbiology of Iceland

Adviser: Kyle Mac Lea

UNH MANCHESTER UNDERGRADUATE RESEARCH CONFERENCE POSTER PRESENTATIONS, CONTINUED

Jacob DiGiovanni***Ethan Faxon*****Benjamin Pinard*****Marie Rouleau***

Homeland Security

*Live and Let Live Farm and Sanctuary**Capstone Project*

Adviser: James Ramsay

Erin Docko*

Biological Sciences

Cardiothoracic Surgical Shadow

Adviser: Suzanne Cooke

James Driscoll***Jaime Ellerman*****Chantal Jennings***

Homeland Security

*School Administrative Unit (SAU) 8**Emergency Operations Analysis and**Threat Assessment*

Adviser: James Ramsay

Kelsie Duggan*

Biotechnology

*RNA Knockdown of Circadian Rhythm**Gene ARNTL2 Effects in Pancreatic Cancer*

Adviser: Kristen Johnson

Ethan Edwards**Isabelle Laizure**

Biotechnology

*Genome Annotation of Bacteriophage:**SilentRX*

Adviser: Kyle Mac Lea

Ashlyn Farwell*

Biology

*Genome Sequencing of *Halococcus***dombrowskii*

Adviser: Kyle Mac Lea

Eugenia Fedorov***Medina Omeragic*****Kristina Shalygina**

Biological Sciences

*Genome Sequencing of *Kibdelosporangium***philippinense, *Saccharolobus shibatae*, and**Cellulomonas hominis*

Adviser: Kyle Mac Lea

Justin Feenstra***Michael Gray*****Nicholas Tiso***

Homeland Security

*Town of Newfields Emergency Operation**Plan Recommendations and Threat**Assessment*

Adviser: James Ramsay

Ethan Ferraiuolo*

Biotechnology

*CRISPR-Cas9 Knock-In: Endogenous**Tagging of the FOXN2 Gene Locus in**Pancreatic Cancer Cells*

Adviser: Kristen Johnson

Christopher Fifty***Tommy Huynh*****Kaylie Knowlton*****Vishnu Soni***

Neuropsychology

Prameela Karedla***Ava Parr*****Rebecca Waugh***

Psychology

*Visible or Invisible: An Examination of**the Effects of Motion-Induced Blindness,**Binocular Rivalry, and Continuous**Flash Suppression*

Adviser: John Sparrow

Heather Finnigan*

Biological Sciences

*A Day in the Shoes of an Emergency**Room Physician*

Adviser: Suzanne Cooke

Maryssa Flynn*

Biological Sciences

*Culture Characterization as a Tissue**Engineering Intern*

Adviser: Stephen Pugh

Kyle Foden*

Politics and Society

*Community Rights Movements in**New Hampshire*

Adviser: Stephen Pimpare

Lillian Frechette

Biological Sciences

Aging Adults Living in Nursing Homes

Adviser: Alison Paglia

Jordan Garron

Psychology

Technology in Old Age

Adviser: Alison Paglia

Kevin Hurley*

Biological Sciences

*Identification of Novel Antibiotic**Production from the Microbial Community**in a Freshwater-Adjacent Sediment Sample*

Adviser: Suzanne Cooke

Tommy Huynh*

Neuropsychology

*Do We See Eye to Eye? A Study of**the Effects on the Visual Perceptual**Phenomena of Binocular Rivalry and**Continuous Flash Suppression on Motion-**Induced Blindness*

Adviser: John Sparrow

Corey Jakway*

Biological Sciences

Internship at Manchester Water Works

Adviser: Kristen Johnson

Kaylie Knowlton*

Neuropsychology

*Is Seeing Really Believing? A Deeper**Look into Motion-Induced Blindness,**Continuous Flash Suppression, and**Binocular Rivalry*

Adviser: John Sparrow

Christine LaPierre*

Biological Sciences

*Let It Grow: Cultivating STEM Cognition**through Community Outreach*

Advisers: Patricia Halpin, Stephen Pugh

James Larocque

Computer Science, Information Technology

Here's Lookin' at You, Kid...

Adviser: Howard Eglowstein

Makayla Lembo

Biological Sciences

*Comparison of Women's Health in Iceland**and in America*

Adviser: Kyle Mac Lea

Kate Lu*

Biological Sciences

*Investigation of Downstream Targets of**ARNTL2 in Human Pancreatic Cancer Cells*

Adviser: Kristen Johnson

Steven MacLeod

Computer Science

*Voice Commands with Google AIY Voice**Kit and Raspberry Pi*

Adviser: Howard Eglowstein

Johnny Marin Cedeno*

Neuropsychology
*Parental Substance Use Disorder:
 Affect on Adolescent Behavioral and
 Academic Performance*
 Adviser: Nicholas Mian

Margaret Martin*

Biotechnology
Pharmacy Certification
 Adviser: Sarah Prescott

Meriah Metzger*

Politics and Society
Nutrition Incentive Programs
 Adviser: Stephen Pimpare

Dennis Miller

Biotechnology
*Microbial Diversity of the White
 Mountains of New Hampshire*
 Adviser: Suzanne Cooke

Erica Ogert*

Biological Sciences
*An Investigation of SARS-CoV-2 and the
 COVID-19 Pandemic*
 Adviser: Kyle Mac Lea

Sabrina Oliveira*

Biotechnology
*AKT2 and ROCK2 Molecular Pathways in
 Pancreatic Cancer Cell Lines*
 Adviser: Kristen Johnson

Abbey Olsen*

Brianna Sullivan*
 Biotechnology
*The Effect of Geothermal Heating on Soil
 Microbes in Iceland*
 Adviser: Kyle Mac Lea

Natalie Parker*

Biological Sciences, Neuropsychology
*Brown-Sequard Syndrome: Unwinding
 the Mystery behind a Rare Neurological
 Condition*
 Adviser: Daniel Seichepine

Natalie Parker*

Biological Sciences, Neuropsychology
*Inspiring STEM Education for the Next
 Generation by Utilization of Anatomy and
 Physiology Based Activities with a Focus in
 Oral Health and Wellness*
 Advisers: Patricia Halpin, Stephen Pugh

Natalie Parker*

Biological Sciences, Neuropsychology
*Unwinding the Mysteries behind Brown-
 Sequard Syndrome*
 Adviser: Daniel Seichepine

Robert Patnaude*

Biotechnology
*Full Genome Sequencing of Novel
 Bacterium Dactylosporangium fulvum*
 Adviser: Kyle Mac Lea

Jamila Peguero

Psychology
*Golden Brook Elementary School Case
 Study Report*
 Adviser: Nicholas Mian

Christopher Puzzo

Computer Science
*An Escape Room House Built out
 of a Dollhouse*
 Adviser: Howard Eglowstein

Amir Rahimov*

Computer Information Systems
Smart Trashcan
 Adviser: Howard Eglowstein

Nicole Reed

Neuropsychology
*Effects of Multiple Concussive and
 Subconcussive Impacts on Driving
 Function under Cognitive Load*
 Adviser: Daniel Seichepine

Sarah Reny

Biological Sciences
The Acidity of Icelandic Water
 Adviser: Kyle Mac Lea

David Reynolds*

Computer Information Systems
System Fundamentals Final Project
 Adviser: Howard Eglowstein

Cody Rodriguez*

Computer Science and Entrepreneurship
Systems
 Adviser: Howard Eglowstein

Sydney Rollins

Biology
*Searching for Novel Antibiotic Chemical
 Metabolite Production in Soil Bacteria*
 Adviser: Suzanne Cooke

Katie Salvagno*

Biological Sciences
Exploring Nursing
 Adviser: Patricia Halpin

Mamady Sankoh

Biological Sciences

Robert Yelle

Biological Sciences, Neuropsychology
*Icelandic Gene That Protects Elderly from
 Late-Onset Alzheimer's Disease*
 Adviser: Kyle Mac Lea

Blanca Santibanex Ocampo*

Biotechnology
*Knockdown Expression of FOXN2 in 3D
 Pancreatic Cancer Spheroids*
 Adviser: Kristen Johnson

Fardeen Siddiqui

Meliha Ulker

Biotechnology
*Genome Annotation for
 Bacteriophage Yavru*
 Adviser: Kyle Mac Lea

Emily Siel

Psychology
*Psychotropic Drug Use for Older Adults in
 Care Facilities*
 Adviser: Daniel Seichepine

Nicholas Spinosa

Biotechnology
*Cytotoxicity of Gemcitabine on FoxN2-
 Deficient Pancreatic Cancer Cells*
 Adviser: Kristen Johnson

Alexander Tenczar*

Computer Information Systems
*Computing Capstone: An Undergraduate
 Speech Research Group*
 Adviser: Michael Jonas

Alexander Tenczar*

Computer Information Systems
*Mimir: A Wiki-Based Online Textbook for
 Programming Languages*
 Adviser: Michael Jonas

Raphaelle Vrana*

Biotechnology
*Growth and Whole-Genome Sequencing of
 Okadaella gastrococcus*
 Adviser: Kyle Mac Lea

UNH MANCHESTER UNDERGRADUATE RESEARCH CONFERENCE POSTER PRESENTATIONS, CONTINUED

Raphaelle Vrana

Biotechnology

Illustrative Exploration of Icelandic Microbes

Adviser: Kyle Mac Lea

Rebecca Waugh*

Psychology

Examining Motion-Induced Blindness, Continuous Flash Suppression, and Binocular Rivalry through Capstone

Adviser: John Sparrow

Alysse Winkelmann*

Neuropsychology

TBI Child Research

Adviser: Nicholas Mian

Marcus Wright*

Biology

P.A. Shadow Experience

Adviser: Kyle Mac Lea

UNH Manchester URC Cinema Arts Day

Thursday, April 23

The UNHM Communication Arts program has a production track in which students complete introductory and advanced course work in video production, scriptwriting, audio production, film aesthetics, and documentary production. The student films and scripts illustrate student work at different stages in the curriculum.

Adviser: Anthony Tenczar

Ross Damon*

Kinesiology

*Riding for a Cause***Ethan Drew**

Communication Arts

*(ab)Normal Documentary Film Trailer***Logan Frye***

Communication Arts

*Mystery Morning***Alyssa Henderson***

Communication Arts

*Where Are My Keys?***Alyssa Henderson***

Communication Arts

*Why Should Children Ride Horses?***Elizabeth Langfeld***

Communication Arts

*Emanate***Elizabeth Langfeld***

Communication Arts

*Northeastern Ballet Theatre:
The Art and Discipline of Ballet***Elizabeth Langfeld***

Communication Arts

*Winifred: Meet Nathan Wells***Cameron Schuyler***

Communication Arts

*Little Red Right Hook - Roller Derby***Cameron Schuyler***

Communication Arts

*Stray Film Short***Robert Skaff**

Communication Arts

*A Story with No Name***Robert Skaff**

Communication Arts

*Lenard the Alien and the Accidental Vegan Movement***Robert Skaff***

Communication Arts

*Slippery Slopes***Robert Skaff***

Communication Arts

The Sun Rises & The Sun Sets

History Department Undergraduate Research Conference

Thursday, April 23

The History Department hosts several panels of undergraduate history majors who present research projects from their academic classes, research seminars, independent research projects, and Honors theses. The History Undergraduate Research Conference provides History students with the opportunity to share their work with fellow students, professors, and families.

Civil Rights and Race

Moderator: Jason Sokol

Benjamin Bernier*

History

Black, White, and Read All Over: Tracing Journalistic Perspectives of the Civil Rights Movement

Adviser: Janet Polasky

Austin Hyatt*

History

Violence and the Black Panther Party

Adviser: Janet Polasky

Astrid Kipka

History, Political Science

I Pledge Allegiance to the Flag of the United States of AmeriKa: An Analysis of the 1920s Ku Klux Klan

Adviser: Marion Dorsey

Abigail Wright*

History

The Resistance: Student Protest and the University of New Hampshire in May 1970

Adviser: Jason Sokol

Colonial Relations and Their Discontents

Moderator: Janet Polasky

Abigail Colby*

History

Physical and Political Geography as a Protagonist of Revolution in French Colonial Vietnam

Adviser: Janet Polasky

Daniel Frehner*

Economics, History

Former Friends: The Franco-American Relationship 1789-1794

Adviser: Janet Polasky

Peter Murray*

History

At the Request of Our People: The March First Movement in Korea Under Japanese Colonial Rule

Adviser: Yan Lu

Revolution and Urban Change

Adviser and Moderator: Sara Wolper

Sarah Marie Jarrar*

Anthropology, History

Why Is There a Tokyo Street in Ramallah? Foreign Monetary Contributions to the State-Making Process in Palestine

Christian Silva*

History

Rebuilding Huaraz: Using Disaster to Manipulate the Future of a City

Katherine Titus

Anthropology, History

Dismantled Landscapes and New States

The Naked Arts—Creativity Exposed!

Act II

Thursday, April 23

This event exposes the inner creative process of artists working in various disciplines. Presenters will describe the process, research, and other creative aspects undertaken to bring an artistic creation from initial inspiration to the stage or gallery. This may include a performance or excerpts from their work to illustrate their creative scholarship.

Deus Boerner*

English

Stargazer

Adviser: Mekeel McBride

Sage Gould*

Fine Arts

Identity and Representation through Creative Expression

Adviser: Sachiko Akiyama

Kaitlyn Grant*

Art: Studio Art

Modern Monsters: Warping Humanity

Adviser: Liese Zahabi

Andrew Knight*

Theatre

Playwriting

Adviser: Nina Morrison

Lansing Ward*

Fine Arts

A Study of Photographic Presentation: The Act of Looking

Adviser: Sachiko Akiyama

Matthew Williams

Art: Studio Art, English/Journalism

MicrobeMasterpiece

Advisers: Cheryl Marie Andam, Julee Holcombe

Philosophy Department Undergraduate Research Conference

Thursday, April 23

The Philosophy URC is a mosaic of concise and meaningful student presentations, varying from such philosophical topics as applied ethics, language theory, and social justice.

Andrew Bisbee

Economics, Philosophy

Platonic Communism: A Comparison of the States of Marx and Plato

Adviser: Nicholas Smith

Caroline Gibson*

Philosophy, Political Science

An Evaluation of Punishment and the Utility Calculus

Adviser: Nicholas Smith

Cameron Horack

Classics, Economics, Philosophy

The Ethics of Higher Education Finance: Income Share Agreements

Adviser: Nina Windgaetter

Ashley Larson

Neuroscience and Behavior

Why It Is Difficult to Walk Away from the Omelas

Adviser: Nina Windgaetter

Liliana Mangan*

Philosophy

Value-Driven Science and Artificial Intelligence

Adviser: Subrena Smith

Angelina Muller

Philosophy, Psychology

Mental Illness as a Symptom of Capitalism

Adviser: Nicholas Smith

Parker Stewart

Philosophy

Marxism and Automation

Adviser: Nicholas Smith

PHILOSOPHY DEPARTMENT UNDERGRADUATE RESEARCH CONFERENCE, CONTINUED

Gordon Unzen*

Justice Studies, Philosophy, Psychology
Finding a Place for Contemporary Psychology in the Marxist Worldview
 Adviser: Nicholas Smith

Clio Walsh

Philosophy
Essentializing
 Adviser: Charlotte Witt

Dylan Wheeler*

Information Technology, Philosophy
Artificial Intelligence as a Disinformation Engine
 Adviser: Nicholas Smith

Emma Wick*

Philosophy, Sustainability
Women's Reproductive Rights, Abortion, and Communism: A Complex Connection
 Adviser: Nicholas Smith

All Colleges Undergraduate Research Symposium

Oral Presentations, Session A

Friday, April 24

The All Colleges Undergraduate Research Symposium showcases students from all disciplines. Students present their faculty-mentored projects in one of two interactive poster sessions, or in one of three oral presentation sessions. University-wide participants come from a variety of disciplines.

Anthropology at Work: A Cultural, Forensic, and Archaeological Approach

Leena Aly

Michaela Morrill
 Biomedical Science
Caesarea Maritima: Analysis of Ancestry Utilizing Metric and Nonmetric Traits of Teeth
 Adviser: Amy Michael

Jeffrey Baron

Anthropology
A Looter's Legacy: Lithic Analysis of an Unprovenienced Stone Tool Collection
 Adviser: Meghan Howey

Emily Bethune

Anthropology, Italian Studies
Arianna Coletti
 Anthropology
Border Connections
 Adviser: Sara Withers

Emily Dolloff-Holt*

Anthropology, Spanish
Kailey Parker*
Haley Rinfret
 Anthropology
Biases in Murder Investigations
 Adviser: Amy Michael

Sarah Marie Jarrar*

Anthropology, History
The Gift That Keeps Giving: Investment of Conservative Forces in Renewable Energy Technology
 Adviser: Robin Sheriff

Shannon McKelvey

Audrey Waterman
 Anthropology
Victoria Slight
 Anthropology, Justice Studies
Caesarea Maritima Biological Profiles
 Adviser: Amy Michael

Defending the Homeland: Military and Economic Security

Adviser: Lawrence Reardon

Devin Ciampi

Political Science
For Eternity: China's Support for the North Korean Terrorist Regime

Kevin Condict

Political Science
Why States Lease Overseas Territory

Abrita Kuthumi

International Affairs, Political Science
Ball's in Your Court: Japan, South Korea, and the Liancourt Rocks

Lauren MacLachlan

International Affairs, Political Science
China's Expanding Influence in Central Asia: The Case of Kazakhstan

Yongyao Peng

International Affairs, Political Science
Towards a Blue-Water Navy: The Development of China's Navy

Tiivo Ruutopold

Political Science
The Kuril Islands: The Organization Void

Education, Identity, and Discrimination in Europe

Caroline Edwards

French, International Affairs, Political Science
Comparison between Higher Education Systems in the U.S. and France
 Adviser: Thomas Safford

Hannah Machado*

International Affairs, Italian Studies, Political Science
Are Italians Happier Than Their American Counterparts?
 Adviser: Thomas Safford

Joseph Margareci

International Affairs, Political Science
To What Extent Does Racism in Italian Media Affect Public Opinion?
 Adviser: Thomas Safford

Alexander McKenna*

International Business and Economics,
Marketing
*An Uneven Pitch: Where Italian Soccer's
Racism Epidemic Comes from and Where
It's Headed*
Adviser: Smita Lahiri

**Gender and Women's Status
around the Globe**

Simfora Bangasimbo*

International Affairs, Political Science
*Sexual Violence and Abuse in Armed
Conflicts*
Adviser: Thomas Safford

Grace Goodwin

Anthropology, International Affairs
*A Cross-Cultural Comparison of Women's
Movements between Spain and the U.S.*
Adviser: Thomas Safford

Darby O'Neil*

International Affairs, Political Science
*Constructing a Kazakh National
Identity: The Role of Gender Dynamics
in Kazakhstan's Urban Landscape and
Mediascape*
Adviser: Smita Lahiri

Brooke Seigars*

International Affairs, Spanish
*The Hidden Cost: Femicide and Free Trade
in Ciudad Juárez*
Adviser: Thomas Safford

Jessica Shah*

Analytical Economics,
International Affairs
*A Cross-Cultural Comparison of Gender
Equality Policies between the United
States and Norway*
Adviser: Thomas Safford

**Multidisciplinary Session I: From
Leadership to Literature**

Alayna Blodgett*

Sociology, Women's Studies
Social Media's Impact on Mental Health
Adviser: Rebecca Glauber

Evan England*

Sociology, Women's Studies
*Gender and Sexual Orientation Minority
Healthcare: Experiences from Both Sides of
the Exam Table, a Pilot Study*
Adviser: Melissa Day

Julian Maduro*

English, Justice Studies
*The Relationship between Multicultural
Representation in Children's Literature and
Reading Practices of Young Adults*
Adviser: Laura Smith

Kayla Sliz*

Psychology
*More Than Just a Captain's Band: An
Investigation into the Role of Leadership
for Women in Collegiate Sport*
Adviser: Karen Collins

Samantha Sullivan

Spanish
La Frontera
Adviser: Lori Hopkins

**Multidisciplinary Session II:
Kinesiology Connections**

Francis Gesel*

Kinesiology
*Supplementation of a Leucine-Enriched
Dairy Protein Blend: Effects on Plasma
Amino Acids in Older Adults*
Advisers: Dain LaRoche, Stuart Phillips,
Dan Traylor

Carlton Robie*

Kinesiology, Marketing
*Marketing College Football's
150-Year Anniversary*
Adviser: Zachary Scola

Jesse Smith

Kinesiology
*The Relationship between Anaerobic
Power, Blood Lactate Concentration, and
Position in Division I Collegiate Ice
Hockey Players*
Adviser: Summer Cook

Benjamin Surman

Kinesiology
*Kinematic Analysis of Patient and
Therapist Agreement in Demonstrated
Shoulder Exercises*
Adviser: Dain LaRoche

**Multidisciplinary Session III:
Topics in Psychology and Life
Sciences**

Shanna Argyros

Noah Ryder
Psychology
Sofia Lombardo
Justice Studies, Psychology
*Using Adaptive Psychophysical Methods
to Measure Spatial Frequency Effects in
Stereoacuity*
Advisers: Andrew Kitt, Joseph LaBarre,
John Sparrow, William Stine, Dan Swift,
Erika Wells, Rebecca White

Alexis Efriamson*

Equine Studies
*The Prevalence of Cryptosporidium and
Giardia amongst New Hampshire
Dairy Calves*
Adviser: Andrew Conroy

Yuri Makar

David Walker
Biomedical Science
*Identification of STAT3 Target Genes That
Promote Ovarian Cancer Metastasis*
Adviser: Sarah Walker

**Religion and Human Rights in
Asian Authoritarian Regimes**

Adviser: Lawrence Reardon

Nicholas Beall

Political Science
The Growth of AI in China

Benjamin Buesser

Political Science
The Muslim Misfortune in China

Gabryella Corricelli

Justice Studies, Political Science
*North Korea: Human Rights Violations
and International Countries' Influences*

ALL COLLEGES UNDERGRADUATE RESEARCH SYMPOSIUM, ORAL PRESENTATIONS, SESSION A, CONTINUED

Jonas Marrello

Political Science

*Catholic and Protestant Acculturation in China***Timothy Rice***

Political Science, Spanish

*Buddhism in China: The Model Religion***Elin Warwick**

Political Science

*Violation of Ethnic Minority Rights in Xinjiang China***Selected Papers from Comm-entary: A Journal for Research in Communication Studies****Emma Barresi**

Communication

Instagram on Paper: Journaling, Photography, and Mindfulness

Adviser: Kevin Healey

Hannah Baum*

Communication

A Royal Pain: Tensions of Womanhood in Padmaavat

Adviser: Michelle Michaud

Rebecca Link

Communication

Revlon Analysis

Adviser: Nora Draper

Kyra Nelson*

Communication, Italian Studies

A Narrative of Antiquity: An Analysis of the Shift in Ecclesiastical-Secular Power in Late Medieval and Early Renaissance Italy

Adviser: Piero Garofalo

Monique Ricard

Communication

DNA Databases: Problematic on Grounds of Constitutionality, Fallibility, and as a Discriminatory Practice

Adviser: Josh Lauer

Sexual Violence Prevention and Response: The Role of Prevention Innovations Research Center Interns**Julia Bobeck**

Communication

Emma Bonacci

Art: Studio Art, Women's Studies

Allison Cross

Justice Studies, Psychology

Tony Nguyen

Communication, Psychology

Mari Tarantino

Human Development and Family Studies

Bridging the Gap between Research and Practice: The Role of PIRC Interns

Advisers: Hannah Drake, Elizabeth

Moschella, Sharyn Potter, Delilah Smith

Julia Bobeck

Communication

Emma Bonacci

Art: Studio Art, Women's Studies

Allison Cross

Justice Studies, Psychology

Tony Nguyen

Communication, Psychology

Mari Tarantino

Human Development and Family Studies

*Sexual Violence among College**Populations: A Review of the Literature*

Advisers: Elizabeth Moschella, Sharyn

Potter, Delilah Smith

Julia Bobeck

Communication

Emma Bonacci

Art: Studio Art, Women's Studies

Tony Nguyen

Communication, Psychology

*Technology as a Tool to Prevent and**Respond to Sexual Violence*

Advisers: Hannah Drake, Elizabeth

Moschella, Sharyn Potter, Delilah Smith

Allison Cross*

Justice Studies, Psychology

Mari Tarantino*

Human Development and Family Studies

*High Schoolers and Healthy**Relationships: The Role of Gender and**Mobile Phone Usage*

Advisers: Elizabeth Moschella,

Sharyn Potter, Delilah Smith

Shifting Trends in Politics, Migration, and Education**Noah Burn**

Political Science

*An Evaluation and Assessment on Whether English or a Desired Native Language is**Most Effective for Elementary-Aged South**African Students to Be Taught in*

Adviser: Jeannie Sowers

Kimberly Gravlin*

Political Science

The Partisan Impact of Hispanic Migration

Adviser: Andrew Smith

Tyler Vareski

Justice Studies, Political Science

*Trends in World Politics: The Rise of the**Multipolar World*

Adviser: Alynna Lyon

Sarah Wydra

Justice Studies, Political Science

*The Effects of Crime, Corruption, and**Climate Change on Gendered Migration**from Central America's Northern Triangle*

Adviser: Mary Malone

Social and Political Change in China**Olivia Bernier**

International Affairs, Political Science

*The Human Cost of China's Struggle for**Sovereignty: Xinjiang and Tibet*

Adviser: Smita Lahiri

Gwenyth Fifield

Genetics, International Affairs

Coronavirus: Were We Prepared or Not?

Adviser: Thomas Safford

Jordyn Haime*

English/Journalism, International Affairs

*Chinese Philo-Semitism: Why China**Admires the Jewish People*

Adviser: Thomas Safford

Cenyue Wang

Communication, International Affairs

*China's Basic Education System and the**Worsening Problem of Inequality*

Adviser: Smita Lahiri

Ruichan Zhang

Communication, International Affairs
The Social Origins of SARS and Wuhan Coronavirus: A Case Study of Chinese Eating Culture
Adviser: Thomas Safford

Social and Political Change in Europe and Asia

Stephannie Adorno-Martinez

International Affairs, Management, Psychology
Social Pressures and Mental Health in South Korea
Adviser: Thomas Safford

Alyssa Dean

Italian Studies
Hydropower Dams in Laos: The Pros and Cons of Energy Development
Adviser: Smita Lahiri

Cailee Griffin*

International Affairs, Political Science
Nation in Suspension: Could Seeking EU Membership Be Bosnia's Road Map — or Its Ruin?
Adviser: Smita Lahiri

Rushali Kapoor

French, International Affairs
India: A Beacon of Democracy
Adviser: Thomas Safford

Cynthia Liu

International Affairs, Political Science
K-Pop Idols as Products: The Dark Side of South Korea's Entertainment Industry
Adviser: Smita Lahiri

All Colleges Undergraduate Research Symposium

Poster Presentations, Session A

Friday, April 24

The All Colleges Undergraduate Research Symposium showcases students from all disciplines. Students present their faculty-mentored projects in one of two interactive poster sessions, or in one of three oral presentation sessions. University-wide participants come from a variety of disciplines.

Margaret Ahearn

Kinesiology
Body Composition and Anaerobic Power Comparison during Pre- and Post-Season in Division 1 Collegiate Ice Hockey Players
Adviser: Summer Cook

Ian Ayer*

Biomedical Science
Regulation of Cellular Communication Network Factor 1 (CCN1) Expression by Thyroid Hormone in the Bovine Corpus Luteum
Adviser: Paul Tsang

Meredith Baker*

Psychology
Conducting a Process Evaluation of the "Supporting Survivors and the Self" Program
Advisers: Katie Edwards, Emily Waterman

Brendan Berube

Kinesiology
Assessing Blood Lactate Levels after an Anaerobic Cycling Test in a Men's Division I Ice Hockey Team
Adviser: Summer Cook

Alyson Caruso

Statistics
Patient Decisions Regarding Cancer Gene Panel Testing: An Exploratory Study
Advisers: Michelle Capozzoli, Margaret Emmet, Kristen Mahoney Shannon

Morgan Chabot*

Communication Sciences and Disorders
How Does Listener Familiarity with a Story Affect the Content Storytellers Include?
Adviser: Kathryn Greenslade

William Chiang

Political Science
Anti-Corruption Practices in the Form of Anti-Doping Measures in the MLB, NFL, and FIFA
Adviser: Melvin Dubnick

Suzanne Courter

Nursing
Sleep Quality of Caregivers for Children with Mitochondrial Disease
Adviser: Pamela Dinapoli

Cierra Cowan*

English, Neuroscience and Behavior
Alexis Loyed*
Psychology
Mind over Matter: Exploring How Mindset Affects Mind Wandering
Advisers: Caitlin Mills, Shelby Smith

Tan Dao

Engineering Physics
Electronic Properties in Strained and Suspended Sheet of MoS₂ on Anodized Aluminum Oxide
Adviser: Shawna Hollen

Briannah DeLorme*

Tiana DiBenedetto*
Sophie Kenny*
Madeline Quigley*
Nutrition
Comparison of Relative Fat Mass Equation and Body Mass Index (BMI) in Predicting Body Composition of Male Collegiate Athletes
Adviser: Kevin Pietro

Kacey Dutton

Occupational Therapy
Patterns of Senior Social Connection
Adviser: Lou Ann Griswold

Audrey Eastman

Biomedical Science, Theatre
Alice: A Story of Drug Addiction
Advisers: Assaf Benchetrit, Gay Nardone

ALL COLLEGES UNDERGRADUATE RESEARCH SYMPOSIUM, POSTER PRESENTATIONS, SESSION A, CONTINUED

Faith Farnham**Mercedes McCoy**

Nursing

Reflecting on How People Who Inject Drugs Describe Their Familial Relationships in Relation to Healthcare Experiences

Adviser: Kerry Nolte

Devon Fortier

Nursing

Predictors of Naloxone Co-Prescription in Palliative Care Patients Receiving Opioids

Adviser: Kerry Nolte

Amy Frechette*

Psychology

The Benefits of Service Dogs for Adults with Autism Spectrum Disorder

Adviser: Jan Tornick

Anika Frink

Zoology

Impacts of Inappropriate Human Possession of Wildlife on the Animal's Well-Being

Adviser: Janet Anderson

Tayla George

Justice Studies, Political Science

The Changing Landscape of Immigration Policy in the United States

Adviser: Melvin Dubnick

Katherine Hunt*

Communication Sciences and Disorders

Acceptance and Commitment Therapy: A Mindfulness-Based Approach for Treatment of Communication Disorders

Adviser: Donald Robin

Meaghan Kalinowski

Nursing

Nursing Student Experiences with Patients with Opioid Use Disorder

Adviser: Kerry Nolte

Daniel Kashulines*

Nursing

Nurses' Perspectives on the Effectiveness of Chest Splinting after Sternotomy Procedures

Adviser: Eileen Hollis

Abigail Laverriere**Tara Willette**

Nutrition

Relationship between Perception of Diet Quality, Exercise, and Performance on Variability of Body Composition among Male College Athletes

Adviser: Kevin Pietro

Benjamin MacKillop

Political Science

Causes of Federal Spending Preferences among Americans

Adviser: Dante Scala

Brianna McGrath

Nursing

Professional Nurse-Led Unjani Clinics: Empowering the Nurse Entrepreneur as a Primary Care Provider

Adviser: Gene Harkless

Gabriela Misiewicz

Bioengineering

Analyzing the Roles of STAT3 and STAT5 in Breast Cancer

Adviser: Sarah Walker

Paxton Morley***Molly O'Shea***

Justice Studies, Psychology

How Mental Health Plays a Role in the Victims of Domestic Violence

Adviser: Ellen Cohn

Serena Mueller*

Communication Sciences and Disorders

The Role of Socio-Economic Status on the Language Output of 3-6 Year Olds during a Naturalistic Museum Study

Adviser: Jill Thorson

Grace O'Connell

Political Science

Legalization of Marijuana

Adviser: Dante Scala

Stephen Orlych

Chemistry

Singlet Fission in Polyacenes for Photovoltaic Solar Cells

Adviser: Craig Chapman

Vincent Pagano*

Environmental Conservation and Sustainability

Determining Viability of Unmanned Aerial Systems (UAS) to Map Forest Edge Influence in New England Forest Communities

Adviser: Russell Congalton

Trey Patno*

Biochemistry, Molecular and Cellular Biology

Does Treatment with Angiogenic Factors (VEGFA and FGF2) Increase Expression of Hypoxia-Inducible 1 alpha (HIF1a) in Bovine Steroidogenic Luteal Cells?

Adviser: Paul Tsang

James Peters

Psychology

Understanding the Personality of a Coworker

Advisers: Hannah Lightcap, John Mayer

Elizabeth Preble*

Occupational Therapy

Understanding the Caregiver Experience: Examining the Transition Out of the Educational System for Children with Cognitive Disabilities

Adviser: Sarah Smith

Erin Robert

Philosophy

Disability Ethics and Democratic Rights: An Ethical Analysis of the 1990 Americans with Disabilities Act, as Amended

Adviser: Andrew Christie

Barbara Silva

Political Science

America's Feelings on a Woman Being President of the United States

Adviser: Dante Scala

Anna Stockman

Community and Environmental Planning

Monetary Involvement in Politics and Interest in Environmental Issues

Adviser: Dante Scala

Shannon Thomes

Finance, Marketing

UNH Addiction Campaign

Adviser: Michael Leese

Caroline Thuma*

Recreation Management and Policy
The Economic Impact of a Youth Softball Tournament in Conway, NH
Adviser: Robert Barcelona

Jessica Tremblay*

Zoology
Assessing How the Diversity of Groups Affects the Frequency of Vigilant Displays in Birds
Adviser: Leslie Curren

Advanced Technical Writing

Adviser: Molly Campbell

Trevor Arseneau

English
Exploring the Benefits of Video Games: Culture and Education

Brittany Bloom

English
Social Media and Personal Productivity

Frances Copeman

Marketing
The Role of Music in Marketing and Advertising: A Website

Jacob Elia

English
IT Internship Experience: A Website

Arianna Gurrera

Biomedical Science
Artificial Intelligence in Healthcare

Jillian Jacques

English
An Exploration into Esports: A Website

Taffarel Putra

Finance, Information Systems and Business Analytics
The World of Esports

Riley Steward

English
A Website for the New Hampshire Outing Club (NHOC)

Timothy Wizda

English
Workplace Crunch in Video Game Development

Sustainability Dual Majors

Christina Delyani

Theresa MacDowell
Marketing, Sustainability
Bosibori Mosongo

Analytical Economics, Sustainability
Michael Slagle
Community and Environmental Planning, Sustainability
Marketing and Promoting Sustainability Education at UNH
Adviser: Vanessa Levesque

Luke Doverspike

Marketing, Sustainability

Ariane Faro

English, Sustainability

Sawyer Hall

Environmental Engineering, Sustainability

Catherine Micinilio

Community and Environmental Planning, Sustainability
Carbon Net Zero by 2050: Approach to a More Sustainable UNH
Advisers: Vanessa Levesque, Cameron Wake

Alison Eagan

English/Journalism, Sustainability

Jordan Garrett

Geography, Sustainability

Ethan Letourneau

Finance, Sustainability

Kate Morrissey

Environmental and Resource Economics, Sustainability
Southern Maine Coastal Resilience: Natural Capital
Advisers: Vanessa Levesque, Cameron Wake

Erin Fabian

Marine, Estuarine and Freshwater Biology, Sustainability

Lauren Ritter

Mechanical Engineering, Sustainability

Lani Stevens

Analytical Economics, Sustainability

Andrea Tutuny

Political Science, Sustainability
Southern Maine Coastal Resilience: Manufactured Capital
Advisers: Vanessa Levesque, Cameron Wake

Clara Miller

Civil Engineering, Sustainability
Localized Onsite Algae Power
Advisers: Felix Devito, Vanessa Levesque

Lauren Pitkanen

Environmental Sciences, Sustainability

Hannah Purcell

Sustainability

Andrea Scarfo

Economics, Sustainability
B Corp Impact Assessment
Advisers: Vanessa Levesque, Fiona Wilson

All Colleges Undergraduate Research Symposium

Oral Presentations, Session B

Friday, April 24

The All Colleges Undergraduate Research Symposium showcases students from all disciplines. Students present their faculty-mentored projects in one of two interactive poster sessions, or in one of three oral presentation sessions. University-wide participants come from a variety of disciplines.

Anthropology at Work: Indigenous Culture

Adviser: Svetlana Peshkova

Caitlin Burnett

Anthropology, Sustainability
Indigenous New Hampshire Rising: Stories in Regalia's Flowers and Curls

Rebecca Holland*

Anthropology, Philosophy
A History of Traditional Palestinian Dress

Mark Marasca

Anthropology
Tribal Identity/Affiliation

Emily Olivier

Educational Studies, French Studies
Indigenous Female Power: Are We in Reverse?

ALL COLLEGES UNDERGRADUATE RESEARCH SYMPOSIUM, ORAL PRESENTATIONS, SESSION B, CONTINUED

Elizabeth Schwaner

Anthropology, French
*Indigenous New Hampshire Rising:
 Indigenous in the New Hampshire
 Community*

**Challenges to International
 Free Trade Regime**

Adviser: Lawrence Reardon

Rory Ceplo

Political Science
*Ties between Economic Activity and
 National Security*

Alyvia Cormier

Justice Studies, Political Science
*Currency Manipulation: The Cause of
 Political Controversy*

Trevor Deane

Economics, Political Science
*China's Growing Investments and
 Business Interest in Nigeria*

James Firsick

Justice Studies, Political Science
*Crash of the Recycling Market: The
 Inadequacies of American Recycling in the
 International World*

Joseph Hook

Economics
*Why Countries Accept Trade Agreements:
 A Case Study of Asia*

**Digital Capitalism in a
 Global Context**

Adviser: Lin Zhang

Caila Kilson-Kuchtic

Communication
Nano-Influencers as a Commodity

Monique Ricard

Communication
*Authenticity and Apologies on the
 Platform YouTube*

Nelson Thomas

Business Administration,
 Communication
*The Rise of Japanese Minimalism and Its
 Effect on Western Society*

Ruichan Zhang

Communication, International Affairs
*TikTok: A Chinese Media Platform
 Going Global*

**Economics, Inequality, and Crime
 around the World**
Evelyn Bollinger*

English, International Affairs
*Fixing Fast Fashion: Solutions to Social
 and Environmental Injustice in Latin
 America's Largest Counterfeit Market*
 Adviser: Smita Lahiri

Noah Burn

Political Science
*How Should South Africa Address Its
 Wealth Inequality Crisis? A Comparison of
 Major Reform Strategies*
 Adviser: Smita Lahiri

Rachael Corsi

International Affairs, Psychology
*Sicilian Mafia and Its Effect on
 Italian Society*
 Adviser: Thomas Safford

John McGinness

International Affairs, Spanish
*How Have Spain's Labor Laws and Culture
 Led to Unemployment over the Last
 Few Decades?*
 Adviser: Thomas Safford

Sierra Riedel

International Affairs, International
 Business and Economics
*Russian Money Laundering in the United
 Kingdom during the 2000's*
 Adviser: Thomas Safford

Environmental Politics in Asia

Adviser: Jeannie Sowers

Darcy Drago

Political Science
Ocean Acidification in the Bay of Bengal

Raneen Nassar

Political Science
*The Economic Impact of Global Warming
 on the United Arab Emirates*

Darby O'Neil*

International Affairs, Political Science
*China's Use of Subsidies in the Solar
 Energy Industry*

Devin Paquette

Justice Studies, Political Science
River of Trash Flows through Lebanon

Tyler Vareski

Justice Studies, Political Science
Ganges River Environmental Impacts

**Honors Papers in Communication
 Studies**
Emily Bourne

Communication
*Analysis of Social Hierarchies in the
 Music Industry*
 Adviser: Joseph Terry

Jillian Cataldo

Communication
*Just Post It: How Nike Has Branded Itself as
 a Lifestyle through Social Media*
 Adviser: Nora Draper

Elena Gregory

Communication
*President Trump's Manipulation of Digital
 Rhetoric during His Presidency and the 2020
 Election*
 Adviser: Michelle Gibbons

Brooke Marston

Communication
*Emancipation and Exploitation:
 Contextualizing the Contraceptive Pill*
 Adviser: Nora Draper

**Multidisciplinary Session IV:
 Investigations of the Brain**
Kennis Barker*

Classics, Psychology

Catarina Santos*

Psychology
*Investigating Individuals' Experiences of
 Visualization While Reading Narratives*
 Advisers: Laura Allen, Sarah Creer,
 Puren Oncel

Sarah Meier*

Neuroscience and Behavior
Graph Theory Analysis of fMRI for Chronic Pain Patients Pre- and Post-Acceptance and Commitment Therapy
 Adviser: Donald Robin

Noah Waller*

Neuroscience and Behavior
Regional Brain Activation in Chronic Pain: A Meta-Analysis for Therapeutic Protocol
 Adviser: Donald Robin

**Multidisciplinary Session V:
 Ideas and Injustices**

Christopher Cioffi

Psychology
The Impact of Individual Differences on the Phenomenological Experience While Reading
 Adviser: Laura Allen

Lauren Flynn*

Human Development and Family Studies,
 Psychology

Catherine McGrath*

Psychology
Boring Ideas: Exploring the Effects of Constraints on Creative Idea Generation
 Adviser: Caitlin Mills

Anika Frink

Zoology
Impacts of Inappropriate Human Possession of Wildlife on the Animal's Well-Being
 Adviser: Janet Anderson

Devon Guyer*

Environmental Conservation and Sustainability, Justice Studies
Creating a Policy Framework to Address Environmental Injustice in the United States
 Adviser: Benjamin Brown

**Political Ideology and the Rise
 and Fall of Authoritarianism**

Logan Breton

International Affairs, Political Science
Populism and Illiberal Backsliding in Central Europe: A Case Study of Hungary and the Czech Republic
 Adviser: Thomas Safford

Jirias Charabati

Civil Engineering, International Affairs
Understanding Lebanon's Waste Management Crisis: The Role of Sectarian Governance and Politics
 Adviser: Smita Lahiri

Tyler Gross

Homeland Security, International Affairs
The Ukrainian Crisis and the Possible Ways It Can Be Resolved
 Adviser: Smita Lahiri

Sophia Henkels

International Affairs, Political Science
The New Cold War in the Age of Information
 Adviser: Thomas Safford

Monica Hughes

International Affairs, Psychology
Yazidi Ethnic Culture and Their Recovery from ISIS Persecution
 Adviser: Thomas Safford

**Public Opinion and Identity
 Politics in Europe**

Audrey Bradley

International Affairs, Spanish
The Role of Bilingual Education in Preserving Regional Languages in Spain
 Adviser: Thomas Safford

Olivia Brigagliano

Economics, International Affairs
Enabling Discrimination? Race-Neutral Policies in France
 Adviser: Smita Lahiri

Gordon Guilmette

International Affairs, Political Science
The Growth of AFD in Germany and How to Combat It
 Adviser: Thomas Safford

Delana Lane

International Affairs, Political Science
Connections between Germany's Diet Shift and Environmental Sustainability
 Adviser: Thomas Safford

Timothy Morris

German, International Affairs
The Origins of Euroscepticism amongst the German Public
 Adviser: Smita Lahiri

**The Environmental Politics of
 Food and Water**

Adviser: Jeannie Sowers

Olivia Bernier

International Affairs, Political Science
Unbottling: The Dark Side of Nestle's Bottled Water Industry

Brooke Bernier

Political Science
Veganism of the Rich

Thomas Hawkins

Political Science
Environmental and Public Health Impacts of Perfluorinated Chemicals in Southern New Hampshire

Alana MacDonald

Political Science
The Beneficial Environmental Impacts of Veganism

Emily Thompson

Environmental Conservation and Sustainability
How the U.S. Federal Government Addresses Factory Farming

**War and Peace in Germany:
 An International Experience in
 Diplomacy**

Adviser: Alynna Lyon

Kelsey Crowley

Elizabeth McCarthy

Political Science

Cailee Griffin

Avery Judd

International Affairs, Political Science

Cameron MacDonald

Economics, Political Science

Russell Miles

Applied Mathematics
War and Peace in Germany: An International Experience in Diplomacy

World Politics and Human Security in a Changing World

Simfora Bangasimbo

International Affairs, Political Science
The United Nations' Unsolved Problem: Investigating the Relationship between Female Peacekeepers and Sexual Abuse Allegations in Peacekeeping Missions
 Adviser: Alynna Lyon

Melinda Hamilton*

Political Science
A Study of Cameroon and South Sudan: How Neoliberal Efforts Shaped Two Countries and a Continent
 Adviser: Alynna Lyon

Hannah Machado

International Affairs, Italian Studies, Political Science
Global Impacts of Brexit
 Adviser: Alynna Lyon

Vincent Petracca

Political Science
Naval Shipbuilding and Maintenance
 Advisers: Alynna Lyon, Susan Siggelakis

Brian Wilson*

Political Science
International Organizations and Global Homelessness
 Adviser: Alynna Lyon

Sarah Wydra

Justice Studies, Political Science
A Comparison of Jordan and Lebanon on Their Response to the Syrian Refugee Crisis
 Adviser: Jeannie Sowers

All Colleges Undergraduate Research Symposium

Poster Presentations, Session B

Friday, April 24

The All Colleges Undergraduate Research Symposium showcases students from all disciplines. Students present their faculty-mentored projects in one of two interactive poster sessions, or in one of three oral presentation sessions. University-wide participants come from a variety of disciplines.

Maryam Ahmad*

Biological Sciences, Neuropsychology
Synapse: Bridging the Gap between Music and Technology
 Adviser: Aubrie Dionne

Taylor Alcorn*

English, Justice Studies
The Effect of Inadmissible Evidence on Jury Decisions
 Advisers: Donovan Kelley, Kirk Trombley

Shanna Argyros

Noah Ryder

Psychology

Sofia Lombardo

Justice Studies, Psychology
Measuring the Decay of Inhibition Created by Motion-Induced Blindness
 Advisers: Andrew Kitt, Joseph LaBarre, John Sparrow, William Stine, Dan Swift, Erika Wells, Rebecca White

Meredith Baker*

Tracy Fister*

Psychology
Are You Sabotaging Your Own Relationship? A Dyadic Analysis of Emotion Regulation and Satisfaction in Romantic Relationships
 Adviser: Katherine Lee

Bridget Baker*

Genetics
Current Dog Breeding Practices' Impacts on Health and Preservation of Purebred Dogs
 Adviser: Jessica Bolker

John Ball

Jennifer Mydosh

Biomedical Science
Species Diversity of Methicillin-Resistant Staphylococcus from Domestic and Wildlife Animals
 Advisers: Cheryl Marie Andam, Robert Gibson, David Needle

Keirra Bartley*

Raegan Lynch*

Isabelle Todd*

Nutrition
Assessing Nutrient Adequacy among Food-Insecure Students at the University of New Hampshire
 Adviser: Jesse Morrell

Ava Boutilier

Biomedical Science
Drug-Dependent Decrease in Waldenstrom macroglobulemia Cell Proliferation and Viability by JAK2/STAT Inhibitor Pacritinib
 Adviser: Sherine Elsawa

Mia Brikiatis*

Educational Studies, English Teaching
Literature in the Classroom and Its Effect on Women's Representation
 Adviser: Judith Sharkey

Benjamin Buesser

Political Science
Religion and Political Conservatism
 Adviser: Dante Scala

Carissa Charbonneau*

Wildlife and Conservation Biology
Does Dimorphism Predict Life History Characteristics in Australian Passeriformes?
 Adviser: Leslie Curren

Nick Charron

Zoology
*The Catbird's Meow: An Acoustic Analysis of Gray Catbird (*Dumetella carolinensis*) Vocalizations*
 Adviser: James Taylor

Isabella Craig*

Psychology

Examination of Individual Differences in Source-Based Writing

Advisers: Laura Allen, Sarah Creer, Puren Oncel

Emily D'Antonio

Nutrition

Social Media Engagement and Psychological Well-Being in Students at University of New Hampshire

Adviser: Kevin Pietro

Kyle Deegan

Neuroscience and Behavior

The Role of Ventral Midline Thalamic Nuclei in Goal-Directed Behaviors

Adviser: Robert Mair

Benjamin Desrochers

Political Science

Public Perceptions of Homeland Security and Surveillance

Adviser: Dante Scala

Ciara Devereaux

Biology

Sonthaya Lacy

Neuroscience and Behavior, Spanish

Elizabeth Rebuck

Psychology

Clio Walsh

Philosophy

"Is That What She's Wearing?": How Internalized Misogyny Affects the Judgement of Outfits in Different Social Contexts

Advisers: Ewa Kochanowska,

Jolie Wormwood, Jaime Young

Ciara Devereaux*

Biology

Sonthaya Lacy*

Neuroscience and Behavior, Spanish

Elizabeth Rebuck*

Psychology

Clio Walsh

Philosophy

"They Said It, Not Me!": Effects of Internalized Misogyny on Endorsement of Social Media Judgements

Advisers: Ewa Kochanowska,

Jolie Wormwood, Jaime Young

Samantha Dionne

Biomedical Science

Cognitive Abilities of Caribbean Hermit Crabs in Navigating a Known Location

Adviser: Leslie Curren

Nikolaos Dishaw

History

The Effects of Age on Party Affiliation

Adviser: Dante Scala

Erica Domeier

Nursing

Nursing Students' Experiences of Incivility in Undergraduate Nursing Programs and the Perceived Effects on Well-Being

Adviser: Alyssa O'Brien

Elizabeth Dukas

Political Science

Social Connectedness' Relation to General Happiness

Adviser: Dante Scala

Hannah Duperry*

Neuroscience and Behavior

The Importance of Proactive Control in the Targeted Retrieval of Content-Specific Memory

Adviser: Robert Ross

Alexandra Ecker*

Tyler Stetson*

Neuroscience and Behavior

Using Language to Predict Mind Wandering

Adviser: Caitlin Mills

Travis Fischer

Biochemistry, Molecular and Cellular

Biology

GLI3 as a Mediator of Inflammation

Adviser: Sherine Elsawa

Mrinal Ganash*

Bioengineering

Spore Surface Display of Plastic-Degrading Enzymes

Adviser: Kang Wu

Ian Gliser*

Neuroscience and Behavior

The Sound of Inattention: Predicting Mind Wandering with Automatically Derived Features of Instructor Speech

Adviser: Caitlin Mills

Alicia Guzman*

Justice Studies, Psychology

The Statistical Analysis of National Drug Court Data

Adviser: Ellen Cohn

Emma Hancock

Educational Studies, Political Science

How Confidence in the Federal Government Affects Voter Turnout

Adviser: Dante Scala

Emily Handy*

Psychology

What Happens When the Coherence Threshold Is Shifted?

Advisers: Edward O'Brien,

Allison Sonia-Bolduc

Michael Harris

Geography

Demographic Regression Analysis of the 2019 Canadian Federal Election Results in GIS

Adviser: Tu Lan

Eric Hilton

English/Journalism, Political Science

How Individual Traits Affect Confidence in Government Institutions

Adviser: Dante Scala

Jessica Hosea*

Neuroscience and Behavior

Effective Connectivity during Cognitive Flexibility

Adviser: Robert Ross

Allison Hurley*

Neuroscience and Behavior

Computational Analyses of Musical Mood Inductions

Advisers: Laura Allen, Sarah Creer,

Puren Oncel

Angela Hurley*

Justice Studies, Sociology

UNH Students' Attitudes about Campus Police

Adviser: Cesar Rebellon

Mikayla Jerominek

Community and Environmental Planning

The "Conservative Democrat": Analyzing the Elusive Existence of a Leftist Party in America

Adviser: Dante Scala

ALL COLLEGES UNDERGRADUATE RESEARCH SYMPOSIUM, POSTER PRESENTATIONS, SESSION B, CONTINUED

Philip Kaifer

Political Science

Opinion on Climate Change, Age, Education

Adviser: Dante Scala

Katherine King***Isabella Thompson***

Psychology

The Relations between Dimensions of Reading Comprehension and Prior Knowledge

Advisers: Laura Allen, Sarah Creer, Puren Oncel

Sean Kohlbrenner*

Computer Science

Assessing the Need for Task-Specific Algorithms for Automated Essay Scoring

Adviser: Laura Allen

Nicholas LaCourse*

Political Science

Religiosity in Presidential Elections: The Faithful as a Cohesive Political Bloc in the 21st Century

Adviser: Dante Scala

Jason Lam*

Bioengineering

The Role of STAT3 in Ovarian Cancer Sphere Formers

Adviser: Sarah Walker

Danielle Lamontagne

Psychology

Risk Perception in a Sexual Assault Vignette Depicting LGB or Heterosexual Relationships

Adviser: Jolie Wormwood

John Levasseur

Information Systems and Business

Analytics

Causes of Public Perception of the Media

Adviser: Dante Scala

Yuri Makar**David Walker**

Biomedical Science

Identification of STAT3 Target Genes That Promote Ovarian Cancer Metastasis

Adviser: Sarah Walker

Riana Malik*

Health Management and Policy

Associations of Health Behavior Indicators and Adverse Childhood Experiences among New Hampshire High School Students

Adviser: Semra Aytur

Catherine Micinilio

Community and Environmental Planning, Sustainability

Climate Change Deniers: Why Is There Lack of Trust in Science?

Adviser: Dante Scala

Max Miller

Physics

Estimating Errors from Extrapolating Finite-Radii Gravitational Wave Merger Simulations to Infinite Radii

Adviser: Francois Foucart

Dennis Miller

Biotechnology

Microbial Diversity of the White Mountains of New Hampshire

Adviser: Suzanne Cooke

Angela Monahan

Neuroscience and Behavior

In Situ Hybridization to Determine If Alternatively Spliced N-Type Calcium Channel, CaV2.2 e18a, Is Found in Dopaminergic Cells

Adviser: Arturo Andrade

Glenn Morris

Economics

Government Spending

Adviser: Dante Scala

Michael Newell*

Nursing

Evaluating the Outcomes of Incorporating LGBTQ+ Panels in Undergraduate Nursing Education

Adviser: Alyssa O'Brien

Brenna Niziak*

Justice Studies, Psychology

Meegan O'Connell***Kathleen Tortorella***

Psychology

Depression as a Mediator between Parental Monitoring and Substance Abuse

Adviser: Ellen Cohn

Griffin Nye***Michael Pellitteri***

Biomedical Science

*Multilocus Sequence Analysis of Global *Streptococcus canis* and *Staphylococcus pseudintermedius* Reveals Genetically Diverse and Frequently Recombining Lineages*

Adviser: Cheryl Marie Andam

Abigail Palin*

Biochemistry, Molecular and Cellular Biology

Effect of Fetal Bovine Serum (FBS) on Expression of Cellular Communication Network Factor 1 (CCN1) in Bovine Granulosa Cells

Adviser: Paul Tsang

Isabella Pantano

Nursing

Perceptions of Vaping by Adolescents

Adviser: Gene Harkless

Siobhan Pelletier

Nursing

Nursing Students' Self-Reported Responses towards Evidence-Based Vaccine Recommendations

Adviser: Gene Harkless

Savannah Pirello-Spraggins**Sarah Rebillard**

Wildlife and Conservation Biology

*Fear and Social Learning in the Land Snail *Bulimulus guadalupensis**

Adviser: Leslie Curren

Sarah Pogany*

Nutrition

Changes in Bone Health of Female College Students

Adviser: Gretchen Arnold

Griffin Poutre

Political Science

Do Self-Identified Democrats Participate in More Protest Marches Than Self-Identified Republicans?

Adviser: Dante Scala

Erin Robert

Philosophy

Disability Ethics and Democratic Rights: An Ethical Analysis of the 1990 Americans with Disabilities Act, as Amended

Adviser: Andrew Christie

Mitchell Scacchi

Political Science
Political Tolerance
Adviser: Dante Scala

Logan Slattery

Economics, Political Science
Causes of Political Party Alliance in College Students
Adviser: Dante Scala

Raymond Staples

Political Science
Tax Expenditure within the Government
Adviser: Dante Scala

David Temeng

Mechanical Engineering
Optimizing the Die Geometry of B-Pillar to Accommodate for Springback
Adviser: Marko Knezevic

Katherine Titus

Anthropology, History
Preserving the Past for a More Ethical Future: Photogrammetry and Re-Analysis of a Bioarchaeological Sample from Çadır Höyük in Central Turkey
Adviser: Amy Michael

Gordon Unzen*

Justice Studies, Philosophy, Psychology
Introspection as a Moderator of the Relationship between Religiousness and Moral Reasoning
Adviser: Ellen Cohn

Tyler Wade*

Biomedical Science
"CIORF150": A Novel Regulator of JAK2 Kinase, and Candidate Tumor Suppressor in Human Blood Cell Progenitors
Adviser: Don Wojchowski

Emmaline Willis*

Zoology
The Evolution and Development of Chiropteran Flight
Adviser: Jessica Bolker

Zeek Witt

Political Science
Public Opinion on Whether Global Warming Is Happening or Not
Adviser: Dante Scala

Rachel Young*

Justice Studies, Psychology, Women's Studies
What Mattered Most: The Effect of Gender Identity and Mattering on Rule-Violating Behavior
Adviser: Ellen Cohn

Rachel Zampini*

Nutrition
Mindful Eating and Metabolic Syndrome among UNH College Students
Adviser: Maggie Begis

Advanced Technical Writing

Adviser: Molly Campbell

Matthew Cohen

Finance
Economics: Indicators That Influence Us

Jacob Garner

Communication
Looking into Access to Higher Education

Bryce Libbey

Management
Career Exploration in the Legal Field

Ashley Martin

Information Technology
Technology's Impact on the Environment: Data Centers

Emily Murphy

Finance
Effect of Social Media on Fitness: A Website

Lilian Pudlo

English
The Art of Creating Children's Picture Books: A Website

Gabrielle Scott

English Literature
College Writing Readiness Gap: A Website

Mason Sweet

English
Effective Use of Social Media as a Marketing Platform

Cassandra Townsend

Biomedical Science
Exploring the Impact of Culture on Outbreak Containment

Andrew Weaver

Environmental Engineering
Downhill Cartography: Mapping Mountain Bike Trails with GPS Data in ArcMap

All Colleges Undergraduate Research Symposium

Oral Presentations, Session C

Friday, April 24

The All Colleges Undergraduate Research Symposium showcases students from all disciplines. Students present their faculty-mentored projects in one of two interactive poster sessions, or in one of three oral presentation sessions. University-wide participants come from a variety of disciplines.

Educational Studies

Adviser: Judith Sharkey

Olivia Doulames*

Margaret Potvin*
Educational Studies, Human Development and Family Studies
Can We Expand the Playing-Learning Field? Perspectives from UNH Education Field Experience Coordinators and Directors

Lauren Eramo*

Educational Studies, Human Development and Family Studies

Zachary Kelly*

Educational Studies, History
UNH Education Faculty Perspectives on the Role of Field Experiences in Developing Educators

ALL COLLEGES UNDERGRADUATE RESEARCH SYMPOSIUM, ORAL PRESENTATIONS, SESSION C, CONTINUED

Colleen Keyes*

Educational Studies, History

Brittany Missert*

Educational Studies, English Teaching

Ashley Storey*

Educational Studies, Human Development and Family Studies
Building Our Field of Dreams: UNH Education Students' Perspectives on Expanding Field Experiences in Their Program

Fears of the People: Nationalism, Health, and Immigration

Adviser: Lawrence Reardon

Ian Ffrench

Philosophy, Political Science
How International Relations Shape Global Health Policy

Aislinn Noble

Political Science
The H&M Story: How the Media Can Change Fast Fashion

Andrew Pozerski

Justice Studies, Political Science
Article 9: Why Countries Adopt Pacifist Constitutions

Devon Resnikoff

Political Science
Complicated Neighbors: North Korean Refugees in China

Raymond Staples

Political Science
International Health Issues

From Oil Spills to Coral Bleaching: U.S. Environmental Politics

Adviser: Jeannie Sowers

Tayla George

Justice Studies, Political Science
Political Responses to Oil Spills in the Gulf of Mexico

Nelson Idahosa

Political Science
American Elections and the Environment

Hannah Touzos

Political Science
Coral Reef Decay in the Bahamas

Philip Trajkovski

Environmental Conservation and Sustainability
The Politics of Nuclear Waste

Multidisciplinary Session VI: Culture and Behaviors
Adrian Cea Cruz

Neuroscience and Behavior
People's Understanding of Personality and Their Everyday Behavior
 Adviser: John Mayer

Nicolette Cooper*

Kinesiology
Native Americans and Climate Change through Feminism
 Adviser: Tamsin Whitehead

Hayleigh Hildebrand

Environmental Sciences, Russian
Russian Youth, Politics, and Pop Songs
 Adviser: Ekaterina Burvikova

Gordon Unzen*

Justice Studies, Philosophy, Psychology

Rachel Young*

Justice Studies, Psychology, Women's Studies
Justice Attitudes, Adolescent Bullying Behavior/Victimhood, and the Effects of Masculinity, Femininity, and Androgyny
 Adviser: Ellen Cohn

Multidisciplinary Session VII: Historical Perspectives
Benjamin Bernier*

History
Black, White, and Read All Over: Tracing Journalistic Perspectives of the Civil Rights Movement
 Adviser: Janet Polasky

Cameryn Boland

Linguistics
Globalicious: Global Trends of the Suffix -licious in the 2010s
 Adviser: Rochelle Lieber

Samuel Mercer*

Chemical Engineering
Comparing the History of the State Police between Maine and New Hampshire
 Adviser: Alex Holznienkemper

Erin Robert

Philosophy
Disability Ethics and Democratic Rights: An Ethical Analysis of the 1990 Americans with Disabilities Act, as Amended
 Adviser: Andrew Christie

Multidisciplinary Session VIII: Topics in the Sciences
Tristan Anderson

Physics
Dynamic Nuclear Polarization and Nuclear Magnetic Resonance with Applications in Medical Physics
 Adviser: Karl Slifer

Jonathan Cooper*

Bioengineering
Selective Detection of Dopamine Utilizing a Graphene-Based Field Effect Transistor with a Microfluidic Channel
 Adviser: Edward Song

Emily Dunlop*

Zoology
A Comparison of Welfare Considerations among Captive Animals
 Adviser: Jessica Bolker

Taylor Gagne*

Neuroscience and Behavior
Comorbid Effects of Nicotine and Alcohol on Demand in Rats
 Adviser: Sergios Charntikov

Michael Moheban

Chemistry
Synthesis of a Novel Class of Compounds: Intramolecular N-heterocyclic Borole Frustrated Lewis Acid/Base Pair
 Adviser: Christine Caputo

Vincent Pagano

Environmental Conservation and Sustainability
Offshore Wind in Northern New England: An Examination of Political, Environmental, and Economic Factors
 Adviser: Clayton Mitchell

Remembrance of Things Past: The Asian Legacy

Adviser: Lawrence Reardon

Isabella Arms

Italian Studies, Political Science
The Human Cost of Chinese Investment

Jokaira German

Political Science
*Japan and South Korea: An
Inconsolable History*

Kimberly Gravlin*

Political Science
*Japan's Declining Population and Its
Integration of Outward-Focused Policies*

Benjamin Kelley*

Political Science
Taiwan: Japan's Only Asian Ally

Thomas McDonough*

Political Science
*Effects of Korean Policy on International
Soft Power*

Selected Papers in Conversation Analysis

Adviser: Edward Reynolds

Zachary Astle

Communication
*Membership and the Creation of
Hierarchies in the Sport of Throwing*

Riley Nadeau*

Communication
*The Practice "I Mean" Being Used for
Initiating Self-Repair*

Stephanie Rodriguez

Communication
*The Practice of Swearing in
Conversation Analysis*

Abdulaziz Zarandah

Business Administration,
Communication
"I Guess" in Conversation Analysis

Peter T. Paul College of Business and Economics Undergraduate Research Conference

Poster Session I

Friday, April 24

Through original research and valuable guidance from mentors, this event helps Paul College students gain deeper academic knowledge as well as professional experience. This URC event includes poster presentations, oral presentations, and feedback from judges.

B.S. & B.A. Economics

Mariam Abougareeb

Ellen Goulding

Grace Monahan

Economics

*The Effects of Immigration on Wages of
Native Workers*

Adviser: Reagan Baughman

Hazel Alvarez

Nicholas Nilsen

Mary Shotton

Economics

Andrea Scarfo

Economics, Sustainability
Strategies for Poverty Reduction in Brazil

Adviser: Reagan Baughman

Zhehan Bao

Owen Graham

Economics

Evan Royer

Business Administration, Economics
*How Student Loan Debt Affects Future
Savings*

Adviser: Reagan Baughman

Bretton Belden*

Economics
All-Payer System and Health Care Costs
Adviser: Aziz Saglam

Aurora Braswell

Robert Shannon

Economics

Kevin Teng

Business Administration, Finance
*How the Move toward Automation Will
Affect U.S. Workers*

Adviser: Reagan Baughman

Olivia Brigagliano*

Economics, International Affairs
The Labor Market Effects of Immigration
Adviser: Aziz Saglam

Bryce Currier

Connor Holman

Economics

Andrew Merchant

Business Administration, Economics
*A Tax That Does Good: The Case of
Cigarettes*
Adviser: Reagan Baughman

Shaan DeJong

Economics, Wildlife and
Conservation Biology

Ivana Korusiakova

Accounting, Economics, Finance

Kevin Murphy

Economics, Finance
What Caused Greece's Economic Crisis?
Adviser: Reagan Baughman

Hayden Foley*

Economics, Sociology
*Wages and Prices: Are Workers Fully
Compensated for Cost of Living
Differences?*
Adviser: Aziz Saglam

Daniel Frehner

Economics, History

Cameron MacDonald

Economics, Political Science

Amanda Sullivan

Economics
The Economics of the Gender Wage Gap
Adviser: Reagan Baughman

Andrew Graff*

Economics

Economic Benefits of Renewable Energy
Adviser: Aziz Saglam

Sarah Hobbs*

Economics, Finance
Central Bank Independence and Economic Growth
 Adviser: Aziz Saglam

Joseph Hook*

Economics
Social Security: Crisis and Solutions
 Adviser: Aziz Saglam

Caroline Kageleiry*

Economics
A Socioeconomic Model of National Olympic Performance
 Adviser: Aziz Saglam

Ali Mara*

Applied Mathematics
The Role of Socioeconomic Status in SAT Scores
 Adviser: Aziz Saglam

Patrick Morse

Economics
Gaming Industry: Stock Market Performance
 Adviser: Aziz Saglam

Richard Planchet*

Economics
Planned Parenthood and Economy
 Adviser: Aziz Saglam

Christian Reardon*

Economics
Economic Impacts of Artificial Intelligence
 Adviser: Aziz Saglam

Lani Stevens*

Analytical Economics, Sustainability
Determinants of Undernourishment
 Adviser: Aziz Saglam

EcoGastronomy**Spencer Drakeunderkoffler***

Ecogastronomy, Psychology
Happy Plants, Happy People: Building a Horticultural Therapy Program with UNH Health and Wellness
 Advisers: Daniel Winans, Dawn Zitney

Jonathan Gagne*

Environmental and Resource Economics, EcoGastronomy
Plastic Retail: Convenience at a Cost
 Adviser: Daniel Winans

Jennifer Howes*

Ecogastronomy, Nutrition
Cream, Sugar, or Black: Coffee Intake Patterns in Relationship to Body Mass Index of University of New Hampshire Students
 Advisers: Sherman Bigornia, Daniel Winans

Lea Iuliano*

Italian Studies, Sociology
What You Say vs. What You Do: The Disparities between UNH Students' Beliefs vs. Actions towards Environmental Awareness
 Advisers: Della Burke, Daniel Winans

Kristine Keller-Miller*

Accounting, Ecogastronomy, Information Systems and Business Analytics
Assessing Market Viability of Heirloom Vegetables through Farmer and Chef Collaboration
 Advisers: Alison Magill, Daniel Winans

Jessica Letellier*

Taylor Zupo*
 Ecogastronomy, Nutrition
Development of Indigenous Foods Education Program for New Hampshire Elementary Schools
 Advisers: Stacey Purslow, Daniel Winans

Meredith Parvin*

Ecogastronomy, Nutrition
Isabella and the Habichuelas con Dulce: Exploring Latin American Food and Culture through Development of a Children's Book
 Advisers: Ruth Wharton-McDonald, Daniel Winans

Grace Stott*

Ecogastronomy, Nutrition
Design and Implementation of a Nutrition Education Program at the Strafford County Department of Corrections
 Advisers: Rochelle L'Italien, Daniel Winans

Peter T. Paul College of Business and Economics Undergraduate Research Conference

Poster Session II

Friday, April 24

Through original research and valuable guidance from mentors, this event helps Paul College students gain deeper academic knowledge as well as professional experience. This URC event includes poster presentations, oral presentations, and feedback from judges.

Economics of Sports

Adviser: James Wible

Zhehan Bao

Economics
Golden State Firm Perspective

Geoffrey Bearden

Finance
An Economic Analysis of the New England 2007 Roster

Bretton Belden

Economics
An Economic Analysis of St. Louis Cardinals Roster and Salary Management

Micheal Curley

Information Systems and Business Analytics
An Economic Analysis of the San Francisco 49ers Labor

Matthew Erb

Finance
An Economic Analysis of the Milwaukee Bucks Roster

Bryson Herring

Information Systems and Business Analytics
Economics of Dallas Cowboys Roster Value

Paige Hughes

Economics, Finance, Marketing
Economic Analysis of the Pittsburgh Steelers

Trevor Hunt

Finance
An Economic Analysis of the San Antonio Spurs

Jack Larche

Economics
The Roster Economics of the Philadelphia 76ers

Eric Lugli

Analytical Economics
An Economic Analysis of the Los Angeles Clippers

Sadie Mazzola

Analytical Economics
An Economic Analysis of the Los Angeles Dodgers Roster

Christopher Mead

Economics
Vegas Golden Knights as a Monopoly

David Michel

Information Systems and Business Analytics
Labor Economics of the Minnesota Vikings

Ian Moscaritolo

Business Administration
Economics of the New Orleans Saints Roster

Christopher Mudrick

Economics
Do the Cincinnati Reds Have a Monopoly on Labor in Their Market?

Brendan Nichols

Information Systems and Business Analytics
Labor Economics of the New York Giants Roster

Nicholas O'Neil

Finance
A Look at the New York Knicks Organization

Connor O'Neil

Management
Red Sox Roster Sports Economics Project

Jonathan Olson

Information Systems and Business Analytics
Labor Economics of the New York Yankees

Dennis Panneton

Political Science
Toronto Raptors: Labor and Roster

Bronson Paradis

Management
An Economic Analysis of the Pittsburgh Steelers Roster

Aaron Rancourt

Economics
An Economic Analysis of the Labor and Roster of the Tampa Bay Buccaneers

Cameron Richall

Finance
Economics of the Pittsburgh Penguins Roster

Jared Silkman

Finance, Management
Boston Celtics: Labor/Roster

Anthony Sturzo

Management
Golden State Warriors Roster: Sports Economics Project

Jakob Walker

Economics
The Economics of the Boston Bruins

Matthew Wilson

Business Administration
Economic Analysis of the Tampa Bay Rays Roster Structure

Information Systems and Business Analytics

Alexa Ardolino

Business Administration, Information Systems and Business Analytics

Liam Costello

Information Systems and Business Analytics, Management

Brooke Dacy

Laura Shea
Information Systems and Business Analytics

Ethan Zarak-Croke

Undeclared
New Balance Roadmap (Blue Team)
Adviser: Roger Grinde

Alexei Baranov

Joseph Suriner
Samantha Woodward
Information Systems and Business Analytics

Kristine Keller-Miller

Accounting, Ecogastronomy, Information Systems and Business Analytics

Justin Thomas

Information Systems and Business Analytics, Marketing
DecSecOps
Adviser: Peter Zaimes

Jack Barnes

Chunyang Li

Nicholas Rocchio

Information Systems and Business Analytics

Corey Mills

Business Administration, Finance, Information Systems and Business Analytics
Red River Communications Tools Analysis
Adviser: Peter Zaimes

Cassidy Bartlett

Skyler Tarczali

Information Systems and Business Analytics, Marketing

Brendan Boyle

Brendan O'Connor

Information Systems and Business Analytics

Ian Moscaritolo

Business Administration
New Balance: Global Merchandising
Adviser: Roger Grinde

Brianna Becotte

Thomas Simo

Business Administration

Anthony Costalas

Information Systems and Business Analytics, Management

Corey Gallagher

Information Systems and Business Analytics, Marketing
PMAC: Data Management (Blue Team)
Adviser: Roger Grinde

PETER T. PAUL COLLEGE OF BUSINESS AND ECONOMICS UNDERGRADUATE RESEARCH CONFERENCE, POSTER PRESENTATIONS, CONTINUED

Collin Belt**Nicholas LaCreta****Xinping Yu**

Finance, Information Systems and
Business Analytics

Lauren Lumbra

Accounting, Information Systems and
Business Analytics

*Communication Tools at Red River
Technologies*

Adviser: Peter Zaimes

Bridget Burkett**James Walsh**

Information Systems and Business
Analytics

Kirsten LaFleur

Business Administration

Skyla Mrosk

Finance, Information Systems and
Business Analytics

*Portsmouth Music and Arts Community
Center: Data Management and Analytics*

Adviser: Roger Grinde

Nicholas Cambra**Catherine Mathews****Zyan Prestridge**

Finance, Information Systems and
Business Analytics

Carter Mercer

Information Systems and Business
Analytics

Savvy Management: Agile Assessment Tool

Adviser: Russell Miles

Shuai Chen**Elliot Ferland**

Information Systems and Business
Analytics

Charles Gates**Taffarel Putra**

Finance, Information Systems and
Business Analytics

Laci Hanington

Information Systems and Business
Analytics, Marketing

DevSecOps: Red River

Adviser: Peter Zaimes

Cameron Chrystal

Information Systems and Business
Analytics, Marketing

Thomas Matthews**Olivia Patrick****Arielle Seavey**

Information Systems and Business
Analytics

Lindt Supply Chain (Red Team)

Adviser: Russell Miles

Micheal Curley**Bailey Custeau****Jiamin Zhang**

Information Systems and Business
Analytics

Connor Goff

Finance, Information Systems and
Business Analytics

Lindt Chocolate Customer Supply Chain

Adviser: Russell Miles

Danielle Doonan

Information Systems and Business
Analytics, Marketing

Connor Finucan

Finance, Information Systems and
Business Analytics

Bryson Herring**Courtney White**

Information Systems and Business
Analytics

Lauren Reissfelder

Accounting, Information Systems and
Business Analytics

*New Balance Global Merchandising
(Red Team)*

Adviser: Roger Grinde

Morgan Dudley**Tiemo Fenner****Kevin Kerrigan**

Information Systems and Business
Analytics

Catherine Francis

Accounting, Information Systems and
Business Analytics

TBR (Red Team)

Adviser: Peter Zaimes

Mengsijing Gao**Riley Gardner****Jonathan Olson**

Information Systems and Business
Analytics

Page Laurendeau

Finance, Information Systems and
Business Analytics

Lindt Chocolate Risk Assessment System

Adviser: Russell Miles

Althea Gere**Erick MacCormack****Emma Nofsker****Max Polay**

Information Systems and Business
Analytics

Hailey Studley

Information Systems and Business
Analytics, Marketing

New Balance OGSP

Adviser: Roger Grinde

Kyle Gourley

Accounting, Information Systems and
Business Analytics

Zachary Kidd

Information Systems and Business
Analytics

Brian Letourneau**Cara Small**

Finance, Information Systems and
Business Analytics

*Agile Assessment Tool for Savvy
Management*

Adviser: Russell Miles

Thomas Licence

Business Administration

Kyle Lorenz**Zhuoying Yang**

Information Systems and Business
Analytics

Christine Tringali

Accounting, Information Systems and
Business Analytics

Lindt Risk Assessment

Adviser: Russell Miles

Brandon McNeil
Sara Sherburne
 Finance, Information Systems and
 Business Analytics
David Michel
Xinmiao Zhao
 Information Systems and Business
 Analytics
TBR: Corporate Project Experience
(Blue Team)
 Adviser: Peter Zaimes

Peter T. Paul College of Business and Economics Undergraduate Research Conference

Poster Session III

Friday, April 24
 Through original research and
 valuable guidance from mentors, this
 event helps Paul College students
 gain deeper academic knowledge
 as well as professional experience.
 This URC event includes poster
 presentations, oral presentations,
 and feedback from judges.

Economics of Climate Change

Adviser: Robert Mohr

Aurora Braswell*
Christopher Sheikhabdou*
 Economics
Alexander Bunnell*
 Marketing
Climate Policy in Massachusetts

Owen Gagnon*
 Applied Mathematics
Sebastian Hart-Meyer*
 Economics
Zachary Kay*
 Environmental and Resource Economics
Andrea Scarfo*
 Economics, Sustainability
The Regional Greenhouse Gas Initiative:
15-Year Overview and Analysis

Benjamin Gallahue*
 Environmental and Resource Economics
Ryan Leonard
Nicholas Nilsen*
 Economics
Matthew Quirk*
 Political Science
Climate Mitigation in Australia

Ellen Goulding*
Robert Iannarilli*
Daniel Pinheiro*
 Economics
Climate Change Policy of California

Andrew Meyer*
 Analytical Economics
Sean Orr*
Mary Shotton*
 Economics
Climate Policies in New Zealand

Ryan Rose*
Michael Sullivan*
 Environmental and Resource Economics
Climate Policy in the Commonwealth

Multidisciplinary/Honors Thesis

Parker Armstrong*
 Economics, Mathematics
Airline Fare Competition in the
Post-Merger Era
 Adviser: Aziz Slaglam

Jack Barnes*
 Information Systems and Business
 Analytics
IT Security Policy Compliance: A
University Perspective
 Adviser: Kholekile Gwebu

Oliver Botthof*
 Finance
The Future of Actively Managed U.S.
Equity Funds
 Adviser: Huimin Li

Nicholas Brown*
 Economics
Using Daily Market Reports to Determine
Whether the Efficient Market Hypothesis
or the Behavioral Finance View Has
More Support
 Adviser: Michael Goldberg

Abigail Chapman*
 Entrepreneurial Studies, Finance
Analysis of Jamie Dimon: Impact of
Leadership and Culture at JPMorgan
Chase & Co.
 Adviser: Richard Kilbride

Attilio CrimiVaroli*
 International Business and Economics
The Relationship between Spending Money
and On-Field Success in World Soccer
 Adviser: Kevin McLaughlin

Colin Daly*
 Finance, Marketing
Future of Netflix
 Adviser: Kevin McLaughlin

Margaret Dauphinais*
 Marketing
CSR Communication Techniques: How to
Steer Away from Consumer Skepticism
 Adviser: Lin Guo

Megan Elwell*
 Accounting, Finance
Understanding the Importance and Impact
of Technology in an Accounting Setting:
Work Outcomes and Relationships
with Clients
 Adviser: Le Xu

Ilya Feldman*
 Economics, Marketing
The Effect of University Sales Education on
That Career Success after a Year
from Graduation
 Adviser: Thomas Gruen

Sean Fontaine*
 Finance, Marketing
Analyzing the Effectiveness of New
Balance's Efforts to Differentiate from Nike
 Adviser: Matthew O'Hern

Catherine Francis*
 Accounting, Information Systems and
 Business Analytics
Understanding the Importance and Impact
of Technology in an Accounting Setting
 Adviser: Linda Ragland

Kyle Gourley*
 Accounting, Information Systems and
 Business Analytics
The Effect of Taxation on Earned Income
 Adviser: David Hasseldine

PETER T. PAUL COLLEGE OF BUSINESS AND ECONOMICS UNDERGRADUATE RESEARCH CONFERENCE, POSTER PRESENTATIONS, CONTINUED

Annie Henry*

International Business and Economics
Exploring the Gender-Based Funding Gap in the International Angel Investment Sector
 Adviser: Jeffrey Sohl

Delaney Housley*

Finance
The Effect of Gender on Ethical Investing
 Adviser: Stephen Ciccone

Katelyn Howe*

Information Systems and Business Analytics, Marketing
The Mortgage Industry: Has It Changed Since the Great Recession?
 Adviser: Michael Goldberg

Madeline Karlberg*

Accounting, Finance
The Effect of CSR and Female Presence in Corporate Governance on a Firm's Tax Avoidance
 Adviser: Viktoriya Staneva

Ivana Korusiakova*

Accounting, Economics, Finance
The Effects of Pensions Changes on Fortune 500 Companies and the Stock Market
 Adviser: Stephen Ciccone

Timothy Larkin*

Accounting, Finance
The Transformation of Accounting Information Systems Curriculum in the Last Decade
 Adviser: Linda Ragland

Amanda Lee*

Accounting
Data Analytics in Top Accounting Programs in the U.S.
 Adviser: Le Xu

Kara MacDonald*

Marketing
Listening in: Investigating Social Media Activity in the Streaming Services Industry
 Adviser: Matthew O'Hern

Amber Man*

Management, Marketing
Global Marketing Strategy of Uber and Lyft
 Adviser: Goksel Yalcinkaya

Andrew McCarthy*

Finance
Negative Interest Rates and Their Effect on Asset Prices in the European Economy
 Adviser: Jaroslav Horvath

Sinead McDonagh*

Finance, International Business and Economics
What Drives Prices within Financial Markets?
 Adviser: Michael Goldberg

Porter McManus*

Entrepreneurial Studies, Finance
How Efficient Is Market Pricing: Is Alpha Generation about Luck or Can There Be an Exploited Skill? Further, Is It Possible That Alpha Is Only about Exploiting the Mistakes of Others?
 Adviser: Richard Kilbride

Brandon McNeil*

Finance, Information Systems and Business Analytics
UNH Honors Thesis: Airbnb
 Adviser: Christopher Glynn

Carter Mercer*

Information Systems and Business Analytics
Estimating the Housing Market Response to Sea Level Rise
 Adviser: Christopher Glynn

Kevin Murphy*

Economics, Finance
Causes of Chaos: Financial Crisis in Latin America
 Adviser: Ahmad Etebari

Dante Povinelli*

Analytical Economics
Addressing the Social Costs of Aquaculture Pollution: Aquaponics vs. a Pollution Tax
 Adviser: Shadi Atallah

Ryan Quinn*

Accounting, Finance
Tax in the 2020 Presidential Election
 Adviser: David Hasseldine

Bryanna Richardson*

Accounting, Business Administration, Management
Can Fundamental Accounting Analyses Be Used to Predict Macroeconomic Conditions?
 Adviser: Le Xu

Brian Rivet*

Finance
Valuation of Professional Sports Franchises
 Adviser: Stephen Ciccone

Anupreet Saini*

Accounting, Business Administration, Finance
Risky Business: Investigating the Relationship between Background and Risk-Taking in CEOs
 Adviser: Stephen Ciccone

William Saunders*

Accounting, Finance
An Analysis of Excise Taxes on Wine in the United States
 Adviser: David Hasseldine

Jessica Shah*

Analytical Economics, International Affairs
The Impact of Paid Leave on Employment of Women: The Case of Family Leave in California
 Adviser: Reagan Baughman

Cara Small*

Finance, Information Systems and Business Analytics
Predicting Gross Revenue Using Online Movie Reviews
 Adviser: Seyed Ali Hojjat

Chad Supranowicz*

Business Administration, Finance, Management
The Impact of Tax Breaks and Incentives for Corporations on Local Economies
 Adviser: Peter Zaimas

Enoska Ventura*

International Business and Economics
The Fading American Dream: Upward Mobility and the Effect on Personal Income
 Adviser: Loris Rubini

Biyu Wang

Finance, Marketing
A Case Study on Citizen Schools
 Adviser: Michael Swack

Jake Yennaco*

Business Administration, Economics
Effect of Elections on Healthcare Returns
 Adviser: Ahmad Etebari

Peter T. Paul College of Business and Economics Undergraduate Research Conference

Oral Session

Friday, April 24

Through original research and valuable guidance from mentors, this event helps Paul College students gain deeper academic knowledge as well as professional experience. This URC event includes poster presentations, oral presentations, and feedback from judges.

Marketing Workshop Presentations

Adviser: Peter Masucci

Nicolas Agostini*

Aaron Hunt*

Kara MacDonald*

Marketing

Kelsey Girard*

Finance, Marketing

Jillian Sellers*

Marketing, Psychology

Paul College Executive Education: Design

and Develop Marketing Programs to

Increase Awareness of and Registrations to

These Post-Graduate Programs

Connor Allwood*

Ethan Floyd*

Xiangxiang Huang*

Emily Morris*

Marketing

Theresa MacDowell*

Marketing, Sustainability

Hampton Police Department: Design and

Develop Marketing Programs Aimed at

Increasing Applications for Part-Time,

Seasonal Police Officers in This Seacoast

Resort Town

Robert Anderson*

Margaret Dauphinais*

Connor Finnegan*

Campbell Quinn*

Marketing

Hunter Lambroff*

Sarah MacEachern*

Management, Marketing

Maine Beer Cafe: Research and Development

of Marketing Programs to Increase

Awareness of and Business at This Kittery,

Maine, Small Family-Run Restaurant

Brianna Arsenault*

Kallie Dougherty*

Alex Hiltz*

Marketing

Katharina Barta*

International Business and Economics,

Marketing

Justin Thomas*

Information Systems and Business

Analytics, Marketing

Paul College MBA Program: Research

and Design Marketing Programs to Better

Position Online versus In-Person Courses

to Prospective Graduate Students

Tyler Babst

Anthony DeBeer

Isabella Zampieri

Marketing

Danielle Doonan

Information Systems and Business

Analytics, Marketing

Madison Murdick

Finance, Marketing

Kimberly Tsui

International Business and Economics,

Marketing

Edvance Life Skills: Research and Develop

Marketing Programs to Increase Awareness

of and Drive Sales for This NH-Based Life

Skills Educational Tools Company

Taylor Barbagallo*

Dana Levine*

Justin Maguire*

Management, Marketing

Luke Gouldsbrough*

Christina Sears*

Tanner Williams*

Marketing

Ames Farm Inn: Research and Develop

Marketing Programs to Increase Bookings

at This Family-Owned Inn on Lake

Winnepesaukee

Cassidy Bartlett*

Information Systems and Business

Analytics, Marketing

Cortlynn Danby*

Alexa Guerrieri*

Management, Marketing

Michael Dateo*

Shivani Sudan*

Marketing

Patriot Resilient Leader Institute: Design

and Develop Marketing for This Non-

Profit Which Provides Support Services

and Programs for Military Veterans and

First Responders at Camp Resilience in

Gilford, NH

William Berberich

Paige Duffy

Madison Jackson

Christina Pescatore

Marketing

Sean Fontaine

Finance, Marketing

Marissa Massaro

Marketing, Psychology

Paul College Hospitality Management,

Part 1: Design and Development of

Marketing Programs to Encourage Intra-

University Transfers into the Program

Eric Berkemeier*

Alyson Veo*

Entrepreneurial Studies, Marketing

Sarah Mahon*

Alvin Nathaniel*

Conor O'regan*

Abigail Stearns*

Marketing

UNH Advance, Part 2: Design and Develop

Marketing Tools and Campaigns to

Prepare for the Launch of This New Online

Training Tool

Shae Berry*

Claire Durfee*

Taylor Nottebart*

Finance, Marketing

Ri Gulotta*

Jarrett Torriere*

Marketing

Max Porrazzo*

Management, Marketing

Mola Foods: Research and Develop

Marketing Programs to Expand Awareness

of and Product Sales for This Authentic

African Food Products Company

PETER T. PAUL COLLEGE OF BUSINESS AND ECONOMICS UNDERGRADUATE RESEARCH CONFERENCE, ORAL PRESENTATIONS, CONTINUED

Jacquelyn Boucher

Hospitality Management, Marketing

Eric Perry

Marketing

Bryce Wydra

Marketing

Ingela Shannahan

Finance, Marketing

Clare Wetmore

Management, Marketing

White Birch Armory: Research and Develop Marketing Programs to Raise Awareness of and Increase Sales for This Dover, NH, Supplier of Firearms and Ammunition

Elizabeth Brandt***Evan Carpinella*****Colin Daly***

Finance, Marketing

Joseph Capodagli*

Marketing

Devin Cowhig*

Management, Marketing

Paige Hughes*

Economics, Finance, Marketing

Margaritas Mexican Restaurants: Research and Design Marketing Program to Attract More Millennials to This Authentic Mexican Cuisine Restaurant

Ciara Brooks**Jonathan Dryja****Nola Hesby****Kaley Patterson**

Marketing

Madeline Ragno

Management, Marketing

Biyu Wang

Finance, Marketing

Albacore Submarine Museum: Research and Develop Marketing Programs to Support a Planned Capital Campaign for a New Maritime Museum Building

Ryan Brooks***Benjamin Factor*****Tyler Swarthout***

Marketing

Grace Gendron*

Management, Marketing

Cassandra Lee*

Finance, Marketing

Jordan Ross*

Hospitality Management, Marketing
Paul College Hospitality Management, Part 2: Research and Design Marketing Programs to Attract Students from Community Colleges to Come to UNH to Complete Their Bachelor's Degree

Alexander Bunnell***Lily Pabo*****Ashley Twombly*****Ponmani Vongsay***

Marketing

Taylor Spica*

Management, Marketing

Palette Pavilion: Research and Design Marketing Programs to Increase Awareness of and Ticket Sales for This Arts and Entertainment Venue

Scott Callahan***Travis Hurley*****Kalyani Pearson*****Emma Riley***

Marketing

Ilya Feldman*

Economics, Marketing

Elizabeth Lane*

Entrepreneurial Studies, Marketing

Paul College Sales Program, Part 2: Design and Develop Marketing Materials and Videos to Increase Awareness of and Recruitment of Students to the Program

Jeffrey Campanile**Timothy Collins****Qixin Yang**

Marketing

Luke Doverspike

Marketing, Sustainability

Heather Hill

Marketing, Social Work

Emily Vien

Finance, Marketing

NH Veterinary Diagnostic Lab: Design and Develop Marketing Programs to Increase Awareness of the Lab through Social Media Marketing

Marissa Capone***Nicholas Fay*****Caroline Tucker***

Marketing

Samantha Galvin*

Accounting, Marketing

Liam Smith*

Finance, Marketing

Bear-Paw Regional Greenways: Design and Develop Marketing to Help Increase Awareness and Support for This Non-Profit Organization Dedicated to Preserving Wildlife Habitat

Kayley Cedrone**Allison Fasold****Laura McArdle**

Marketing

Corey Gallagher

Information Systems and Business

Analytics, Marketing

Julianna Rinaldi

Hospitality Management, Marketing

Lauren Silver

Management, Marketing

A House for ME: Research and Develop Marketing Programs to Increase Awareness of This Residential Facility for Young Adults Living with Autism or Other Developmental Problems

Nicholas Celentano***Jeffrey Foster***

Finance, Marketing

Haley Flynn***Madelyn McAteer***

Marketing

Peter Grande*

Management, Marketing

UNH Housing: Research and Develop Marketing Programs to Expand Awareness of and Bookings for Housing Facilities during the Summer

Cameron Chrystal**Skyler Tarczali**

Information Systems and Business

Analytics, Marketing

Julia Dushane**Alexander Haslam****Andrew Peick****Emily Tennis**

Marketing

UNH Hamel Recreation Center: Design and Develop Marketing Programs to Encourage Use of the Center by Current Non-Users

Michael Ciardiello

Jordan Murray

Kevin Shields

Finance, Marketing

Zoe Fitzgerald

Daphne Jordan

Youngmin Kim

Marketing

Measured Air Performance: Design

Marketing Programs to Increase Awareness

of and Generate Sales Leads for This NH-

Based Technology Start-Up Company

Emma Conner*

Kathleen McDermott*

Thomas Roark*

Gavin Tierney*

Marketing

Hunter Letendre*

Entrepreneurial Studies, Marketing

NextStep HealthTech: Research and

Development of Marketing Programs to

Increase Awareness and Sales of Online

Health Management Tools

Benjamin Couture

Cassandra Jennell

Jiayuan Lin

Max Ravenelle

Marketing

Nicholas Karas

Communication, Marketing

Erika Sillon

Management, Marketing

UNH Memorial Union Building: Research

and Develop Marketing Programs to

Raise Awareness and Use of Facilities and

Programs Offered at the MUB

Connor Czerepuszko

Robert Girardin

Marketing

Alexandra Fogarty

International Business and Economics,

Marketing

Justin O'Donnell

Amy Stanieich

Bridget Stockwell

Management, Marketing

UNH Advance, Part 1: Research and

Develop Marketing Programs for a New

Faculty and Staff Training Tool

Tiger DeStefano*

Vincent LoBuono*

Hannah Saulnier*

Finance, Marketing

Philip Hughes*

Catherine Riley*

Neve Thompson*

Marketing

Wild Valentine: Design and Develop

Marketing for This NH-Based Florist and

Gift Boutique Start-Up Company

Erin DeWolfe*

Mary Farley*

Alexander Kosheff*

Marketing

Laci Hanington*

Information Systems and Business

Analytics, Marketing

Carlton Robie*

Kinesiology, Marketing

Emma Woodhouse*

Management, Marketing

Community Loan Fund of NH: Develop

Marketing Programs and Materials for

This Provider of Loans to the Traditionally

Underserved

Matthew Freda

Nguyen Phuong Khanh Huynh

Amber Man

Management, Marketing

Katherine Goodrich

Finance, Marketing

Colin MacDonald

Nathan Sheeler

Marketing

UNH Graduate School: Research and

Develop Marketing Activities to Increase

Awareness of and Applications to the

Accelerated Master's Degree Program

Jaimee Hersch*

Communication, Marketing

Hanna Lawler*

Hospitality Management, Marketing

Alexander McKenna*

International Business and Economics,

Marketing

Connor McNamara*

Di Sun*

Marketing

UNH Olson Manufacturing Center:

Research and Develop Marketing

Programs to Increase Awareness

and Promotion of This Advanced

Manufacturing Center in the College of

Engineering and Physical Sciences

Charles Lamplough

Jennifer Luetters

Tara Marand

Marketing

Hailey Studley

Information Systems and Business

Analytics, Marketing

Payton Taylor

Communication, Marketing

Logan Welti

Entrepreneurial Studies, Marketing

Paul College Sales Program, Part 1:

Research and Development of Marketing

Materials Aimed at Increasing Registration

and Participation

UNH Manchester URC Engineering Technology Day

Senior Project Presentations

Friday, April 24

The UNHM Engineering Technology Program presents its annual Senior Project Presentations day. This event is the culmination of an academic year effort where full-time seniors formally present their projects to peers, faculty members, representatives and technical advisers of sponsoring companies, and special guests.

Owen Armricht*

Mechanical Engineering Technology
VEX Robotics Activities for ET Labs
Adviser: Robert Arredondo

Denys Bowen*

Mechanical Engineering Technology
Pneumatic Educational Training Equipment Implementation in a University ET Program
Adviser: Theodore Tavares

Branden Chandonnet*

Mechanical Engineering Technology
Fixture Redesign for Pull Tester
Adviser: Robert Arredondo

Alexis Condon*

Electrical Engineering Technology
Design of a Robotic Cell for the UNH Manchester Machine Shop
Adviser: Robert Arredondo

Alexander Desmarais*

Mechanical Engineering Technology

Devan Piper*

Electrical Engineering Technology
Mobile I.V. Systems Process Improvement
Advisers: Christopher LeBlanc, Glenn Shwaery

Peter Do*

Electrical Engineering Technology

Matthew Larochelle*

Kyle Lyndes*

Tyler Slock*

Mechanical Engineering Technology
Research and Development for Coordinating Small Autonomous Braitenberg Vehicles
Adviser: Theodore Tavares

Ryan Dunn*

Electrical Engineering Technology
Current Sensor Bandwidth Tester System Upgrade
Adviser: Christopher LeBlanc

Cameron Ferry*

Devin Heino*

Mechanical Engineering
Geneva Indexing Device and Walking Beam Conveyor
Adviser: Robert Arredondo

Tyler Gee*

Mechanical Engineering Technology
Defect Reduction: Fabric Dip Coating
Advisers: Robert Arredondo, Theodore Tavares

Alish Gurung*

Mechanical Engineering Technology
Movable Guitar Pick-Up Project Phase II (2019-2020)
Adviser: Robert Arredondo

Gregory Haefele*

Mechanical Engineering Technology
Arduino Retrofit for a Dual Extruder 3D Printer for Quality Improvement
Adviser: Christopher LeBlanc

Jared Harbour*

Electrical Engineering Technology
Design and Implementation of a Support Portal for Legacy Software
Adviser: Christopher LeBlanc

Michael Hazen*

Electrical Engineering Technology
Controller Connector Redesign
Adviser: Christopher LeBlanc

Christopher Hill*

Mechanical Engineering Technology

Thomas Kelly*

Electrical Engineering Technology
NHTI's Robotic Soldering System Redesigned for Automated Assembly
Advisers: Robert Arredondo, Joseph Cunningham

Kyle Johnson*

Mechanical Engineering Technology
Manufacturing Process Improvement through Automated Workholding for Future Robotic Automation
Adviser: Theodore Tavares

Travis Lantry*

Electrical Engineering Technology

Ting-Yi Yang*

Mechanical Engineering Technology
Design and Implementation of a Data Logger for a Cell Growth Incubator
Advisers: Christopher LeBlanc, Theodore Tavares

Nicholas Larochelle*

Mechanical Engineering Technology
Design and Fabrication of a Universal Photogrammetry Reference Frame
Adviser: Robert Arredondo

Alexander Leger*

Mechanical Engineering Technology
Turntable for Modeling Constantly Varying Wind Conditions
Adviser: Theodore Tavares

Benjamin Mason*

Electrical Engineering Technology
Modification of Ultra-Wideband Ranging Demo
Adviser: Christopher LeBlanc

Zachary Maynard*

Joshua Walsh*

Mechanical Engineering Technology
Precision CNC Contour Solution
Adviser: Theodore Tavares

Philip Thai*

Electrical Engineering Technology
Integration of Automated Environmental Data Loggers
Adviser: Christopher LeBlanc

Brennan Vermette*

Electrical Engineering Technology
Automated Gas Exchange System Design to Measure Tree Stem Respiration
Adviser: Andrew Ouimette

The Naked Arts— Creativity Exposed!

Act III

Friday, April 24

This event exposes the inner creative process of artists working in various disciplines. Presenters will describe the process, research, and other creative aspects undertaken to bring an artistic creation from initial inspiration to the stage or gallery. This may include a performance or excerpts from their work to illustrate their creative scholarship.

Audrey Eastman*

Biomedical Science, Theatre

Alice: A Story of Drug Addiction

Advisers: Assaf Benchetrit,

Gay Nardone

Madison Marshall

English

Mill Town Poetry

Adviser: David Rivard

Nicholas Pichierri

English

Godspeed

Adviser: Lily Greenberg

College of Health and Human Services (CHHS) Grimes Award Competition

Friday, April 24

Jack and Marianna Grimes and family, all UNH graduates, endowed the funds for this celebration of excellence in undergraduate research. The oral presentation competition includes finalists who have been selected by CHHS faculty after rigorous scientific review of written proposals.

Courtney Clairmont*

Human Development and Family Studies

Exploring Single Adults' Relationship

Histories: Past Experiences and

Current Ideals

Adviser: Tyler Jamison

Erica Domeier*

Nursing

Nursing Students' Experiences of Incivility

in Undergraduate Nursing Programs and

the Perceived Effects on Well-Being

Adviser: Alyssa O'Brien

Kacey Dutton*

Occupational Therapy

Patterns of Senior Social Connection

Adviser: Lou Ann Griswold

Faith Farnham

Mercedes McCoy

Nursing

Reflecting on How People Who

Inject Drugs Describe Their Familial

Relationships in Relation to Healthcare

Experiences

Adviser: Kerry Nolte

Francis Gesel*

Kinesiology

Supplementation of a Leucine-Enriched

Dairy Protein Blend: Effects on Plasma

Amino Acids in Older Adults

Advisers: Dain LaRoche, Stuart Phillips,

Dan Traylor

Brianna McGrath*

Nursing

Professional Nurse-Led Unjani Clinics:

Empowering the Nurse Entrepreneur as a

Primary Care Provider

Adviser: Gene Harkless

Serena Mueller*

Communication Sciences and Disorders

The Role of Socio-Economic Status on the

Language Output of 3-6 Year Olds during

a Naturalistic Museum Study

Adviser: Jill Thorson

Michael Newell*

Nursing

Evaluating the Outcomes of Incorporating

LGBTQ+ Panels in Undergraduate

Nursing Education

Adviser: Alyssa O'Brien

Jesse Smith

Kinesiology

The Relationship between Anaerobic

Power, Blood Lactate Concentration, and

Position in Division I Collegiate Ice

Hockey Players

Adviser: Summer Cook

Benjamin Surman

Kinesiology

Kinematic Analysis of Patient and

Therapist Agreement in Demonstrated

Shoulder Exercises

Adviser: Dain LaRoche

Psychology Department George M. Haslerud Undergraduate Research Conference

Friday, April 24

The George M. Haslerud URC, named for the late Professor Emeritus of Psychology, recognizes and celebrates undergraduate research conducted by Honors psychology students. Students present their original research projects before an audience of UNH faculty, staff, graduate students, fellow undergraduates, and friends and family.

Allison Cross*

Justice Studies, Psychology

Violent Video Game Playing and

Aggression: Addressing Issues in

the Research

Adviser: Ellen Cohn

Margaret Devlin*

Psychology

Autobiographical Memories of Work

Transitions in Older Adults

Adviser: David Pillemer

Spencer Drakeunderkoffler

Ecogastronomy, Psychology

Ecotherapy: A Not-So-New Approach

to Therapy

Adviser: Robert Eckstein

Lauren Kreinces*

Psychology
*Exploring Memories within the
 Reminiscence Bump*
 Advisers: Michelle Leichtman,
 David Pillemer

Catherine McGrath*

Psychology
*Boring Ideas: Exploring the Effects of
 Constraints on Creative Idea Generation*
 Adviser: Caitlin Mills

Abby Oostendorp*

Psychology
*Measuring Motion-Induced Blindness
 Using Increments and Decrements*
 Adviser: William Stine

James Peters*

Psychology
*Understanding the Personality of
 a Coworker*
 Advisers: Hannah Lightcap, John Mayer

Kayla Sliz*

Psychology
*Personal Intelligence as a New Recruitment
 Tool: A Psychological Predictor for
 Sport Performance?*
 Advisers: Cecile Desmond, John Mayer

Honors English Undergraduate Research Conference

Friday, April 24

To complete Honors-in-English, students must conduct a semester-long research project, culminating in a 30-40 page senior thesis. The Honors English Undergraduate Research Conference provides these students and students in the linguistics program with the opportunity to share their work with their fellow students, professors, and families. The presentations include poetry, autobiographical writing, journalism, and scholarship on literary texts from several different centuries.

Taylor Alcorn*

English, Justice Studies
*A Transatlantic Timeline of Female
 Writers Pushing Back through
 Their Protagonists*
 Adviser: Brigitte Bailey

Michaela Conery*

English
The Art of Running
 Adviser: Jaed Coffin

Cierra Cowan*

English, Neuroscience and Behavior
*How Language Manipulates Mental
 Simulations of Real and Imagined Events
 in Shakespeare*
 Adviser: Dennis Britton

Keenan Dunleavy*

English
Independent Novel
 Adviser: Clark Knowles

Ariane Faro*

English, Sustainability
The Remaining Ash: Mallacoota
 Advisers: Nina Morrison, Thomas Payne

Sophia Kurzius*

English/Journalism
The Press & The Royals
 Adviser: Susan Hertz

Alicia Maimone*

English Teaching
*Chronicling a Chronic Illness: What I
 Actually Learned in College*
 Adviser: James Rioux

Renee Sevinsky

Classics, English
*Gender and Power: An Analysis of Women
 in Shakespearean Tragedies and Comedies*
 Adviser: Dennis Britton

Languages, Literatures, & Cultures (LLC) Department Undergraduate Research Conference

Friday, April 24

The Department of Languages, Literatures, and Cultures (LLC) hosts an undergraduate research conference comprised of oral presentations, poster presentations, a foreign language award ceremony, and a reception.

Cameryn Boland

Linguistics
*Civil Unions (Pactes civils de solidarit )
 in France*
 Adviser: Amena Moinfar

Luisa Bomfim*

Communication Sciences and Disorders
*What Did We Learn from Natural
 Disasters Like Hurricane Maria Which
 Allow Us to Improve Communication
 Systems for Deaf Individuals and
 Communities in Natural Disasters?*
 Adviser: Holly Cashman

Victoria Broadley

Philosophy
Reproductive Rights in Latin America
 Adviser: Jairo Pulecio-Pulgarin

Kyra D'entremont

Emma Danaïs
 Educational Studies, Spanish
*How Can We Make U.S. Schools Culturally
 Inclusive?: A Puerto Rico Lab Exploration*
 Advisers: Holly Cashman, Scott Weintraub

Caitlin Durnbaugh

Human Development and Family Studies,
 Spanish
*Adolescents' Experience of Hurricane
 Maria: A Humanities-Informed
 Participatory Youth Advocacy Project*
 Advisers: Holly Cashman, Erin Sharp

William Fraser

Management, Spanish
El Mar de Plástico: La Frontera de Tensiones Raciales
Adviser: Lori Hopkins

Alicia Marx

Communication Sciences and Disorders, Spanish
Chile
Adviser: Lori Hopkins

Sierra Mullin

Management, Spanish
Those Left Behind
Adviser: Lucia Montas

Rhea Neal

French, Spanish
The Power of Josephine Baker
Adviser: Amana Moïnfar

Molly O'Shea*

Justice Studies, Psychology
Seeking Asylum in Spanish Territories: What is Fair and Just?
Adviser: Jairo Pulecio-Pulgarin

Christina Restrepo

Biomedical Science
Analyzing the Progression of Higher Education in Colombia
Adviser: Jairo Pulecio-Pulgarin

Carly Schewe

Kinesiology, Spanish
Spreading Security and Keeping Youth Safe in Central America through Activism
Adviser: Lori Hopkins

Gabrielle Scott*

English Literature
The Gnostic Milton: Tracing the Descent of the Son in Paradise Lost
Adviser: Paul Robertson

Brooke Seigars*

International Affairs, Spanish
Las Líderes en las Calles: Una investigación de Las Madres de Plaza de Mayo y #NiUnaMenos en Argentina
Adviser: Scott Weintraub

Hayden Stinson*

Linguistics, Spanish
Borges, Remediation, and the Dangers of New Media
Adviser: Scott Weintraub

Lindsey Wood

Justice Studies, Spanish
The Winnipeg: Collective Memory and the Importance of Collaboration
Adviser: Lori Hopkins

COLSA Undergraduate Research Conference

Oral Presentations

Saturday, April 25

Student presentations at the COLSA URC are based on research conducted in any of the departments within the College of Life Sciences and Agriculture. Registrants will be notified by the COLSA URC committee if they are selected for an oral presentation.

John Ball

Jennifer Mydosh
Biomedical Science
Species Diversity of Methicillin-Resistant Staphylococcus from Domestic and Wildlife Animals
Advisers: Cheryl Marie Andam, Robert Gibson, David Needle

Helene Bartsch

Environmental Conservation and Sustainability
How Does Coral Morphology Change along Ningaloo Reef, Western Australia?
Adviser: Thomas Lee

Ava Boutilier

Biomedical Science
Drug-Dependent Decrease in Waldenström macroglobulemia Cell Proliferation and Viability by JAK2/STAT Inhibitor Pacritinib
Adviser: Sherine Elswa

Nick Charron

Zoology
*The Catbird's Meow: An Acoustic Analysis of Gray Catbird (*Dumetella carolinensis*) Vocalizations*
Adviser: James Taylor

Cassandra Collimore

Biomedical Science
Milk Production and Methane Emissions in Jersey Cows Grazing Forage Canola
Adviser: Andre Brito

Daniel DiRocco*

Biochemistry, Molecular and Cellular Biology
*Investigating the Role of Protein Phosphatase 2A in the Salt Stress Response in *Arabidopsis thaliana**
Adviser: Estelle Hrabak

Emily Dunlop

Zoology
A Comparison of Welfare Considerations among Captive Animals
Adviser: Jessica Bolker

Anika Frink

Zoology
Impacts of Inappropriate Human Possession of Wildlife on the Animal's Well-Being
Adviser: Janet Anderson

Lily Gilbert

Environmental Sciences
Small Mammal Reproductive Patterns during Mating Years in Northeastern Forests
Adviser: Rebecca Rowe

Ellen Gonzalez Rossi*

Zoology
*Roost Site Preference of Long-Tailed Bats (*Chalinolobus tuberculatus*) in the Hūnua Ranges*
Adviser: Carrie Hall

Ryan Landon*

Biology
*Spatial and Temporal Feeding of Juvenile Alewife (*Alosa pseudoharengus*)*
Advisers: James Haney, Nancy Leland

Yuri Makar*

David Walker*
Biomedical Science
Identification of STAT3 Target Genes That Promote Ovarian Cancer Metastasis
Adviser: Sarah Walker

COLSA UNDERGRADUATE RESEARCH CONFERENCE, ORAL PRESENTATIONS, CONTINUED

Mary Munley*

Marine, Estuarine and Freshwater Biology
The Tolerance of Sublegal Florida Stone Crabs (Menippe mercenaria) during Prolonged Exposure to Hypoxia and Red Tide (Karenia brevis)
 Adviser: Philip Gravinese

Griffin Nye**Michael Pellitteri**

Biomedical Science
Multilocus Sequence Analysis of Global Streptococcus canis and Staphylococcus pseudintermedius Reveals Genetically Diverse and Frequently Recombining Lineages
 Adviser: Cheryl Marie Andam

Ryan Puterbaugh

Biochemistry, Molecular and Cellular Biology
Effects of Mutation on Structure and Binding of the Intrinsically Disordered Protein PopZ
 Adviser: Krisztina Varga

Adriana Radosavljevic***Tyler Silverwood***

Biochemistry, Molecular and Cellular Biology
Global Examination of the Effects of Methamphetamine on Histone Post-Translational Modifications in the Rat Striatum
 Adviser: Feixia Chu

Kaylan Williams

Neuroscience and Behavior
The Effect of Acute Bouts of Aerobic Exercise on Recognition Memory
 Advisers: Ronald Croce, Robert Ross

COLSA Undergraduate Research Conference

Poster Presentations

Saturday, April 25

Student presentations at the COLSA URC are based on research conducted in any of the departments within the College of Life Sciences and Agriculture. Research ranges from field studies to molecular biology to genomics studies.

Noah Abasciano*

Biology
Assessing the Distribution and Damage of Malus sylvestris on Appledore Island, Maine
 Adviser: Gregg Moore

Kelsey Ahearn***Diya Anand***

Biology
 Biomedical Science
Justifying Socioscientific Decisions: Differences between Non-Science and Science Major Students
 Advisers: Melissa Aikens, Jordan Bader

Samantha Allen*

Wildlife and Conservation
How Do Field Size, Shape and Openness Influence Bobolink Distribution among Fields in Southeastern New Hampshire
 Adviser: Matthew Tarr

Katherine Anderson*

Biomedical Science
Tick-Borne Infections in New Hampshire: An Evaluation of the Diagnostic Process in a Local Patient Population
 Adviser: Juan Rojo

Emma Arsenault***Bert Prince***

Biochemistry, Molecular and Cellular Biology

Olivia Tsang*

Biomedical Science
The Effects of Devil's Club Extracts on GDF1 Expression in Acute Myeloid Leukemia Cells
 Adviser: Brian Barth

Alexandra Awad

Animal Science
Histomorphology Approaches to Track Human Erythroid Cell Development Ex Vivo and Discovery of "C1ORF186" as an Essential Factor for RBC Production
 Adviser: Don Wojchowski

John Ball***Jennifer Mydosh***

Biomedical Science
Species Diversity of Methicillin-Resistant Staphylococcus from Domestic and Wildlife Animals
 Advisers: Cheryl Marie Andam, Robert Gibson, David Needle

Daniel Banas*

Biomedical Science
Effects of Two Diabetic Conditions on Inflammation Molecules Related to Atherogenesis
 Adviser: Thomas Foxall

Keirra Bartley***Raegan Lynch*****Isabelle Todd***

Nutrition
Assessing Nutrient Adequacy among Food-Insecure Students at the University of New Hampshire
 Adviser: Jesse Morrell

Helene Bartsch*

Environmental Conservation and Sustainability
How Does Coral Morphology Change along Ningaloo Reef, Western Australia?
 Adviser: Thomas Lee

Draven Bishop*

Biomedical Science
The Role of Phosphoprotein C1ORF150 during EPO-Dependent Erythroid Progenitor Cell Formation
 Adviser: Don Wojchowski

Alexis Blanchard*

Wildlife and Conservation Biology

Jenna Randall*

Biomedical Science
Determining Plasma Methionine Concentrations for Lactating Holsteins Supplemented with 24g/d of Methionine from Smartamine M, AminoShure M, MetiPearl, or Timet
 Adviser: Nancy Whitehouse

Sarah Blatchley*

Zoology

Signalling in Silence: Unraveling the Song of the Cicadellidae

Adviser: Daniel Howard

Jayce Bliss

Marine, Estuarine and Freshwater Biology
Neurotoxin BMAA (Beta-Methylamino-L-alanine) in Stomach Contents of Fish and Amphibians

Advisers: James Haney, Katherine Low

Veronica Bodge*

Wildlife and Conservation Biology
How Vegetation Composition and Timing of Haying the Previous Year Influence Bobolink Abundance in Fields in Southern NH

Adviser: Matthew Tarr

Devin Borchard

Computer Engineering

Creating an Automated Hydroponic Control System

Advisers: Todd Guerdat, Mehmet Kayaalp

Caitlin Borges

Sustainability, Zoology

Jessica Tremblay

Zoology

Impacts of Cyanotoxins on the Death of Seabirds: Cyanotoxins in By-Caught Red-Throated Loons, Common Loons, and Greater Shearwaters

Adviser: James Haney

Ava Boutilier

Biomedical Science

Drug-Dependent Decrease in Waldenstrom macroglobulemia Cell Proliferation and Viability by JAK2/STAT Inhibitor Pacritinib

Adviser: Sherine Elsawa

Daniel Brammer*

Lok Cheng*

Biology

Matthew Derrick*

Emma Orzech*

Zackary Vajda*

Marine, Estuarine and Freshwater Biology

Tyler Dunn*

Ocean Engineering

Increasing Bottom Temperatures and Their Influences on Benthic Biota

Adviser: Larry Harris

Kaylah Caires*

Biomedical Science

Diagnostic Findings in 300 Free-Ranging and Zoo-Housed North American Porcupines(Erethizon dorsatum) from U.S. Northern Border States and Canada, 2000-2019

Adviser: David Needle

Kaylah Caires*

Biomedical Science

Mastitis Pathogen Incidence Patterns in Conventional versus Organic Dairy Operations in Northern New England

Adviser: David Needle

Dylan Cairns

Keara Scarry

Marine, Estuarine and Freshwater Biology
Fish Age as a Predictor for Cyanotoxin Concentration

Adviser: James Haney

Marissa Cartee*

Marine, Estuarine and Freshwater Biology
Linking Sponge Morphological Characteristics with Phylogeny

Adviser: David Plachetzki

Marissa Cartee*

Emma Orzech*

Marine, Estuarine and Freshwater Biology
Microplastics in Carcinus maenas and Mytilus edulis within the Gulf of Maine

Adviser: Bonnie Brown

Alyson Caruso*

Statistics

Patient Decisions Regarding Cancer Gene Panel Testing: An Exploratory Study

Advisers: Michelle Capozzoli, Margaret Emmet, Kristen Mahoney Shannon

Jeanne Cassidy*

Biomedical Science

A Population Genetics Assessment of Northeast Northern Long-Eared Bats (Myotis septentrionalis) before and after the Onset and Spread of White-Nose Syndrome

Advisers: Matthew MacManes,

Meghan Stark

Carissa Charbonneau*

Wildlife and Conservation Biology

Does Dimorphism Predict Life History Characteristics in Australian Passeriformes?

Adviser: Leslie Curren

Nick Charron*

Zoology

The Catbird's Meow: An Acoustic Analysis of Gray Catbird (Dumatella carolinensis) Vocalizations

Adviser: James Taylor

Sara Connell*

Biomedical Science

Determining the Relative Bioavailability of Two RP-Lys Prototype Supplements Using the In Vivo Plasma Dose-Response Method

Adviser: Nancy Whitehouse

Sara Connell*

Alexus Day*

Maya-Grace Ginsberg*

Tamara Hathorn*

Biomedical Science

Obesity Mediates the Progression of Acute Myeloid Leukemia through the Dysregulation of Sphingolipid Metabolism

Adviser: Brian Barth

Andrea Cote*

Biochemistry, Molecular and Cellular Biology

Felicia Williams*

Biomedical Science

The Role of Growth and Differentiation Factor 1(Gdf1) as a Regulator of Sphingolipid Metabolism in Acute Myeloid Leukemia

Adviser: Brian Barth

Annie Cotter*

Genetics

Abundance of Methanogens at Forested vs. Urban Stream Sites in New England

Advisers: Jessica Ernakovich, Andrew Robison, Wilfred Wollheim

Emily D'Antonio*

Nutrition

Social Media Engagement and Psychological Well-Being in Students at University of New Hampshire

Adviser: Kevin Pietro

COLSA UNDERGRADUATE RESEARCH CONFERENCE, POSTER PRESENTATIONS, CONTINUED

Briannah DeLorme***Tiana DiBenedetto*****Sophie Kenny*****Madeline Quigley***

Nutrition

Comparison of Relative Fat Mass Equation and Body Mass Index (BMI) in Predicting Body Composition of Male Collegiate Athletes

Adviser: Kevin Pietro

Gianna DeMarco*

Zoology

The Effect of Predator Cues on Black Garden Ants' Worker Task Efficiency

Adviser: Leslie Curren

Alexa DeMember*

Genetics

The Effects of White-Nose Syndrome on Bat Wing Microbiome

Adviser: Matthew MacManes

Diane DeVries*

Environmental Sciences

Comparison of Methane and Nitrous Oxide Emissions along a Nitrate Gradient in the Ipswich River, Massachusetts

Adviser: Ruth Varner

Daniel DiRocco*

Biochemistry, Molecular and

Cellular Biology

Investigating the Role of Protein Phosphatase 2A in the Salt Stress Response in Arabidopsis thaliana

Adviser: Estelle Hrabak

Samantha Dionne*

Biomedical Science

Cognitive Abilities of Caribbean Hermit Crabs in Navigating a Known Location

Adviser: Leslie Curren

Catherine Doheny

Sustainable Agriculture and Food Systems

Nutrient Uptake and Physiology of Lettuce in Aquaponic Systems, Determined by Sodium and Potassium Concentrations

Adviser: Todd Guerdat

Devyn Enwright*

Biomedical Science

Microbiology Culture Results from 156 Sheep and 204 Goats at the NHDVL from 2012-2019

Adviser: David Needle

Molly Erickson**Owen Hamel****Zackary Vajda****Tiffany Winter**

Marine, Estuarine and Freshwater Biology

Exploration into Efficient and Inexpensive Methods of Aquaculture for the Green Sea Urchin, Strongylocentrotus droebachiensis

Adviser: Larry Harris

Thomas Farrar*

Biomedical Science

Species-Specific Patterns of Antibacterial Resistance and Genomic Diversity among Cryptic Escherichia Species

Adviser: Cheryl Marie Andam

Travis Fischer

Biochemistry, Molecular and

Cellular Biology

GLI3 as a Mediator of Inflammation

Adviser: Sherine Elswa

Anika Frink*

Zoology

Impacts of Inappropriate Human Possession of Wildlife on the Animal's Well-Being

Adviser: Janet Anderson

Grace Gaucher

Marine, Estuarine and Freshwater Biology

Ryan Landon*

Biology

Investigation of Extraction Techniques for Microcystins and BMAA in Muscle Tissue of Fish

Advisers: James Haney, Nancy Leland

Grace Gaucher

Marine, Estuarine and Freshwater Biology

Ryan Landon*

Biology

Use of Stable Isotopes to Determine Shifts in the Feeding Habits of Juvenile Alewife (Alosa pseudoharengus)

Advisers: James Haney, Nancy Leland

Alexia Gianoulis*

Biomedical Science

Dietary Energy Source and Rumen-Protected Amino Acids: Effects on Milk Production, Plasma Amino Acids Concentration, and Methane Emissions in Dairy Cows

Advisers: Andre Brito, Yu Zang

Lily Gilbert

Environmental Sciences

Small Mammal Reproductive Patterns during Masting Years in Northeastern Forests

Adviser: Rebecca Rowe

Ian Gliser***Victoria Madore***

Neuroscience and Behavior

The Effect of Stress on Individual Demand for Alcohol

Adviser: Sergios Charntikov

Ellen Gonzalez Rossi*

Zoology

Roost Site Preference of Long-Tailed Bats (Chalinolobus tuberculatus) in the Hünua Ranges

Adviser: Carrie Hall

Kendall Gray

Environmental Conservation and Sustainability

Analyzing Waste Management Practices within New Hampshire Public Schools

Adviser: Maggie Morrison

Grace Griffin

Psychology

Two Hearts Beating as One? Testing for Covariation in Horse-Rider Cardiac Rhythms

Adviser: Daniel Howard

Jennifer Halloran*

Biochemistry, Molecular and

Cellular Biology

Optimizing the Feeding Protocol for Hydra

Adviser: David Plachetzki

Molly Hanlon*

Biomedical Science

Trellis Systems Modify Grape's Health-Beneficial Properties

Adviser: Marta Lima

Jackson Hastings*

Genetics

Analysis of a Morphological Clinal Zone of the Poison Frog Ranitomeya imitator to Identify Genome-Wide Differentiation

Adviser: Matthew MacManes

Jessica Hodgkins*

Biomedical Science

Identification of the Virulence Factors of Serratia sp. SCBI

Adviser: Louis Tisa

Owen Kanter*

Wildlife and Conservation Biology
The Influence of Road Density and Land Cover on Population Demographics of Common Snapping Turtles
 Adviser: Peter Pekins

Benjamin Kaphan*

Biochemistry, Molecular and Cellular Biology
Using CRISPR to Generate Novel Mutants in Arabidopsis thaliana
 Adviser: Estelle Hrabak

Patrick Kaplan*

Biology
Characterization and Evaluation of Streptomyces Species in Managed and Abandoned Apple Orchards
 Adviser: Anissa Poleatewich

Benjamin Kerns*

Animal Science

Hannah Robertson*

Biomedical Science
Effects of Supplemental Mycotoxin Deactivator on Lactation Performance of Holstein Cows Fed Natural Mixed Mycotoxin Contaminated Feed
 Adviser: Nancy Whitehouse

Jacqueline Klombers*

Ciara McCarter*

Biology
How Group Work Impacts Students' Quantitative Biology Self-Efficacy
 Advisers: Melissa Aikens, Alexander Kulacki

Troy LaPolice*

Biology
The Effect of Transcriptome Assembly Quality on Phylogenetic Relationships
 Adviser: Matthew MacManes

Jason Lam*

Bioengineering
The Role of STAT3 in Ovarian Cancer Sphere Formers
 Adviser: Sarah Walker

Ryan Landon*

Biology
Spatial and Temporal Feeding of Juvenile Alewife (Alosa pseudoharengus)
 Advisers: James Haney, Nancy Leland

Abigail Lemmon*

Marine, Estuarine and Freshwater Biology
Effects of the Biomedical Bleeding Process on the Mating Habits of the American Horseshoe Crab, Limulus polyphemus
 Adviser: Winsor Watson

Rebecca Lisowski*

Biomedical Science
Assessing the Relationship between Salivary Cortisol, Perceived Levels of Test Anxiety, and Test Performance
 Adviser: Adele Marone

Sarah Lunn*

Biology
Selection on Pollinator Efficiency and Attractiveness Traits in Impatiens capensis
 Adviser: Melissa Aikens

Elizabeth Mackenzie*

Zoology
How Life-History Traits Predict Life Span and Post-Fledging Mortality in the Order Passeriformes
 Adviser: Leslie Curren

Yuri Makar*

David Walker*

Biomedical Science
Identification of STAT3 Target Genes That Promote Ovarian Cancer Metastasis
 Adviser: Sarah Walker

Elizabeth Martin*

Environmental Sciences
Using Estuarine Microbial Ecology to Mitigate Human Health Implications Concerning Oysters in Great Bay, NH
 Adviser: Stephen Jones

Katherine Mehalek

Marine, Estuarine and Freshwater Biology
Tissue-Specific Bioaccumulation of the Neurotoxin BMAA in Fish and Amphibians
 Advisers: James Haney, Katherine Low

Kelsey Mercurio*

Biochemistry, Molecular and Cellular Biology, Sustainable Agriculture and Food Systems
Frankia and Friends: Roles of Various Nodule Inhabitants in the Actinorhizal Symbiosis
 Adviser: Louis Tisa

Gabriela Misiewicz

Bioengineering
Analyzing the Roles of STAT3 and STAT5 in Breast Cancer
 Adviser: Sarah Walker

Acadia Momm-White*

McKenna Wells*

Environmental Sciences
Assessment of Recycling Behavior on UNH and ECSU Campuses
 Adviser: Patricia Jarema

Mary Munley*

Marine, Estuarine and Freshwater Biology
The Tolerance of Sublethal Florida Stone Crabs (Menippe mercenaria) during Prolonged Exposure to Hypoxia and Red Tide (Karenia brevis)
 Adviser: Philip Gravinese

Kayli Neil*

Biomedical Science
Inhibiting STAT 3 with Atovaquone in Ovarian Cancer
 Adviser: Sarah Walker

Griffin Nye*

Michael Pellitteri*

Biomedical Science
Multilocus Sequence Analysis of Global Streptococcus canis and Staphylococcus pseudintermedius Reveals Genetically Diverse and Frequently Recombining Lineages
 Adviser: Cheryl Marie Andam

Jenna O'del*

Wildlife and Conservation Biology

Sierra Rose Walsh*

Zoology
Green Sea Urchins Need Friends: Decision Making and Risk in Strongylocentrotus droebachiensis in Competitive and Non-Competitive Foraging Environments
 Adviser: Larry Harris

Jenna O'del*

Allison Stefanelli*

Wildlife and Conservation Biology
Investigating Threats of Small Mammal Populations and Associated Predation in Captive Breeding Pens of New England Cottontail
 Advisers: Melissa Bauer, Adrienne Kovach

COLSA UNDERGRADUATE RESEARCH CONFERENCE, POSTER PRESENTATIONS, CONTINUED

Vincent Pagano*

Environmental Conservation and Sustainability
Determining Viability of Unmanned Aerial Systems (UAS) to Map Forest Edge Influence in New England Forest Communities
 Adviser: Russell Congalton

Abigail Palin*

Biochemistry, Molecular and Cellular Biology
Effect of Fetal Bovine Serum (FBS) on Expression of Cellular Communication Network Factor 1 (CCN1) in Bovine Granulosa Cells
 Adviser: Paul Tsang

Ji Yoon Park*

Animal Science
Diagnostic Findings of Wild Moose Submission to NHVDL from 2017-2019
 Advisers: Colleen Monahan, David Needle, Inga Sidor

Amanda Patev*

Biomedical Science
Comprehensive Diagnostic Results of Poultry Submissions to NHVDL from 2008-2019
 Advisers: Colleen Monahan, David Needle

Trey Patno*

Biochemistry, Molecular and Cellular Biology
Does Treatment with Angiogenic Factors (VEGFA and FGF2) Increase Expression of Hypoxia-Inducible 1 alpha (HIF1a) in Bovine Steroidogenic Luteal Cells?
 Adviser: Paul Tsang

Elizabeth Pederson*

Environmental Sciences
Using Leaf Chlorophyll and Nitrogen Concentrations of Mixed Species to Evaluate Forest Productivity in New Hampshire Temperate Forests
 Adviser: Andrew Ouimette

Savannah Pirello-Spraggins*

Sarah Rebillard*
 Wildlife and Conservation Biology
*Fear and Social Learning in the Land Snail *Bulimulus guadalupensis**
 Adviser: Leslie Curren

Sarah Pogany*

Nutrition
Changes in Bone Health of Female College Students
 Adviser: Gretchen Arnold

Alexandra Powers*

Biology
Immigrant Male Tenure as a Predictor of Spotted Hyena Reproductive Success
 Adviser: Leslie Curren

Audrey Prior*

Community and Environmental Planning
An Evaluation of Master Plan Topics at Three Scales of Planning in New Hampshire
 Adviser: Mary Friedman

Ryan Puterbaugh*

Biochemistry, Molecular and Cellular Biology
Effects of Mutation on Structure and Binding of the Intrinsically Disordered Protein PopZ
 Adviser: Krisztina Varga

Adriana Radosavljevic*

Tyler Silverwood*
 Biochemistry, Molecular and Cellular Biology
Global Examination of the Effects of Methamphetamine on Histone Post-Translational Modifications in the Rat Striatum
 Adviser: Feixia Chu

Emily Ray*

Marine, Estuarine and Freshwater Biology, Neuroscience and Behavior
Optimization of Cyanotoxin Aerosol Collection
 Adviser: James Haney

Ashley Reed

Neuroscience and Behavior
Novel Drug Decreases Activity of Wnt Signaling Pathway in Colon Cancer Cells
 Adviser: Bruce Zetter

Brittany Robinson*

Environmental Sciences
Identifying Spatial Distributions and Bat Species Richness in a Southern Plains Tallgrass Prairie Ecosystem
 Adviser: Daniel Howard

Caterina Roman*

Sustainable Agriculture and Food Systems
The Effects of Grafting Melon Crops to Interspecific Squash Rootstocks
 Adviser: J Brent Loy

Natalie Roth*

Animal Science
Determining Plasma Lysine Concentrations for Lactating Holsteins Supplemented with 60 g/d of Lysine from a RP-Lys Prototype Using the In Vivo Plasma Dose-Response Method
 Adviser: Nancy Whitehouse

Fern Schrader*

Biochemistry, Molecular and Cellular Biology
Differentiation of 3t3-L1 Cells into Adipocytes and the Associated Histone Modifications Analysed via Mass Spectrometry
 Adviser: Feixia Chu

Brennan Senecal*

Genetics
Expression Levels May Explain Phenotypic Differences between Arabidopsis Mutants
 Advisers: Estelle Hrabak, Megan Thompson

Alissa Shea*

Environmental Sciences
Michelle Verstraaten*
 Biomedical Science
What Killed Luna? Biomagnification of BMAA and Microcystins as a Possible Cause of Common Loon Death in Province Lake, NH
 Adviser: James Haney

Michael Slagle*

Community and Environmental Planning, Sustainability
Innovative Tools to Bring Workforce Housing to Durham, NH
 Adviser: Mary Friedman

Olivia Smith*

Marine, Estuarine and Freshwater Biology
*The Impact of Atlantic Butterfish (*Peprilus triacanthus*) in the Diet of Common Tern Chicks (*Sterna hirundo*) in the Gulf of Maine*
 Advisers: Elizabeth Craig, Gregg Moore

Carter Snay*

Environmental Sciences

Sampling Ebullitive Methane Flux from Freshwater Streams: What Worked and What Needs Adjustments

Advisers: Andrew Robison, Wilfred Wollheim

Ryan Spelman*

Biology

*Evaluating the Potential of Chitosan for Suppression of Gray Mold Caused by *B. cinerea* on Floriculture Crops*

Adviser: Anissa Poleatewich

Hannah Stewart*

Environmental Conservation and Sustainability, Environmental and Resource Economics

Exploring the Properties UAS for the Assessment of Ecological Processes and Its Resulting Social Impact

Adviser: Russell Congalton

Andrew Sullivan*

Marine, Estuarine and Freshwater Biology

Speciation of the Galápagos Hagfish

Adviser: David Plachetzki

Jessica Tremblay*

Zoology

Assessing How the Diversity of Groups Affects the Frequency of Vigilant Displays in Birds

Adviser: Leslie Curren

Bonnie Turek*

Environmental Conservation and Sustainability

Assessing Topographic Mapping Accuracy Using Aerial Drone with Terrestrial and Submerged Aquatic Ground Control Points

Adviser: Kevin Gardner

Tyler Wade*

Biomedical Science

"CIORF150": A Novel Regulator of JAK2 Kinase, and Candidate Tumor Suppressor in Human Blood

Cell Progenitors

Adviser: Don Wojchowski

Natalie White*

Environmental Sciences

Assessing Salt Marsh Resilience at Moody Point, Great Bay Estuary, NH

Adviser: Gregg Moore

Benjamin Wymer*

Wildlife and Conservation Biology

Habitat Associations of Small Mammals and Their Impact on Forest Regeneration in Northern New Hampshire

Advisers: Rebecca Rowe, Ryan Stephens

Madeline Young*

Biology

Comparison of Two Soybean Varieties with Contrasting Susceptibility to Iron Deficiency Grown with and without Chitosan Supplementation

Adviser: Marta Lima

Rachel Zampini*

Nutrition

Mindful Eating and Metabolic Syndrome among UNH College Students

Adviser: Maggie Begis

Peter T. Paul College of Business and Economics First-Year Innovation and Research Experience (FIRE) URC

Poster Presentations & Oral Presentations

Saturday, April 25

FIRE is an integrated, team-based, and game-like experience for first-year Paul College students. Through a series of challenges, students develop business plans that are presented at this year-end finale, which features poster and oral presentations on students' business plans and concludes with a "Grand Challenge Round."

Grand Challenge: Automation

Team: Fire Starters

Adviser: Danielle Beegan

Christine Aboujaoude*

Brianna Albano*

Hayden Blood*

Daniel Clark*

Brennan Dwyer*

Alex Muto*

Nicholas Smith*

Nathan Sullivan*

Caleb Woodin*

Undeclared

Team: Hang 10

Adviser: Allison MacPhee

Carson Albright*

Joseph Auger*

Cole Cassidy*

Carola Davis*

Ava Dobbelaer*

Brendan Gaffney*

Adam Gray*

Rachel Hollywood*

Michael Judd*

Jacob Rich*

Cameron Rocheleau*

Anthony Syhabout*

Ashley York*

Business Administration

Austin Edwards*

Jack Tevault

Emily Yopchick*

Undeclared

Team: New Train

Adviser: Robert Andreasse

Kindyl Alfonso*
 Ryan Burke*
 Sarah Clark
 Grace Lemerise*
 Olivia McCarren*
 Benjamin McLafferty*
 Michael Santini*
 Kyle Simpson*
 Gunnar Tache*
 Sebastian Trumbull*
 Henry Vaughan*
 Jay Wallace*
 Kobe Zimmer*
 Business Administration
 Kelley Burzlaff*
 Kiana Cheney*
 Lisa DeGeorge*
 John Ginand*
 Eli Witham*
 Undeclared

Team: High Five

Adviser: Alana Hovey

Tucker Banios
 Nicholas Baudo*
 Ashlyn Brown*
 Aiden Brown*
 Katie DuBois*
 Wyatt Hill*
 Robert Horne*
 Niall Kelly*
 Ryan Selman*
 Benjamin Stephens*
 Isabella Walden*
 Business Administration
 Dehlia Beaudry*
 Hospitality Management
 John Bresnahan*
 Autumn Delorey*
 Tyler Dickinson*
 Nathan Edwards*
 Undeclared

Team: Money Twenty

Adviser: Erin Gralton

Winsor Bean*
 Kendyl Drum*
 Brendan Kenney*
 Krysta Mack*
 Jill Mattucci*
 Mia McAuliffe*
 Joseph Moore*
 Undeclared
 Stoughton Bell*
 Alex Clarke*
 Thomas Constantino*
 Alessandra Cutone*
 Griffin Delaney*
 Garrett Henderson*
 Adam LePage*
 Camdyn Loring*
 Jordan Moyer*
 McKenna Wilson*
 Business Administration

**Grand Challenge:
 Community Health**
Team: Fired Up

Adviser: Nicole Marzulli

Nicholas Alborghetti*
 Jeffrey Andon*
 Brendan Andros*
 Isaac Blanchette*
 Ian Bryant*
 Jack Caraccio*
 Connor Cherry*
 Hannah Colley*
 Anders Dachsteiner*
 Kallie Fisher*
 William Gaughan*
 Lena Huang*
 Lila Khanal*
 Madison Lamper*
 Reid Signet*
 Vanessa Smith*
 Noah Stevens*
 Business Administration
 Brynn Lambroff*
 Joshua Rumrill*
 Undeclared

Team: The Flame-ingos

Adviser: Tanner Williams

Brendon Anderson*
 Elise Bender*
 Brooklyn Brackett*
 Justin DiTomaso*
 Emerson Graham*
 Christopher Johnson*
 Alex Kaminski*
 Jui Liao*
 Matthew McDonough*
 Alyssa Norris*
 Luke Pashoian*
 Benjamin Psalidas*
 Nicholas Rainforth*
 Max Richard*
 Madison Shatzer*
 Business Administration
 Paige Bohligh*
 Hannah Carle*
 Jacob Loftin*
 Anna Pollak*
 Devin Ralph*
 Undeclared

Team: One-Hit Wonders

Adviser: Jill Conry

Andrew Arone*
 Ethan Eames*
 James Randazzo*
 Thomas Stimson*
 Lea Trainor*
 Undeclared
 Peter Bannon*
 Liam Bennett*
 Tierney Creighton*
 Robert Hardy*
 Virginia Kozikowski*
 Noor Malik*
 Aleta Mathers*
 Madison Montgomery*
 Kilian O'Connell*
 Mason Patten*
 Brendan Pearl*
 Jake Regan*
 Business Administration

Team: Paul So Hard

Adviser: Valerie Mattice

Million Beaulieu
 Samuel Carlisle*
 Warner Casey*
 Jack Gillis*
 Alexander Haynes*
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 Alison Novack*
 Jakob Ober*
 Jonathan Rizzitano*
 Jared Rizzo*
 Annabelle Stott*
 Michael Trager*
 Sydney Weisensee*
 Catherine Yorke*
 Business Administration
 Joshua Duntley*
 Ashley Hettrich*
 Alyssa Ventura*
 Undeclared

Team: In It 2 Win It

Adviser: Abigail Chapman

Caleb Bell*
 Joseph Caswell*
 Hailly Felgate*
 Dillon Fiore*
 Melissa Girondin*
 Zhiwei He*
 Drew Hudson*
 Michael Keefe*
 Miranda Lau Quan*
 Chris Markunas*
 Jack O'Donnell
 Jacqueline Odyniec*
 Emily Sergeant*
 Breanna Smith*
 Isabella Spagnuolo*
 Business Administration
 Kathryn Edgar*
 Jake Sanclemente*
 Undeclared

Team: Paul's Red Hot

Adviser: Kevin Murphy

Domenic DiZillo
 Brandon Elias
 Cameron Frizzell*
 Eric Gage*
 Maclean Hanley*
 Jared Knight
 Blake Murray*
 Anna Schriefer*
 Alina Wright
 Analytical Economics
 Sara Dube*
 Tim Hagerott*
 Abby Keans*
 James Marsh*
 Nicholas Simone
 Whitney Wiley*
 Business Administration
 Martin Keene*
 Maeve Parnell*
 Undeclared

Grand Challenge: Fast Fashion

Team: The New Hampshire 29ers

Adviser: Jake Rappaport

James Bochiechio*
 McKenzie Callaghan*
 Hunter Ferrera*
 Aislinn Ford*
 Robert Griffin*
 Reynaldo Idieu*
 Sydney Kennedy*
 Macklin Lansbury*
 Will Naughton*
 Aidan O'Hern*
 Nicholas Qualey*
 Chase Stevenson*
 Business Administration
 Brett Conley*
 Thomas McCauley*
 Pranathi Pamidi*
 Undeclared

Team: Supreme 13

Adviser: Alexandra Lipinski

Brendon Bussiere*
 Joseph Dupree*
 Erik Eisen*
 William Foley
 Emma Kearing*
 Lucas Lanagan*
 Ryan Mann*
 Rebecca Mitlin*
 David Moss*
 Edward Mrozowski*
 Maggie Robinson*
 Nicholas Weidman*
 Jack Wixson*
 Business Administration
 Autumn Coady*
 Ethan Huggins*
 Bridget McMahon*
 Emily Strout*
 Audrey Tirrell*
 Undeclared

Team: Live Three or Die

Adviser: Max Polay

Grace Cannon*
 Victoria Carini*
 Clay Courtmanche*
 Christian DiPersio*
 Heather Doyon*
 Jack Hogan*
 Alex Klosen*
 Nicole Massa*
 Richard Mingolelli*
 Clara Richards*
 Mary Van Ness Uitti*
 Business Administration
 Matthew Derby*
 John Gallagher*
 Maxwell Rose*
 Undeclared

Team: 22+1

Adviser: Madison Murdick

Caroline Cavalieri*
 Patrick Cotton*
 Avery Harrison*
 Peyton Kemp*
 Thomas Leighton*
 Shaun McKay*
 Mitch Moore*
 Matthew Oriente*
 Daniel Parker
 Andrew Penkala*
 Madison Rodriguez*
 Aryan Shrestha*
 Carissa Towlson*
 Logan Wertz*
 Joshua Young*
 Business Administration
 Cade Connelly*
 Grace Donaghey*
 Sarah Hills*
 Undeclared

Team: 6 Gods

Adviser: John Eklund

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 Carlos Garcia*
 Nathan Liebert*
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 Ryan O'Grady*
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 Jacqueline Veglia*
 Business Administration
 Alyssa Floyd*
 Matthew Garafano*
 Thomas Goodwin*
 Patricia Laws*
 Katie Remeis*
 Jenna Willwerth*
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Team: The Ocho

Adviser: Amylee Lawn

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 Justine Jonathan*
 Analytical Economics
 Peter Marcouiller*
 Kenney McElroy*
 Eddie Murray*
 Beckett Reap*
 Eflī Shtino*
 Robert Stickney*
 Joshua White*
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Grand Challenge: Ocean**Team: Fire F18hters**

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 William Demers*
 Alison Durand*
 Nicolas Emerson*
 Adam Garrity*
 Alexi Kakouris*
 Nora Lucy*
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 Nolan Policano*
 Chloe Villemure*
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 Noelle Newman*
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Team: Pac12

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 Lilia Gardner*
 Victor Gentile*
 Evan Murray*
 Lukas Narducci*
 Julie Pacenka*
 Felicia Pitcher*
 Erica Reith*
 Alisha Wannaphong*
 Business Administration

Team: Nine Lives

Adviser: Sophia Mazzarelli

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 Thomas Cortese*
 Joshua Eastburn*
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 Jonathan Hilton*
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 Jack Lehoullier*
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 Jacob Escott*
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Team: 21 Savages

Adviser: Jamie McGee

Leandra Anthony*
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 Brian Dankese*
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 Hannah Vanden Heuvel*
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 Hospitality Management

Team: 22 Jump Street

Adviser: Yanni Kakouris

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 Raeanne Breton*
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 Business Administration
 Abigail Faletra*
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 Grady Helliwell*
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Team: The Quad Squad

Adviser: Holly Eisenberg

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 Burke Griffin*
 Allison Heiberger*
 Olivia Hungate*
 Ryan Lennon*
 Ian Morgenstern*
 Kyle Polito*
 Business Administration
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 Joey DeSimone*
 Kylan Mastro*
 Carter McLean*
 Sean Miclette*
 Marius Solbakken*
 Alexander Tveter*
 Luyi Xu*
 Economics
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 Owen McPherson*
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Grand Challenge: Wildlife

Team: It's Business Time

Adviser: Marisa Labadini

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Team: Dirty 30

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Team: You Know What's Better Than 24?...25

Adviser: Haley Demers

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 Megan Mulholland*
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Team: The Wo1f of Pau1 Street

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Team: The Paul T. Peters

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Ryan Foote*
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Sebastian Karas*
Undeclared

Team: Ice Melt

Adviser: Madeline Karlberg

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James Dell'Arena*
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Ian Veer*
Zachery White*
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Samantha Gallo*
Thiri San*
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Ann Manchester Kelley Nursing Inquiry Day

Wednesday, April 29

This event features scholarly presentations by undergraduate Honors students and Graduate Program students in Nursing.

Peter T. Paul College of Business and Economics Paul J. Holloway Prize Innovation to Market Competition

Championship Round

Wednesday, May 6

This competition takes students out of the classroom and into the real world. Students are required to research and prepare strategies for commercializing new products and services, which they present to a panel of industry judges. Prizes are awarded for the most feasible and fundable approaches for starting, acquiring, or expanding a business venture.

Acknowledgments

The UNH Undergraduate Research Conference has grown to become a signature event at the University and one of the largest and most diverse conferences of its kind. Bringing the URC to fruition each year is the result of a collaborative network of many community members across campus. Here, we acknowledge these individuals and campus units and thank them for helping to make the virtual 2020 URC happen.

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Szu-Feng Chen and Tom Payne, The Naked Arts—Creativity Exposed!

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Molly Doyle and Amanda Leger, All Colleges Undergraduate Research Symposium

Andrew Earle and Eileen Laskoski, Paul College Holloway Prize Competition; Nelson Poster Competition

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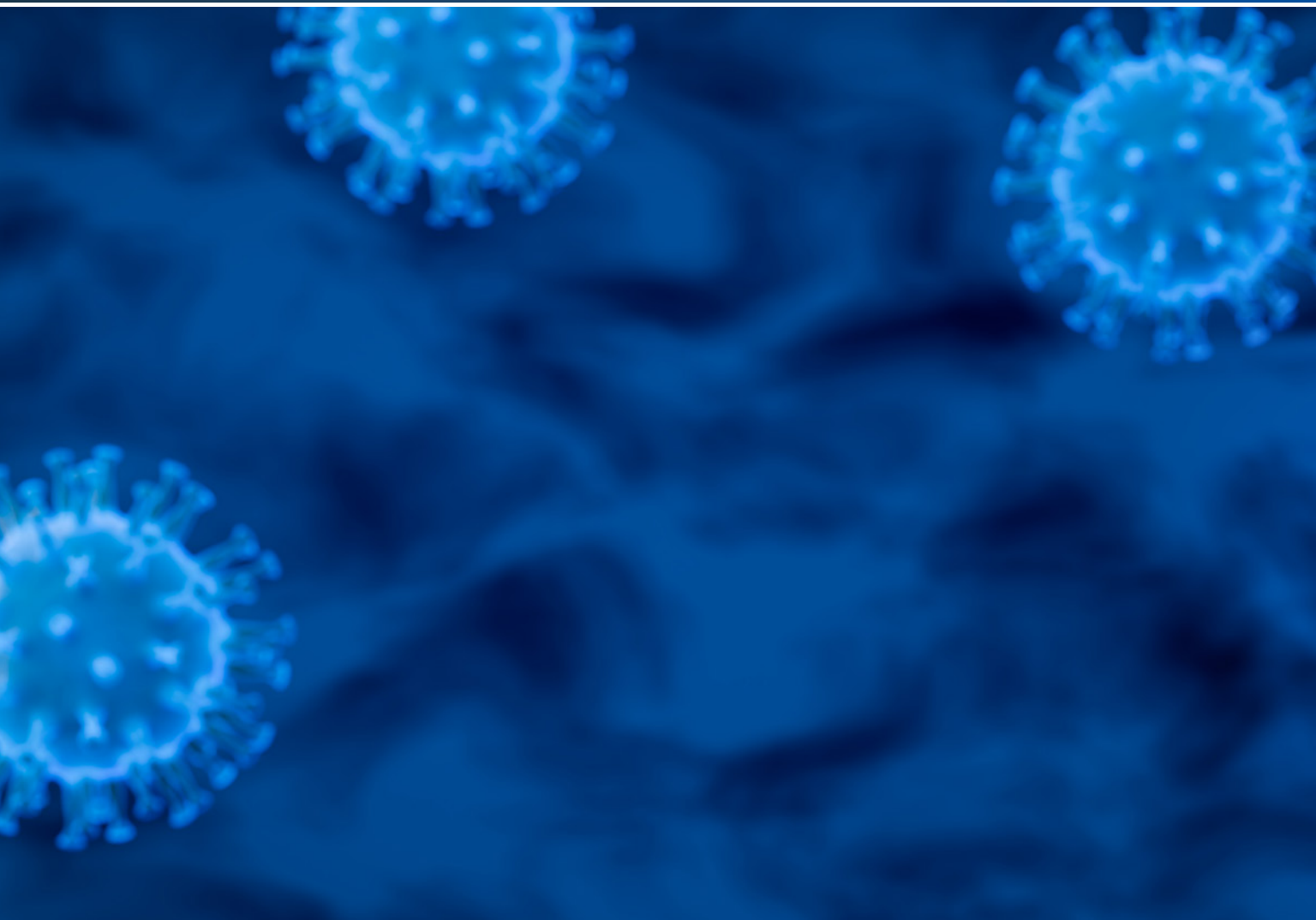
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