Undergraduate Research Conference

April 17–25, 2009

Showcase for undergraduate research, scholarship, and creative presentations

*CHALLENGING* *rewarding* *STAGGERING* *memorable* *fantastic* *INSPIRATIONAL* *enthusiastic* *empowered* *wicked* *enlightening* *INTENSE* *intellectually stimulating* *Surprising* *interesting* *BENEFICIAL* *passionate* *confidence-building* *NERVE-WRACKING* *AWESOME* *fun!*
Welcome to the tenth annual springtime celebration of discovery at the University of New Hampshire. The UNH Undergraduate Research Conference (URC) highlights the outstanding research, scholarship, and creative activities of our students and their faculty mentors. We take pride in—and learn from—their accomplishments.

What began in 2000 has blossomed into an annual tradition that puts UNH students in the spotlight. Our conference is now one of the largest and most diverse in the nation. More than 850 students will present their findings at dozens of events across both the Durham and Manchester campuses, and represent academic achievements in every college and school.

This extraordinary learning experience helps students build the necessary knowledge, skills, and confidence to pursue graduate studies and/or meaningful careers. The URC is a shining example of our students’ success and the discovery-based education for which UNH is known.

Whether your visit includes a poster session, an oral presentation, an art exhibit, or a creative presentation, we are confident that you will be impressed with these participants’ knowledge and understanding. Thank you for your interest in and support of our remarkable students.

Sincerely,

Mark W. Huddleston, President
Julie E. Williams, Associate Vice President for Research and Outreach Scholarship
Chris Reardon knows how intimidating it can be for students to take on a new research project.

And the URC can be especially daunting because it requires independent study on top of a normal class load, as well as presenting before peers, professors, parents, and professionals. All within some demanding deadlines.

“Doubts and questions arise. Can you do it?” says Reardon, an associate professor of political science at UNH for 18 years and a veteran URC mentor. “But once a writer starts down the road of research, and actually begins to enjoy digging into the recesses of knowledge to find that nugget that will shed light… then I know students get hooked.”

Reardon says one of his greatest rewards is to watch students in the URC turn their enthusiasm for a subject into inquiry, then into research, and finally into becoming teachers themselves as they bring their audiences on the path to discovery.

“To me, the URC is a perfect proving ground for future academics,” Reardon says. “Students need to learn how to carry out research, to develop methodologically rigorous arguments, and to test out their theories looking at one or more case studies. Once a student understands this process, the student begins to understand more about the academic pursuit.”

Reardon says the URC is an ideal vehicle for students who are already pursuing independent work, through programs such as the international affairs dual major, to share their discoveries with the UNH community.

“Presenting helps them complete the learning process,” Reardon says. “It’s a fantastic opportunity for them to disseminate their knowledge.”

Many of the URC students Reardon has mentored stay in touch with him. Two are sisters Sarah and Susannah Pratt. Sarah graduated with dual degrees in anthropology and international affairs in 2005, and her sister graduated with dual degrees in political science and international affairs in 2007.

Sarah, who studied Arabic and Arab culture in Jordan, is now a Foreign Service Officer in New Delhi, India.

Susannah is a scholar of Chinese and Asian politics, studying at the University of London, and Fudan University in Shanghai, China. She continued studying Chinese after graduation, and is currently in Chengdu, China, completing a fellowship from the U.S. government by interning at a Chinese travel company.
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All events are free and open to the public.
Accessibility accommodation requests may be directed to Lynne Cooper at (603) 862-1997.
URC ’09 Calendar

Thursday, April 15–16
10 a.m.–4 p.m.
Graduate Research Conference (GRC)
MUB, Strafford Room, assigned rooms

Friday, April 17
6–8 p.m.
2009 Senior B.A. and B.F.A. Exhibition and M.F.A. Thesis Exhibition (I)
Preview Reception
Museum of Art, Paul Creative Arts Center
(Exhibition runs April 18–May 23)

Tuesday, April 21
9 a.m.–3 p.m.
UNH Manchester Undergraduate Research Conference
Oral Presentations
UNHM Auditorium

Wednesday, April 22
9 a.m.–4 p.m.
Whittemore School of Business and Economics Undergraduate Research Conference
MUB, Rooms 330/332, 338/340, Theater II

10:30 a.m.–Noon
Seacoast Reads Exhibition
MUB, Rooms 330/332

10:30 a.m.–Noon
Thompson School Community Leadership Program
MUB, Rooms 330/332

10:30 a.m.–Noon
UNH Office of Community Service Student Partnerships
MUB, Rooms 330/332

Noon–2 p.m.
The Naked Arts—Creativity Exposed! (Act I)
Museum of Art, Paul Creative Arts Center

Thursday, April 23
11 a.m.–1 p.m.
UNH Manchester Undergraduate Research Conference
Cinema Day
UNHM Auditorium

12:30–2 p.m.
The Naked Arts—Creativity Exposed! (Act II)
Hennessey Theatre, Paul Creative Arts Center

12:40–2 p.m.
History Department Undergraduate Presentations
Memorial Union Building, Rooms 338/340

Friday, April 24
8:30 a.m.–3 p.m.
UNH Manchester Undergraduate Research Conference
Engineering Technology Senior Project Presentations
UNHM Auditorium

9–9:30 a.m.
Breakfast with UNH Associate Vice President for Research and Outreach Scholarship
Julie E. Williams and UNH Parents Association Council President Mark Loopley
MUB, Granite State Room

9:30 a.m.–2:30 p.m.
Parents Association Undergraduate Research Symposium
MUB, Granite State Room, assigned rooms

12:15–1 p.m.
The Naked Arts—Creativity Exposed! (Act III)
MUB, Strafford Room

1–4 p.m.
College of Health and Human Services Grimes Award Competition
Pettee Hall, Room G10

1–4 p.m.
Psychology Department George M. Haslerud Undergraduate Research Conference
Conant Hall, Room 101

4–8:30 p.m.
Philosophy Department Undergraduate Research Conference
Hamilton Smith Hall, English Department

8:00 p.m.
Student Composers’ Concert
Bratton Recital Hall, Paul Creative Arts Center

Saturday, April 25
7:45 a.m.–2 p.m.
18th Annual College of Life Sciences and Agriculture (COLSA) URC
The New England Center

Friday, May 8
3–5 p.m.
Chemistry Department Poster Exhibition
Parsons Hall, Iddles Wing

Wednesday, May 13
8 a.m.–2 p.m.
Whittemore School of Business and Economics University-wide Paul J. Holloway Prize Innovation-to-Market Championship Round
Holloway Commons

All events are free and open to the public.
Campus Map

BUILDING KEY
1. Paul Creative Arts Center
2. Horton Hall
3. Memorial Union Building (MUB)
4. Kingsbury Hall
5. Hamilton Smith Hall
6. Pettee Hall
7. Conant Hall
8. New England Center
9. Holloway Commons
10. Parsons Hall
11. Murkland Hall

UNH Manchester
400 Commercial Street
Manchester, N.H.
For directions to UNH Manchester go to
www.unhm.unh.edu/directions.html
or call (603) 641-4321.
UNH Manchester
Undergraduate Research Conference

Oral Presentations

Tuesday, April 21
9 a.m.–3 p.m.
UNHM Auditorium

Oral Presentations are formal scholarly lectures and/or multimedia presentations reflecting students’ research interests.

Dominic DeSando
Computer Information Systems
Using Non-Profit Information Technology Development as the Basis for Learning and Instruction
Adviser: Mihaela Sabin

Timothy Huffman
Communication Arts
Seeing Red: Soviets in American Cinema from 1918–1929
Adviser: Jeffrey Klenotic

Meghan Marcus
Communication
Will It Play in Manchester? The Sound Revolution of 1929
Adviser: Jeffrey Klenotic

Patrick McGuigan
History
Fianna of Ireland
Adviser: Ann Donahue

Elizabeth Neilan
History
Ensuring Warmth from the Millyard—SESL Project
Adviser: Kate Hanson

Katherine Potter
Psychology and Communication Arts
Where Are All the Women? Psychological and Social Factors Contributing to Gender Gaps in the Financial Services Industry.
Adviser: Alison Paglia

Andrew Schwab
Computer Information Systems
Linking Community and Academic Goals: New Hampshire Catholic Charities’ Asset Mapping Database
Adviser: Mihaela Sabin

Joseph Vaskelionis
History
Clash of Cultures: Indian-American Conflict
Adviser: John Resch

Seacoast Reads

Wednesday, April 22
10:30 a.m.–Noon
Memorial Union Building, Rooms 330/332

The Seacoast Reads exhibition displays the work of UNH student volunteers who tutor young children in elementary schools and after-school programs in literacy. Since 1998 almost one thousand UNH students have worked through Seacoast Reads to tutor a like number of children. Sponsored by the Graduate Program in Reading and housed in the Department of Education, Seacoast Reads draws students from across the University and represents one of the largest service and outreach organizations on campus.
Thompson School
Community Leadership Program

Portfolio, Research and Independent Study Presentations

Wednesday, April 22
10:30 a.m.–Noon
Memorial Union Building, Rooms 330/332

The Community Leadership Program is an innovative associate degree and diploma program that prepares students of all ages to work effectively within community organizations and to be active, influential citizens. This exhibition displays students’ leadership portfolios and highlights significant community projects and partnerships.

Katelyn Atwater
Community Leadership
What is Mitochondrial Disease?
Adviser: Timothy Barretto

Sara Bucciarelli
Community Leadership
Final Capstone Project
Adviser: Timothy Barretto

Jesse Burdwood
Community Leadership
Raising Money for the Developmentally Disabled
Adviser: Timothy Barretto

Jamilee Fish
Community Leadership
Girls Fight Back
Adviser: Timothy Barretto

Kaitlin Lafreniere
Community Leadership
Adviser: Timothy Barretto

Kyle McAdam
Community Leadership
UNH Recycling Coalition
Adviser: Timothy Barretto

Catherine Plante
Community Leadership
Volunteer Best Practices
Adviser: Kate Hanson

Katie Brym
Theatre
Oxfam America Hunger Banquet
Adviser: Marianne Fortescue

Amanda Dezak
Kristina Griffin
Health Management and Policy
Alpha Phi Omega
Advisers: Marianne Fortescue, Martha Lawing

Kayla Hampe
Civil Engineering
Nicolette Pocius
Marine and Freshwater Biology
Valerie Schoepfer
Environmental Science: Soil and Watershed Management
Alternative Spring Break 2009
Adviser: Julie Tracy

Emily Ramlow
Environmental Conservation Studies
Christensen Hall Little Buddies Program
Adviser: Hannah Foust

UNH Office of Community Service Partnerships

Wednesday, April 22
10:30 a.m.–Noon
Memorial Union Building, Rooms 330/332

This display showcases the work of student service organizations and student groups—ranging from spring break trips to residence hall community partnerships—engaged in community service and service-learning projects throughout the year.

Samantha Allard
English Teaching
Joy Heinzman
Spanish
Michael LeBlanc
Social Work
Kelsey Ramsey
Jason Shuster
Undeclared
Kiah Wiggin
Animal Sciences: Pre-veterinary Medicine
Hubbard Hall Council Makes Blankets for Project Linus
Adviser: Faina Bukher

Samantha Allard
English Teaching
Karen Doyen
General Biology
Joy Heinzman
Spanish
Hubbard Hall Council Makes Hats for Save the Children: Knit One, Save One
Adviser: Faina Bukher

Kiah Wiggin
What is Mitochondrial Disease?
Adviser: Timothy Barretto

Kaitlin Lafreniere
Community Leadership
Adviser: Timothy Barretto

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Adviser: Faina Bukher
Travis Fleury, URC 2005

Business Administration,
Whittemore School of Business and Economics

In 2005, Travis Fleury’s marketing class tackled a daunting challenge: Boost traffic to the Web giant Yahoo! among “teens and tweens.”

Working as a “corporation,” class members conducted intensive market research, came up with a slogan (“Y! Not”), and developed an advertising campaign, including TV and magazine ads. Professor Peter Masucci, at the Whittemore School of Business and Economics, was so impressed by the result that he encouraged the entire class to enter it in the URC.

Fleury says preparing for the URC taught him critical lessons about teamwork, research, project management, and presentation skills—and delivering under tight deadlines.

Where is he now?

While the national news highlights slow real estate markets and tighter loan restrictions, Fleury, a licensed mortgage consultant for New Market Lending in Dover, says he’s busier than ever.

Homeowners and businesses are re-financing their loans to take advantage of new, lower mortgage rates; and first-time buyers are finding that shrinking real estate prices have put home ownership within their reach.

“A lot of times I find myself having to present something to an investor that requires us to put together a professional, and very complex, package,” Fleury says. “I’m very comfortable in presenting to large and diverse crowds now, and the URC definitely helped me prepare for that.”

When he was at UNH, Fleury learned how to thrive under pressure, both at the URC and as an emergency medical technician working on the McGregor Memorial EMS squad (formerly the Durham Ambulance Corps). He still volunteers for ambulance duty—upwards of 100 hours a month—and has responded to some 700 ambulance calls. He was elected administrative vice president of the squad in February.
Samantha Gingras  
International and Development Economics  
Matthew Young  
Economics  
Adviser: James Wible

**MUB, Rooms 338/340**

**Atkins Investment Group**  
1–3 p.m.  
Students research and analyze current economic developments, industry sectors and specific company stock performance to manage a portfolio known as the Wildcat Investment Fund. The fund uses real dollars to buy and sell investments.  
Moderator: Stephen Ciccone

Alexander Cugini  
Kirsten Fournier  
Jessica Whelan  
Accounting  
Devin Bates  
William Keenan  
Sarah Marschok  
Conor O’Keefe  
Michelle Pirro  
Economics  
Thomas Carter  
Benjamin Collins  
Entrepreneurial Venture Creation  
Christopher Antlitz  
Daniel Arnault  
Ryan Bergeron  
Trevor Boire  
Ryan Callaghan  
Adam Cohen  
Matthew Cohen  
Jennifer Dietz  
Ryan Goodrich  
Ryan Guidice  
Brittany Hill  
Wade Hudson  
Ryan Klapprodt  
Nicholas Krates  
Zachary Leach  
Robert Macfarlane  
Anthony Macleod  
Philip Lund  
John McGrath  
Colin Reilly

Robert Rubino  
Edward Stitz  
Finance  
Jason Norton  
Finance and Entrepreneurial Venture Creation  
Jeffrey Comstock  
International Business and Economics  
Clark Dhein  
Marketing  
Kyle Flynn  
Philosophy  
Adviser: Stephen Ciccone

**MUB, Rooms 338/340**

**Paul J. Holloway Prize**  
University-wide  
**Innovation-to-Market Poster Session**  
11 a.m.–1 p.m.  
Moderator: William Naumes

Jay Agarwal  
Chemistry  
Vosont  
Adviser: Thomas Towl
e

Muazzam Ali (graduate student)  
Brian Findlay (graduate student)  
Ryan O’Rourke (graduate student)  
Kathleen Schmidt (graduate student)  
Sanna  
Adviser: Richard Saavedra

Timothy April  
Jesse Taylor  
Computer Engineering  
Dylan Fransway  
Electrical Engineering  
Home Power Monitoring  
Adviser: Michael Carter

Scott Cannon (graduate student)  
Michael Klein (graduate student)  
Robert Marshall (graduate student)  
Jeremy Paulin (graduate student)  
PWI Consulting  
Adviser: Jun Li

Scott Cannon (graduate student)  
Allertest  
Adviser: Jun Li

Coleman Connolly  
Marketing  
Jason Norton  
Michelle Pirro  
Finance and Entrepreneurial Venture Creation  
ComposiMold  
Adviser: Howard F. Allen

Benjamin Damon  
Spyglass  
Adviser: Michael Merenda

Joseph Dulac  
Meaghan Estes  
Brett Jennings  
Lauren McHugh  
Cali Rodriguez  
Marketing  
Ski Solutions  
Adviser: Ludwig Bstieler

Tina Dussault (graduate student)  
Fourmedible

John Eager (graduate student)  
John Foreman (graduate student)  
Christian Franke (graduate student)  
Katie Graham (graduate student)  
WinAbu  
Adviser: Jun Li

Forest Fyrberg (graduate student)  
Matthew Kramer (graduate student)  
Lori Taylor  
Entrepreneurial Venture Creation  
UNHCEMS  
Adviser: Peter Lane

Jake Galli  
Stephen Lynch  
Marketing  
United Home Health Care  
Adviser: Howard Allen

Tor Harris  
Environmental Engineering  
Kathleen Leonard  
Brianna Mills  
Lori Taylor  
Entrepreneurial Venture Creation  
HydroBreeze  
Adviser: Jeffrey Sohl
**WSBE Individual Posters and Presentations**

**Moderator:** TBD

**Devin Bates**
Economics
*Is There an Upside to the Brain Drain?*
Adviser: Bruce Elmslie

**Clark Dhein**
Marketing
*Guerilla Marketing: Analysis of the Benefits and Drawbacks*
Adviser: William Machanic

**Katherine Duran**
Hospitality Management
*The Origins and Modern Implications of Etiquette*
Adviser: Clayton Barrows

**Min Shin**
Finance, International Business and Economics
*Workforce Housing Coalition of the Greater Seacoast*
Adviser: Meera Venkatachalam

**Joshua Stuhr**
Hospitality Management
*A Hotelier’s Guide to Going Green*
Adviser: Joseph Durocher

**Carly Beldon**
Ali Bickford
Casey Cardinal
Christine Frazier
Greg Halama
Ariane Harter
Lauren McHugh
Cara Sandberg
Courtney Sweeney
Brenna Tenore
Marketing
UNH Summer School Research Project
Adviser: Charles Martin

**MUB, Rooms 338/340**

**MUB, Theatre II**

**Marketing Workshop**
12:30–6 p.m.

Students are organized into teams and work for an entire semester on a marketing problem given them by an outside company or organization. These real-world situations require extensive field research and data analysis, and research findings are then used to design and implement marketing programs to solve the client problem.

**Designing a Marketing Campaign for the NH 55% Initiative—Part 2**

**Moderator:** Peter Masucci

**Clark Dhein**
Phillip Hannafin
Traquis Hart
Sarah Harvey
Kelli LaPerch
Katelyn Peters
John Sawyer
Marketing
Adviser: Peter Masucci
Implementing a Marketing Campaign for the NH 55% Initiative—Part 3
Moderator: Peter Masucci
Sara Bethel
Coleman Connolly
Joseph Dulac
Nicholas Fiorilla
Allison Fricke
Cali Rodriguez
Devon Roy
Chris Spanos
Julie Stevens
Marketing
Adviser: Peter Masucci

Marketing Lenk Orthodontics, DMD, on Campus and Across the Seacoast Area
Moderator: Peter Masucci
Samantha Bonenfant
Neena Daftari
Andrew Hatch
Thomas Manning
Craig Parsons
Jocelyn Schoolsky
Michelle Sheehan
Danielle Travaglini
Marketing
Adviser: Peter Masucci

Marketing the Town of Durham as a Place to Locate New Businesses
Moderator: Peter Masucci
Stasha Fraser
Samantha Gregerson
Jenna Hulbert
Brett Jennings
Jason Lapoint
Nathan Levesque
Christopher Martin
Michelle Petrovic
Stefani Yiokarinis
Marketing
Adviser: Peter Masucci

Increasing Awareness and Promotion of the Joan and James Leitzel Center at UNH
Moderator: Peter Masucci
Brittney Desmond
Alysha Hajdusek
Nicholas Kostis
Michael Segreti
Lindsay Thibeault
Kyle Wilson
Marketing
Adviser: Peter Masucci

Marketing the Connors Writing Center Oral Presentation Services
Moderator: Peter Masucci
Michael DiBenedetto
Mallory Dufresne
Ryan Maiola
Lauren McHugh
Matthew Parker
Victoria Patterson
Kathryn Rohlick
Christopher Rush
Garrett White
Marketing
Adviser: Peter Masucci

Promoting DynDNS on the UNH Campus
Moderator: Peter Masucci
Garrett Callahan
Ian Cox
Danielle Crepeau
Jessica DeGeorge
Melissa Doo
Joseph Madden
Ryan O’Hara
Marketing
Adviser: Peter Masucci

Marketing a New “Green” Apartment Complex at UNH from Bryant Proper
Moderator: Peter Masucci
Alex Belaidi
Kristen Casey
Dan Grube
Lisa Kemp
Christy Pallis
Marissa Palmisano
Laura Taylor
Francesca Tippit
Kevin Wood-Friend
Marketing
Adviser: Peter Masucci

Promoting Lamprey Networks, Inc. on the UNH Campus
Moderator: Peter Masucci
Nicholas Barraclough
Kimarie Dinardo
Heidi Doiron
Meaghan Estes
Jake Galli
Drew Healey
Trevor Messineo
Brendan Moore-Penaskovic
Melissa Nelson
Meghan Tylec
Marketing
Adviser: Peter Masucci

Marketing the New Hampshire Lottery at Point-of-Sale Locations
Moderator: Peter Masucci
Theodore Bahtsevanos
Tricia Burnham
Andrew Buzzell
Keri Deming
Krysten Duarte
Heather Henning
Ashton Lajeskie
Jeffrey Lee
Mary LeRose
Kelley Riley
Marketing
Adviser: Peter Masucci
Promoting the Holloway Prize Competition on the UNH Campus

Moderator: Peter Masucci

Patrick Colburn
Morgan Dorval
Lauren Herman
Stephen Kelley
Maria Linares
Tyler Loopley
Jenna Scali
Marketing
Adviser: Peter Masucci

Promoting the Liberty Mutual Brand on the UNH Campus

Moderator: Peter Masucci

Christopher Campion
Nathan Filicicchia
Christine Frazier
Patrick Hussey
Rachael Kane
Ashley Kelloway
Joel Knight
Colby Lamson
Kellie Norris
Sarah Rajchel
Marisa Sullivan
Marketing
Adviser: Peter Masucci

Interdisciplinary Science and Engineering Symposium (ISE)

Wednesday, April 22
2:00–5:00 p.m.
Kingsbury Hall

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. Students have an opportunity to interact with peers and gain professional experience presenting research. Attendees learn more about research and educational opportunities in science and engineering at UNH. The program will include a poster session, remarks from university leaders, refreshments, and an awards ceremony.

Todd Allen
John Duggan
Jonathan Lamontagne
Joseph Nichols
Civil Engineering
UNH Old Reservoir Dam
Adviser: Kevin Gardner

Katherine Andruchuk
Mary Ferguson
Seth Lizotte
Krystian Manitius-Kozlowski
Kyle Urso
Lawrence Yassanye
Civil Engineering
Wood Island Feasibility Study
Adviser: Kevin Gardner

Marc Bamberger
Justin Bray
Alexander Koulet
Josef Super
Ryan Tebbetts
Mechanical Engineering
UNH Fire Fighting Robot Team Presents “Fire Chief”
Adviser: Todd Gross

Jeffrey Barnard
Mechanical Engineering
Cooling Fluid Distribution Design, Characterization, and Refinement
Adviser: Greg Chini

Jamie Bemis
Mechanical Engineering
Determining Solid Fraction of Liquified Biomass
Adviser: Christopher White

Nicholas Bencivenga
Chemistry
Preparation of Novel Bifunctional Polymerizable Copper(II) Ligands
Advisers: Roy Planalp, Rudolph Seitz

Mark Betts
Mechanical Engineering
TrueTurn Turntable
Adviser: Joseph Klewicki

The Naked Arts—Creativity Exposed (Act I)

Wednesday, April 22
Noon–2 p.m.
Museum of Art, Paul Creative Arts Center

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 gallery.

Jameson Copp
Fine Arts (sculpture)
An Exploration From Landscape
Adviser: Benjamin Cariens
Deana Aulisio, URC 2001

ENVIRONMENTAL ENGINEERING,
COLLEGE OF ENGINEERING AND PHYSICAL SCIENCES

Deana Aulisio took part in the URC’s second year, in 2001, exploring how iron dissolved in the waters of the North Pacific affects a food-chain that supports huge salmon populations.

Where is she now?

“My URC experience certainly was the starting point to my career in scientific research,” says Aulisio, who is studying for a Ph.D. at UNH in the Natural Resources and Earth Systems Science program.

After working closely with Professor Cameron Wake as an undergraduate, Aulisio completed her master’s degree in sediment remediation with Kevin Gardner and the Environmental Research Group at UNH.

She worked with Wake again last summer, helping the state Department of Environmental Services to develop a Climate Change Action Plan for Gov. John Lynch.

She is active in the community as an advisory board member of the Green Alliance, a cooperative of sustainable businesses on the Seacoast. In September, she began her doctoral research in algae biofuels, leveraging an alliance with a local biofuel company. Her research will focus primarily on the energetic, environmental, and economic sustainability of this advanced feedstock.
INTERDISCIPLINARY SCIENCE AND ENGINEERING SYMPOSIUM (ISE), CONTINUED

Christopher Bourque  
Matthew Bruton  
Jeffrey Clifton  
Adam Davenport  
Courtney Goldstein  
Jared O’Donnell  
Caroline Robinson  
Civil Engineering  
Zero Energy Residence Building  
Adviser: Kevin Gardner

Michael Brassard  
Kevin Daigle  
Matthew Drohan  
Stephan Kjellander  
Galina Logunova  
Dennis Moran  
Stephen Moraski  
Julie Muldoon  
Tyler Reisdorf  
Civil Engineering  
Proposed Gables Pedestrian Bridge  
Adviser: Kevin Gardner

Justin Bray  
Mechanical Engineering  
Micro, Macro, and Nano-scale Sheet Metal Forming  
Adviser: Brad Kinsey

James Browne  
Kevin Buruchian  
David Dreyer  
Thomas Ducharme  
Civil Engineering  
Kevin Dutile  
Michele Pelletier  
Mechanical Engineering  
Tidal Infrastructure  
Advisers: Kenneth Baldwin, M.R. Swift

Jake Carmody  
Civil Engineering  
Gunstock Pedestrian Bridge  
Adviser: Kevin Gardner

Rachel Carpenter  
English/Journalism and Spanish

Julie Loosigian  
English

Catherine Perrella  
Economics  
Heaven Forbid, Loss on the Grid!  
Increasing Efficiency of the Electric Grid  
Adviser: John Aber

Daniel Castelli  
Benjamin Jenkins  
Michele Pelletier  
Mechanical Engineering  
TableSat for NASA Magnetospheric Multi-scale Mission  
Adviser: May-Win Thein

Benjamin Chiang  
Thaddaeus Webster  
Chemical Engineering  
Design Of Algae Photobioreactor and Experiments With Salt Water Algae  
Adviser: Ihab Farag

Paul Chisholm  
Richard Czerw  
Ryan Flynn  
Andrew Langsner  
Alex Normandin  
Patrick Paul  
Paul Regis  
Anthony Weatherbee  
Brian Wilmot  
Civil Engineering  
Manchester Airport Multimodal Commuter Station Study  
Adviser: Kevin Gardner

George Clark  
Physics  
Analysis of the Diffuse Background Components Towards Efficient Use of the IBEX-lo Star Sensor for the Interstellar Flow Direction Determination  
Advisers: Harald Kucharek, Eberhard Moebius

Meaghan Coleman  
Music

Ann Emmerling  
Spanish

Kyle Libby  
Communication  
Home Sweet Home: Reducing Residential Energy Use in New Hampshire  
Adviser: John Aber

Christopher Cox  
Computer Engineering

John McLaughlin  
Mechanical Engineering  
Intelligent Infrastructure Monitoring  
Adviser: Andrzej Rucinski

Corinne Disenhof  
Geology  
Chemical Analysis of 450 Million Year Old Subduction Zone Rocks from Tillotson Peak, Vermont  
Adviser: Jo Laird

Uyen-Mai Doan  
(UNH McNair Scholar)  
Biochemistry  
The Charge on Beta-Lactoglobulin A and B Under Self-associating Conditions  
Adviser: Thomas Laue

Alexander Evangelou  
Electrical Engineering and Art Studio

Kyle Maroney  
Electrical Engineering  
Developing Training Modules for the 2009 FIRST Robotics Control System  
Adviser: Brad Kinsey

Stacy Farina  
Marine and Freshwater Biology  
Winter Flounder Stock Enhancement: Examining the Onset of Wild Weaning in Pellet-Reared Fish  
Advisers: William Howell, Michelle Walsh

Mathieu Feraud  
Mechanical Engineering

Daniel Fournier  
Marc Ouellette  
Civil Engineering

Wyatt O’Day  
Computer Engineering  
A Half-Mile/Two Mile Nautical Fog Warning Signal  
Advisers: Kenneth Baldwin, Allen Drake

Mary Ferguson  
Civil Engineering  
Seismic Acceleration Demands on Non-Structural Components Attached to Elastic and Inelastic Structures in Near-field and Far-field Conditions  
Adviser: Ricardo Medina

Jacob Finch  
Mechanical Engineering

Kevin Pflanz  
Computer Engineering

Christopher Thompson  
Mechanical Engineering  
UNH Tidal Turbine Performance Analysis  
Advisers: Kenneth Baldwin, M.R. Swift
Michael Giovinazzo
Mechanical Engineering
Wave Energy Converter Research
Adviser: Christopher White

Travis Glines
Physics
Visualizing the Open GGCM MHD Model
Adviser: Joachim Raeder

Jonathan Grohs
Chemical Engineering
Microalgae Growth and Biodiesel Production
Adviser: Ihab Farag

Bobbie Jean Harriman
Electrical Engineering
Tune Trainer
Adviser: Kuan Zhou

Jaclyn Hulbert
Joshua Hulbert
Chad Hummel
Garrett Krapf
Max Pilsanker
Frank Wetenkamp
Kyle Zorawowicz
Civil Engineering
UNH Crew Team Dover Boat House and Dock Design
Adviser: Kevin Gardner

Jonathan Hutchings
Social Work and Psychology
Hannah Varney
Nursing
Fuel Cells and Grid Electricity: Alternative Fuel Sources for Automobiles
Adviser: John Aber

Patrick Jardin
Mathematics
An Investigation Into the Use of Statistics in Hydrology
Adviser: Linyuan Li

Matthew Jones
Earth Sciences
High-Resolution Magnetostratigraphic Analysis of the Denver Basin’s Kiowa Core; Testing Paleocene Astronomical Cycles
Adviser: William Clyde

Kyle Kalutkiewicz
Physics and Mathematics
Axionic Inflation In Large Volume String Compactifications
Adviser: Per Berglund

Shawn Kenney
Civil Engineering
Submerged Oil Transportation Modeling
Advisers: Diane Foster, Nancy Kinner

Stephen Kolacz III
Computer Engineering
MPG Efficiency
Adviser: Francis Hludik

Paul Kyriacopoulos
Jillian Tombrelli
Chemical Engineering

Joshua Smith
General Biology
Growing Lipid Rich Microalgae in Ultraviolet Light Treated Waste Water Solutions for Biodiesel Production
Adviser: Ihab Farag

Mark LaFrance
Jeffrey Morin
Mechanical Engineering
Ultra Low NOx Coal Burner Design
Adviser: Christopher White

Stephen Lafaille
Mechanical Engineering
Efficient Engine Solutions-Project: Miller Cycle
Adviser: Christopher White

Matthew Lape
Electrical Engineering

Mark Taipan
Computer Engineering
Kingsbury Location Awareness System (KLAS)
Adviser: Andrew Kun

Lauren Lazarus
Physics and Classics
The Dark Side of String Theory: Using Strings to Describe Dark Matter
Adviser: Per Berglund

Rebecca Lehr
Environmental Science: Ecosystems
Analysis of the UNH Climate Action Plan
Adviser: Cameron Wake

Eric Leo
Mechanical Engineering
UNH SAE Acre
Adviser: Christopher White

Jason Lewis
Matthew Minuti
Tyler Rideout
Electrical Engineering
Adaptive Sound Compression
Adviser: Kent Chamberlin

Scott Littman
Undeclared

Cathleen Turner
Environmental and Resource Economics
Assessing the Potential Impacts of Climate Change on Water Resources in New Hampshire Seacoast Area
Adviser: John Davis

Daniel Mannarino
Kyle Snavely
Physics
Simulation of the Electronics Toolchain of the SVT
Adviser: Maurik Holtrop

Kevin Maurer
Mechanical Engineering
UNH ROV
Adviser: Dale Delisle

William Meagher III
Angela O’Donnell
Alexander Vadney
Civil Engineering
Evaluation of Warm Mix Asphalt Technologies
Adviser: Jo Daniel

Samuel Meehan
Mathematics
Study of Interstrip Charge Sharing in Silicon Vertex Tracker Design for CLAS12 Collaboration
Adviser: Maurik Holtrop

James Meli Jr.
Mechanical Engineering
Nanoscale Forming of Bulk Metallic Glass
Adviser: Brad Kinsey
Andrew Middleton  
Environmental Conservation Studies  

Daniel Perrinez  
Marine and Freshwater Biology  
*Biochemical Analysis of Selected Algal Harvests*  
Adviser: Ihab Farag

Andrew Morehouse  
Environmental Science: Ecosystems  
*Understanding Three Major Categories of Influence on Wildfire Dynamics: A Modelling Approach*  
Adviser: George Hurtt

Stephen Morgan (UNH McNair Scholar)  
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*Soil Consistency Limits: The Portable Liquid Limit Device*  
Adviser: Jean Benoit

Caleb Morrill-Winter  
Mechanical Engineering  
*Wind Tunnel Surface Features*  
Adviser: Joseph Klewicket

Ashley Morse  
Russian and German

Megan Murray  
Undeclared

Amanda Richelo  
Animal Sciences: Pre-veterinary Medicine

Rachel Shanahan  
Undeclared  
*Here Comes the Sun*  
Adviser: John Aber

Danielle Morse  
Microbiology  
*Side Effects of Antibiotic Resistance in Evolved Burkholderia cenocepacia*  
*HI2424 Populations*  
Adviser: Vaughn Cooper

Jared Murray  
Statistics  
*Median Polish Algorithm for Automated Anomaly Detection in Sensor Networks*  
Adviser: Ernst Linder

Madison Myers  
Earth Sciences  
*Water-rock Interactions in Bedrock-hosted Aquifers: Implications for the Water Resources in the Seacoast of New Hampshire*  
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Andrew Middleton  
Environmental Conservation Studies
Albert St Aubin  
Computer Engineering  
FPGA Design Verification  
Adviser: Francis Hludik

Joshua Stawarz  
Physics  
The Turbulent Cascade and Proton Heating in the Solar Wind at 1 AU  
Adviser: Charles Smith

Kaitlyn Steele  
Environmental Science: Ecosystems  
Using Stable Isotope Methods to Determine Controls on Methane Production in Coastal Sediments  
Adviser: Ruth Varner

Jesse Taylor  
Computer Engineering  
Home Power Monitoring  
Adviser: Michael Carter

Jonathan Tessein  
Electrical Engineering  
Power Spectral Density Measurement of VDSL2 Modems  
Advisers: Michael Carter

Jeffrey Tessein  
Physics  
Corotating Interaction Regions at 1 AU  
Adviser: Charles Smith

Charlotte Todd  
International Affairs and Spanish  
S.T.A.R.S. Sustainability Tracking Assessment and Rating System  
Adviser: Sara Cleaves

Reid VanBenthysen  
Mechanical Engineering  
Development of Electrical-Assisted and Electromagnetic Microforming Processes  
Adviser: Brad Kinsey

Vassili Vorotnikov  
Chemical Engineering  
Enzymatic Transformation of a Natural Antioxidant  
Adviser: Palligarnai Vasudevan

Amanda Waite  
Mathematics  
Students’ Algebraic Thinking in Geometry Problem Solving  
Adviser: Sharon McCrone

David Waterhouse  
Mechanical Engineering  
Accelerometer Modeling and Thruster Optimization for NASA’s Magnetospheric MultiScale (MMS) Mission  
Adviser: May-Win Thein

Justin Wilcox  
Geography  
GIS and Campus Development  
Adviser: Joel Hartter

Kerin Willard  
Chemical Engineering  
Polymeric Pixels for High Definition Digital Printing  
Advisers: Donald Sundberg, John Tsavalas

Lindsey Wright  
Undeclared  
Detecting Evidence of Shifting Peak Migration Dates of Broad-Winged Hawks  
Adviser: Stephen Hale

UNH Manchester Undergraduate Research Conference

Poster Presentations

Wednesday, April 22  
4–6 p.m.  
UNHM Auditorium

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.

Joshua Albair  
Joshua Quigley  
Craig Tekverk  
Computer Information Systems  
Way Home Outcome Tracking System: Helping Low-Income Housing Streamline Report Generation  
Adviser: Mihaela Sabin

Daniel Arnold  
Stephen Bates  
Tyler Williams  
Computer Information Systems  
Mapping Movies: A Geographical Information System Tracking Cinema History in New Hampshire  
Adviser: Mihaela Sabin

Kevin Bickford  
Jeffrey Lavoie  
Sergei Perreault  
Computer Information Systems  
Database Modeling and Design to Improve the Use of a Legacy System for the NH Division of Juvenile Justice Services  
Adviser: Mihaela Sabin

Shannon Boudreau  
Psychology  
The Importance of Building Social Relationships  
Adviser: Alison Paglia

Brianna Brothers  
Steven Cole  
Harry Dodson  
Computer Information Systems  
Building a Database Application System to Manage Donations for the YWCA of Manchester  
Adviser: Mihaela Sabin

Dominic DeSando  
Zachary Gadway  
David Rice  
Matthew Wright  
Computer Information Systems  
Accessibility, Security and Usability: Revising the Division for Juvenile Justice Services’ Log-Entry System for the Digital Age  
Adviser: Mihaela Sabin

Melissa DiNoto  
Psychology  
Creativity and Aging  
Adviser: Alison Paglia

Glenn Ellis  
Business

Brian Landry  
Justin Tullgren  
Computer Information Systems  
Program and Membership Management System for the YWCA of Manchester  
Adviser: Mihaela Sabin
Cathy Overson, URC 2005/2006

Psychology, UNH/Manchester

CATHY OVerson was already plenty busy when she decided to take part in the URC in 2005. And again in 2006, when she made two presentations.

At the time, she was studying for her bachelor’s in psychology at UNH/Manchester, and also working as a nurse at Elliot Hospital’s delivery and labor unit. But the URC, Overson says, offered an irresistible chance to team up with professors to study the psychological stresses that nurses face day-to-day.

“One of the most valuable aspects of the URC was the ability to be more collegiate with my advisers,” Overson says. “It really helped me explore the research and interact with professors in a more in-depth way.”

Where is she now?

Inspired to continue her studies, Overson hasn’t slowed down.

She earned her master’s degree in psychology from UNH last year, and is on her way to earning a Ph.D.

The URC, she says, was perfect preparation for researching, and presenting, her work at the highest levels of academia.

“The experience I had with the URC was directly related to the work I did on my master’s project, and it also ties in with the research I’m doing on my Ph.D.,” Overson says.

In her master’s work, Overson researched how sexually abused women relate to their pregnancies. Before long, her work could find its way back into hospitals, helping nurses and their patients face some of life’s biggest challenges.
UNH Manchester Undergraduate Research Conference

Cinema Day

Thursday, April 23
11 a.m.–1 p.m.
University Center, Manchester

The UNH Manchester 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.

Andrew D’Agostino
English
Interviewing Cupid
Adviser: Dana Myskowski

Evan Gomes
Communication Arts
Mike’s First Marathon
Advisers: Jeffrey Klenotic, Anthony Tenczar

Joseph Vaskelionis
History
Indian Removal Act of 1830: A Case Study of Continental Imperialism
Adviser: John Resch

Wendy Vattes
Humanities
Woodrow Wilson and the League of Nations: Making the World Safe for Democracy
Adviser: John Resch

Adrianna Wolfe
Psychology
Adult Development and Aging: Service Learning with Seniors Count
Adviser: Alison Paglia

Timothy Huffman
Communication Arts
What Took You So Long?
Adviser: Anthony Tenczar

David Klein
Communication Arts
The Identity Project
Adviser: Jeffrey Klenotic

Kevin Mason
Undeclared
Space Exercise
Adviser: Anthony Tenczar

Kevin Mason
Undeclared
An Interview with Alfred Catalfo
Adviser: Anthony Tenczar

Adam Meran
Communication Arts
Joy
Adviser: Anthony Tenczar

Raymond Murphy
Communication Arts
Working Class Stiffs
Adviser: Anthony Tenczar

Erroll James Ponio
Communication Arts
My Grandfather In the Marcos’ Administration
Adviser: Anthony Tenczar

Ian Reddick
Communication Arts
Up Hill: The Life and Times of Larry Hill
Adviser: Anthony Tenczar

Alex Scarelli
English
Art Show
Adviser: Dana Myskowski

UNH Manchester Undergraduate Research Conference

The Naked Arts—Creativity Exposed (Act II)

Thursday, April 23
12:30–2 p.m.
Hennessey Theatre,
Paul Creative Arts Center

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.

Matthew Frazier
Sasha Kraichnan
Theatre

Adrienne Lesser
Theatre and Animal Sciences: Equine Sciences
The Dissolution of the American Family as Reflected by Contemporary American Drama and Musical Theatre
Advisers: David Kaye, David Richman

Zachary Onett
Music Theory
Microtonal Experimentation
Adviser: Christopher Kies

Joshua Torbick
Art Studio
Coming and Going: Furniture for the Hall
Adviser: Leah Woods

Samantha Withers
Art Studio and Education
Flying Solo—The Impact Companionless Travel Plays in Photographic Artwork
Advisers: Julee Holcombe, Jennifer Moses
High-quality undergraduate research is the hallmark of a University of New Hampshire education. Now, with funds provided by the Parents Association, the University can increase its support to students during the UNH Undergraduate Research Conference (URC). Funding student innovation: it’s one of the many ways the Parents Association enhances the University’s academic mission. Be informed. Join the community. Make a difference.
History Department Undergraduate Presentations

Thursday, April 23
12:40–2 p.m.
Memorial Union Building, Rooms 338/340

The History Department hosts a panel of undergraduate history majors who present research projects from their academic classes, research seminars, and honors theses.

Duncan Edgar
History
*Historic Preservation in Depression-Era Portsmouth*
Adviser: Lucy Salyer

Matthew Fleury
History
*Sufi and State: Success and Failure of Political Sufism in Modern Afghanistan and Libya*
Advisers: Funso Afolayan, Jeffry Diefendorf, Sara Wolper

Jeffrey Kaste
Mallory Murrell
History
*Modern Student Movements: The Success and Failure of Lefist Student Thought and Action in the Hungarian Revolution and American, French and Italian Student Movements (1968–1969)*
Adviser: Janet Polasky

Seth Macomber
History
*Barry Goldwater and the Conservative Capture of the Republican Party*
Adviser: Kurk Dorsey

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Revolutionaries, Radicals, and Whores: Irish Feminism at the Turn of the Twentieth Century

Elizabeth Close
Kathryn Dulla
Allison Lary
History
Thea Dickerman
History and Women’s Studies
Adviser: Nicoletta Gullace

UNH Manchester Undergraduate Research Conference

Engineering Technology Senior Project Presentations

Friday, April 24
8 a.m.–3 p.m.
UNHM Auditorium

Michael Broek
Mechanical Engineering Technology
*Fiber Optic Ferrule Assembly Project*
Adviser: Ralph Draper

David English
Chadwick Shea
Electrical Engineering Technology
*Durability Test Card*
Adviser: David Forest

Maurice Howland
Mechanical Engineering Technology
*Excimer Laser RandD Packaging (Designing an Outer Case)*
Adviser: Ralph Draper

Joshua Huggins
Electrical Engineering Technology
*Autonomous Robot With Manual Network Control Override*
Adviser: David Forest

Tabitha Jason
Mechanical Engineering Technology
*Somersworth School District-Energy Audit*
Adviser: Ralph Draper

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Welcome with Associate Vice President for Research and Outreach Scholarship
Julie E. Williams and Parents Association Council President
Mark Loopley

Friday, April 24
9–9:30 a.m.
Memorial Union Building, Granite State Room

This informal gathering gives students and attendees an opportunity to visit with Associate Vice President for Research and Outreach Scholarship Julie E. Williams and Parents Association Council President Mark Loopley. Both speakers will provide a preview of the large university-wide event that follows—the Parents Association Undergraduate Research Symposium.
Parents Association Undergraduate Research Symposium

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

Poster Presentations, Session A

Friday, April 24
9:30–10:40 a.m.
Memorial Union Building, Granite State Room

Heather Beaudette
Social Work
Community Partners
Adviser: Brian Miller

Alyssa Birt
Animal Sciences: Bioscience and Technology

Rajtilak Majumdar (graduate student)
Regulation of Gene Expression of the Polyamine Pathway Genes: What Does a Promoter Look Like?
Adviser: Subhash Minocha

Jennifer Boudreau
Social Work
Division For Children, Youth and Families
Adviser: Brian Miller

Kristina Breton
Psychology
Dating Patterns at UNH: Hooking Up versus Dating or Committed Relationships
Adviser: Rebecca Warner

Emily Briand
Social Work
United Campus Ministries: The Waysmeet Center
Adviser: L. Rene Bergeron

Crystal Cobb
Political Science
The Role of 64-slice CT Angiography in the Diagnosis of Post-Traumatic Pseudoaneurysms of the Extremities
Advisers: Susan Siggelakis, Irwin Feuerstein M.D., US Army

Kayla Davis
Social Work
Division For Children, Youth and Families
Adviser: Brian Miller

Danae Deveau
Social Work
Homemakers Health Services Adult Day Care Program
Adviser: Brian Miller

Dean Elder (graduate student)

Robert Gibson
Amanda Ramos
Microbiology

Sarah Kinsman
Animal Sciences: Pre-veterinary Medicine

Amanda Rivers (graduate student)
Effect of Postpartum Uterine Pathogens on Ovarian Activity in the Dairy Cow
Adviser: David Townson

Steven Falk
Psychology
The Effects of Parenting Style on Adolescent Substance Use
Adviser: Ellen Cohn

Samantha Fredette
Social Work
The Feminist Health Center of Portsmouth
Adviser: Brian Miller

Jaime Gallagher
Psychology
Attributions of Responsibility for Unplanned Pregnancy: The Effects of Consent and Reputation
Adviser: Ellen Cohn

Allison Greene
Social Work
Seymour Osman Community Center: Youth Safe Haven
Adviser: L. Rene Bergeron

Lauren Gurschick
Nursing
A Descriptive Study of Team-Based Well-Child Care in The Netherlands
Adviser: Gene Harkless

Nina Harris (graduate student)
Business Administration
Sustainability: Webinars at Clean Air Cool Planet
Adviser: Sara Cleaves

Casey Hill
Nursing
Neonatal Nurses Perceptions of Neonatal Pain Scales
Adviser: Carol Williams-Barnard

Sara Hourihan
Kinesiology
Can an Altered Stride Frequency Be Maintained After the Training Stimulus Has Been Removed?
Adviser: Tim Quinn

Lauren Howard
Social Work
Division For Children, Youth and Families
Adviser: Brian Miller

Caroline Ivy
International Affairs and Social Work
The Waysmeet Center
Adviser: L. Rene Bergeron

Colleen Kelley
Social Work
Where is the Outrage?
Adviser: L. Rene Bergeron

Jack Lepine
Plant Biology
Characterization of Transcript Production in Arabidopsis Palmitoyltransferase Mutants
Adviser: Estelle Hrabak

Heather Macomber
Psychology
Does Desipramine Reverse Intermittent Swim Stress-induced Behavioral Depression?
Adviser: Robert Drugan
Emily Lagana, URC 2005

Nursing, College of Health and Human Services

Emily Lagana spent the summer of 2004 researching hospice care in a pediatric hospice house in the United Kingdom.

Backed by a grant from the International Research Opportunities Program (IROP), Lagana’s research found her working side-by-side with a team of doctors and nurses helping seriously ill children and their families.

She returned to UNH ready to share her findings, and her insights for potential improvements in the American health care system, at the 2005 URC.

Where is she now?

After graduation, Lagana became a registered nurse at the University of San Francisco Children’s Hospital, working in the Pediatric Hematology/Oncology/Bone Marrow Transplant Unit.

“I absolutely loved it there! I learned so much working on that kind of unit,” she says. “It was kind of a crash course in pediatrics...high intensity, very sick kids.”

After a year there, she became a traveling nurse, working in a pediatrics unit at the University of New Mexico Children’s Hospital in Albuquerque, as a burn nurse at Shriner’s Hospital for Children in Boston, and as a neuroscience nurse at Children’s Hospital in Boston.

Lagana then took graduate courses at the University of Pennsylvania, focusing on pediatric oncology care. She was finally lured back to New Hampshire and a job in the pediatrics ward at Children’s Hospital at Dartmouth.

She now divides her time between the hospital and Colby-Sawyer College in New London, where she is an adjunct professor. Lagana says she especially enjoys teaching students how to care for children using a hands-on approach.

“I just recently completed an application to UNH for a master’s in child development!” says Lagana, who hopes to be back in Durham next fall.
Parents Association Undergraduate Research Symposium

Oral Presentations, Session A

Friday, April 24
9:30–10:40 a.m.
Memorial Union Building

MUB, Room 330

International Affairs—Searching for the Self: National Identity in Comparative Perspective

Moderator: Mary Rhiel

Andrew Bedell
International Affairs and History and German
Integration vs. Isolation: The Problems of Assimilation in the Turkish-German Community
Adviser: Lawrence Reardon

David Bornstein
International Affairs and History
The Loss of the Breton Language
Adviser: Lawrence Reardon

Alyssa DePaula
International Affairs and Political Science
Without a Shared Identity: The Individual in Moroccan Society
Adviser: Lawrence Reardon

Corey Fong
International Affairs and Russian
Nationalism and Race Relations in Contemporary Russia
Adviser: Lawrence Reardon

Panagiotis Hondros
International Affairs and Political Science and Greek
The Assassination of the Greek National Identity
Adviser: Lawrence Reardon

International Affairs—Xenophobia, Race Relations, and the Immigration Dilemma

Moderator: Claire Malarte-Feldman

Nathalie Bishop
International Affairs and Business Administration
The Marginalization of Muslim-Arab Immigrants in Paris
Adviser: Benjamin Cole

Andrew Lavine
International Affairs and International Business and Economics
Immigration in Japan: Racial Selectivity and Maintaining the Status Quo
Adviser: Lawrence Reardon

Amanda Lawrence
International Affairs and Psychology
Italy’s Reaction to Recent Immigration
Adviser: Benjamin Cole

Maxwell Marquart
International Affairs and Communication
Migrant Populations Following German Reunification
Adviser: Lawrence Reardon

Kathryn Shriver
International Affairs and Political Science
Xenophobia and the Plight of Spain’s Immigrants
Adviser: Lawrence Reardon
MUB, Room 334

Moderator: Greg McMahon

Sarah Gormady (UNH McNair Scholar)
International Affairs and Political Science
Blame It on the West: Why the Russian Georgian Crisis Is Our Fault
Adviser: Lawrence Reardon

Johanna Murphy
Political Science
Holy Oil and Water: The Economics of a Theocratic Nation
Adviser: Lawrence Reardon

Daniel Salem
Political Science
From Cold War to Frozen War?
Adviser: Lawrence Reardon

Justin Troiano
Political Science
The Cost of Security: Economic Repercussion of Military Occupation
Adviser: Lawrence Reardon

Christopher Wasileski
Political Science
From Russia With Love: The Caspian Sea Oil Pipeline
Adviser: Lawrence Reardon

MUB, Room 338

International Affairs—Wings of Wax? Crisis in the Advanced Industrialized Economies
Moderator: Richard England

Evie Athanasi
International Affairs and Chemical Engineering
Where Has All the Dough Gone?: An Exploration of the French National Debt
Adviser: Benjamin Cole

Marisa Baptiste
International Affairs and Environmental Conservation Studies
Environmental Degradation of the Austrian Alps
Adviser: Lawrence Reardon

Sean Coughlin
International Affairs and Political Science
Japan’s Stagnating Economy
Adviser: Lawrence Reardon

Brittany Rittenberry
International Affairs and Political Science
Human Trafficking: A Thriving Black Market Service
Adviser: Lawrence Reardon

MUB, Room 336

International Affairs—From Innocence to Industrialization: Tourism, Migration, and Development
Moderator: Robert Mohr

Alexander Atkind
International Affairs and History
Managing the Disenfranchised: China and Its Rural Migrant Population
Adviser: Benjamin Cole

Jessica Dennis
International Affairs and Spanish
How Tourism Changed Spain’s Economy
Adviser: Benjamin Cole

Johanna Murphy
Political Science
Holy Oil and Water: The Economics of a Theocratic Nation
Adviser: Lawrence Reardon

Daniel Salem
Political Science
From Cold War to Frozen War?
Adviser: Lawrence Reardon

Justin Troiano
Political Science
The Cost of Security: Economic Repercussion of Military Occupation
Adviser: Lawrence Reardon

Christopher Wasileski
Political Science
From Russia With Love: The Caspian Sea Oil Pipeline
Adviser: Lawrence Reardon

MUB, Rockingham Lounge

Political Science—Agents for Change in the International System
Moderator: Ted Howard

Diana Chiang
Sociology and Justice Studies
Successful Measures of Peacekeeping
Adviser: Alynna Lyon

Sarah Graffam
Political Science and Justice Studies
Global Climate Change and Its Implications for Global Politics
Adviser: Alynna Lyon

Jacqueline Lewis
Political Science and Philosophy
Peace vs. Justice: Sudan and the International Criminal Court
Adviser: Alynna Lyon

Sasa Tang
International Affairs and Political Science
Filling the Gap: NGO-State Relationships in Comparative Perspective
Adviser: Benjamin Cole

MUB, Room 340

Political Science—The Economics of War and Peace
Moderator: Michael Smith

Colleen Flaherty
Political Science and Spanish
Problems with Regulation: Illegal Trade of Southeast Asian Wildlife
Adviser: Lawrence Reardon
Nick Perros, URC 2007

Biochemistry, College of Life Sciences and Agriculture

While studying for his undergraduate degree in biochemistry and molecular biology, Nick Perros became fascinated in the molecular basics of vision, and presented a paper on his research at the 2007 URC.

Where is he now?

Two years later, Perros is finishing his second year at the New England Center for Children in Boston, where he works with children diagnosed with autism. He also has his sights set on medical school, and is in the thick of the application process.

“The URC gave me the opportunity to present the results of my project to fellow students and faculty,” Perros says, “and to see the progression of my research all the way from my Summer Undergraduate Research Fellowship (SURF) award junior year to the culmination of the project in my senior honors thesis.”
Yuliya Salata
International Affairs and Cultural Studies
Prejudice and Violence against Place of Worship in France
Adviser: Barbara Cooper

MUB, Strafford Room

Multidisciplinary Session I

Moderator: TBD

Cade Harstedt
English
The Political Aesthetic: Social Realism in European Cinema
Adviser: Delia Konzett

Julie Langevin
Communication Sciences and Disorders
A Study of Speech Perception: The Psychological Reality of the Obligatory Contour Principle
Adviser: Timothy Bryant

Justin Rondeau
Philosophy
An Exploration of the Contemporary Debate of Moral Responsibility’s Compatibility with Free Will and Determinism
Adviser: Paul McNamara

Megan Schulz
Environmental and Resource Economics
Law and Economics Case Study: Calif. Native Plant v. El Dorado
Adviser: James Wible

Laura Zepko
Psychology
Perceptions of College Students
Adviser: Brent Bell

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Laura Fay
English and Women’s Studies
Office of Multicultural Student Affairs- LG-BTQ+ Programs
Adviser: Carina Self

Emily Lusenhop
Women’s Studies
New Outlook Teen Center
Adviser: Carina Self

Laura Tretter
Sociology and Women’s Studies
The Feminist Health Center—Portsmouth
Adviser: Carina Self

MUB, Room 321

Communication Honors Projects: Understanding Identities and Cultures
Moderator: Danielle Pillet-Shore

Anna Bruning
Communication
Euskal Herria: A Filmic Exploration of Basque Identity and Culture
Adviser: Danielle Pillet-Shore

Elizabeth Reny
Communication
Recessionista: Rehabilitating Feminine Consumption in the Age of Recession
Adviser: Melissa Deem

Jennifer Roy
Communication
Body Image and the Media: How Mainstream Magazines Have Depicted Women’s Bodies Over Time
Adviser: Danielle Pillet-Shore

MUB, Room 207

The Growing Divide: A University Dialogue on Poverty and Opportunity
Moderator: Stacey VanDeveer

Devin Bates
Economics
Is There an Upside to Poverty?
Adviser: Michelle Holt-Shannon

Alyssa Mixon
General Biology
The Haves vs. Have Nots of Healthcare: Living in a Land of Uninsured Opportunity
Adviser: Michelle Holt-Shannon

Ian Tanafon
Political Science
The Quiet Threat of Inequality
Adviser: Michelle Holt-Shannon

MUB, Room 304

Sustainability/ Sustainability Internship Program (SIP) I
Moderators: Sara Cleaves, Jason Whitney

Juliet Bluemling
Hospitality Management
Sustainability—Hospitality Food Purchasing
Adviser: Sara Cleaves

Travis Elfreth
Marketing
Kimberly Rogers
Communication
Meaghan Sousa
Communication
Sustainability and the New Hampshire Carbon Challenge
Adviser: Tara Pierce

Ross Seavey
Political Science and Justice Studies
Sustainability—North American Forestry: A Comparative Analysis of Factors in Canada and the United States
Adviser: Stacy VanDeveer

MUB, Room 233

French Studies—Presentations
Moderator: Juliette Rogers

Claire Churchill
International Affairs and Political Science
Jules Simon: Sans colère et sans amertume
Adviser: Barbara Cooper

Carolyn Dempster
International Affairs and French Studies
Marry Me? An Examination of Same-Sex Unions in France and the United States
Adviser: Juliette Rogers
Parents Association Undergraduate Research Symposium

Poster Presentation, Session B

Friday, April 24
10:50 a.m.–Noon
Memorial Union Building, Granite State Room

Janet Barber
Social Work
Dover Teen Center
Adviser: Brian Miller

Amanda Bellerose
Communication Sciences and Disorders
Mentoring Program for Youth Survivors of TBI
Adviser: Michael Fraas

Nicholas Bencivenga
Chemistry
Preparation of Novel Bifunctional Polymerizable Copper(II) Ligands
Advisers: Roy Planalp, Rudolph Seitz

Aaron Brown
Brittany Friend
Undeclared

Emily Ramlow
Environmental Conservation Studies

John Rolfe
Business Administration
Water Productivity in Swains Lake
Advisers: Stephen Hale, Jeffrey Schloss

Robert Carroll
Megan Creighton
Nicholas Deveau
Daniel Milano
Chemical Engineering
Fundamental Studies in Fuel Cells
Adviser: Virendra Mathur

Jillian Clark
Social Work
Seacoast Youth Services
Adviser: Brian Miller

Erica Clemens
Social Work
SASS in the School System
Adviser: L. Rene Bergeron

Sabrina Cote
Occupational Therapy
Occupational Therapy and Physician Assistant Students’ Attitudes Towards Adults Who Are Obese
Adviser: Kerryellen Vroman

Ananda DeMaio
Social Work
Community Partners
Adviser: Brian Miller

Rachel Diosi
Social Work
Chances
Adviser: L. Rene Bergeron

Benjamin Dudek
Environmental Conservation Studies
13C and 15N Isotope Analysis of National and Local Meat and Food Samples to Determine the Percentage of Corn in the New Hampshire Seacoast Area Diet
Adviser: Erik Hobbie

Hilary Eslinger
Social Work and Women’s Studies
Seacoast Hospice Bereavement: What is Grief?
Adviser: L. Rene Bergeron

Nikka Gardner
Social Work
Chances
Adviser: Brian Miller

Brittney Gilman
Tasha Staples
Psychology
Motivating Community Members to Prevent Sexual Assault
Adviser: Victoria Banyard

Ryan Goslin
Physics
Measuring Energetic Ion Composition with the High Energy Telescope on the Ulysses Spacecraft
Adviser: James Connell

Nick Guidice (UNH McNair Scholar)
Nutritional Sciences
Investigating Dietary Habits of Division I Collegiate Male Athletes: Implications for Training and Performance
Adviser: Tim Quinn

Adam Harrington
Communication
Nation of Equality Votes 'Yes' on Proposition 8; Mass Communication and Public Awareness
Adviser: Josh Lauer

Elsa Horne
Occupational Therapy
An Analysis of Scores on the Perceived Stress Scale for Children between Children Diagnosed with Psychiatric Disorders and Healthy Peers
Adviser: Barbara White

Sauwai Hung
Zoology
Somatic Growth of Juvenile Green Sea Urchins (Strongylocentrotus droebachiensis) Fed Artificial Feeds of Varying Nutritional Composition
Adviser: Larry Harris

Katherine Hutchins
Amanda Ramos
Microbiology

Lia Jeffrey (graduate student)
Shiga Toxin-induced Apoptosis in Blood Neutrophils
Adviser: Frank Rodgers

Kelsey Janowicz
Psychology
School-based Occupational Therapy in Northern New England
Adviser: Lou Ann Griswold

Meaghan Johns
Social Work
Early Supports and Services
Adviser: Brian Miller

Olivia Karpinski
Health Management and Policy
Pre-participation Athletic Screening Forms in New England Colleges
Adviser: John Seavey
Parents Association Undergraduate Research Symposium

Oral Presentations, Session B

Friday, April 24
10:50 a.m.–Noon
Memorial Union Building

MUB, Room 330

International Affairs—Managing Economic Development: People, the Environment, and Modernization

Moderator: Mary Malone

Katie Conrad
International Affairs and General Biology
Modernization at the Expense of Ecuador's Environment
Adviser: Lawrence Reardon

Agnieszka Gloskowski
International Affairs and German and Spanish
Argentina: A Struggling Economy
Adviser: Benjamin Cole

Robin Sherman
History
Ceramic Analysis, Social Groups, and Late Prehistory in Northern Michigan (AD 1200-1600)
Adviser: Meghan Howey

Krystal Simmons
Social Work
Schizophrenia
Adviser: L. Rene Bergeron

Nicole Spampinato
Social Work
Prevention and Treatment of Juvenile Offenses: The Perspective of Adults on Probation and Parole
Adviser: Melissa Wells

Nicole Spampinato
Social Work
Odyssey House
Adviser: Brian Miller

Rebekah Taylor
Social Work
Anger Management for the Teenage Mind
Adviser: L. Rene Bergeron

Adrienne Westcott
Psychology and Social Work
Support in Young Adult Chronic Illness
Adviser: Robert Eckstein

Julie Langevin
Communication Sciences and Disorders
A Study of Speech Perception: The Psychological Reality of the Obligatory Contour Principle
Adviser: Timothy Bryant

Monique Lee
Social Work
Strafford County Head Start
Adviser: L. Rene Bergeron

Rebecca Lehr
Environmental Science: Ecosystems Sustainability: Are Anthropogenic Emissions Changing the Glacial-interglacial Cycle?
Adviser: Cameron Wake

Lauren McDonough
Anthropology
Exploring Our Relation to Neandertal Using the Dental Record
Adviser: Meghan Howey

Max Mehelman
Zoology and Psychology
The Effects of Hippocampal Lesions upon the Contextual Cueing Paradigm in Pigeons
Adviser: Brett Gibson

Emma Morin
Psychology
Designing an Intensive English for Academic Purposes Course for German L1 Students
Adviser: Federica Barbieri

Christina Nagel
Nursing
Julianne St. Onge
Nursing
The Influence of Cultural Context on Management of Pain in End-of-Life Care
Adviser: Catherine Bernosky de Flores

Derek Price
Social Work
Somersworth Youth Connection
Adviser: L. Rene Bergeron

Melissa Schilke
Psychology
Procrastination Study on Stress Levels
Adviser: Barbara White

Julie Langevin
Communication Sciences and Disorders
A Study of Speech Perception: The Psychological Reality of the Obligatory Contour Principle
Adviser: Timothy Bryant

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Social Work
Strafford County Head Start
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The Influence of Cultural Context on Management of Pain in End-of-Life Care
Adviser: Catherine Bernosky de Flores

Derek Price
Social Work
Somersworth Youth Connection
Adviser: L. Rene Bergeron

Melissa Schilke
Psychology
Procrastination Study on Stress Levels
Adviser: Barbara White
MUB, Room 332

**International Affairs—The Heart of Democracy: Party, Faction, and Participation in Comparative Perspective**

Moderator: Lu Yan

Claire Churchill
International Affairs and Political Science
*The Rise of the Radical Right in France*
Adviser: Benjamin Cole

Julia Faller
International Affairs and Business Administration
*Italian Politics: Challenges and Reform in the 20th Century*
Adviser: Benjamin Cole

Caroline Ivy
International Affairs and Social Work
*The Election of the First Indigenous President of Bolivia*
Adviser: Benjamin Cole

Allison Krause
International Affairs and Spanish
*Political Balance: Partisan Politics in the Spanish and Italian Transition to Democracy*
Adviser: Benjamin Cole

Wegene Wells-Bogue
International Affairs and Political Science
*Exploring Pathways to Ethnically-integrated Democracy in Ethiopia*
Adviser: Benjamin Cole

MUB, Room 336

**International Affairs—How the “Other” Lives**

Moderator: Monica Chiu

Michelle Bower
International Affairs and Spanish
*How Study Abroad Benefits Students*
Adviser: Benjamin Cole

Katrina Ingraham
International Affairs and Communication
*A Life Between: Reflections of Immigrant Culture in Modern German Cinema*
Adviser: Lawrence Reardon

Corey Malone
International Affairs and History
*Living a Long Life: Japanese Lifestyle and Diet*
Adviser: Lawrence Reardon

Melissa Tarbell
International Affairs and Spanish
*The Virgin of Guadalupe: Female Empowerment and Self-Image in a Traditionally Machista Society*
Adviser: Benjamin Cole

Britta Yost
International Affairs and Political Science
*La Apertura*
Adviser: Benjamin Cole

MUB, Room 338

**International Affairs/Political Science—Power and Sex in the International Economy**

Moderator: Michael Smith

Michelle Blundell
Political Science
*Economic Interdependence, War, and Conflict*
Adviser: Lawrence Reardon

Sarah Gormady (UNH McNair Scholar)
International Affairs and Political Science
*The Carnal Economy: Sex for Sale on the Global Marketplace*
Adviser: Lawrence Reardon

Brian Hough
International Affairs and European Cultural Studies
*A New World Order: The Rise of Multinational Markets Amidst the Globalizing Economy*
Adviser: Lawrence Reardon

Patrick O’Keefe
Political Science
*How to Become an Economic Hegemon: The United States Rise after World War II*
Adviser: Lawrence Reardon

MUB, Room 340

**Political Science—Problems of the Developing State: Poverty, Urbanization, and Ethnic Tension**

Moderator: Trevor Mauck

Craig Gallot
Political Science
*From Clothes to Computers: How Labor Costs Affected Production in China*
Adviser: Lawrence Reardon
Emily Roberts, URC 2008

Nursing and International Affairs,
College of Health and Human Services,
College of Liberal Arts

At the 2008 URC, Emily Roberts explored the role of nurses in rural Uganda, where she worked at a small public health clinic for ten weeks in 2007.

Supported with a grant from the UNH International Research Opportunities Program (IROP), Roberts’s work inspired her to present a second URC paper, on the impact of U.S. support on HIV/AIDS awareness, prevention, and treatment in Uganda.

Where is she now?

Roberts graduated in May 2008, passed her nursing board exams in July, and has been a licensed registered nurse in New Hampshire and her home state of California. Last summer, she was the residential nurse in a Child and Family Services camp in Concord, and then went backpacking for a few weeks in Eastern Europe with college friends.

She returned to the same outpatient clinic in Uganda last fall, this time as a full-time staff nurse. There, she saw cases of malaria, TB, various skin diseases, and HIV/AIDS; and assisted in surgeries, acute care, HIV testing, and community outreach.

She returned from Uganda last winter to California, and is working as a registered nurse and taking courses in community health. She plans to go back to Uganda in the fall for four months.

Finally, she is applying to graduate school to earn a Ph.D. in nursing research, starting in fall 2010.

“My experiences with IROP and URC have completely molded my professional goals,” Roberts says. “I want to be part of the team that makes discoveries, conclusions, suggestions, and proposals for improvement. My experience with URC showed me that small projects can yield substantial results.”
**MUB, Room 321**

**Communication—Articulations of Gender in U.S. Popular Culture**

**Moderator: Melissa Deem**

**Anna Bruning**
Communication  
*The Gold Diggers: An Ephemeral Film*  
Adviser: Melissa Deem

**Leslie Dow**
Communication  
*Political Parody and Tina Fey: An Unforgettable Political Season*  
Adviser: Melissa Deem

**Elizabeth Reny**
Communication  
*The Rhetoric of Retail: Understanding the Function of Retail Therapy*  
Adviser: Danielle Pillet-Shore

**Juliana Tondorf**
Communication  
*Beyond the Housewife: The Construction of Feminism in Prime-time Television*  
Adviser: Melissa Deem

**MUB, Room 304**

**Sustainability/Sustainability Internship Program (SIP) II**

**Moderators: Sara Cleaves, Jason Whitney**

**Simon Spadaro-Bliss**  
Sociology  
*The Coos County Youth Panel Study: Working with the Carsey Institute in the North Country*  
Adviser: Thomas Safford

**Carly Veiga**
Sociology  
*University Campus Parking Availability and Its Correlation to Public Transportation*  
Adviser: Sharyn Potter

**Laura Hanna**
Environmental Conservation Studies  
Sustainability—Creating a Sustainable Landscape Design and Implementing a Compost System at the USDA Forest Service  
Adviser: Sherri Wormstead

**Corey Johnson**
Business Administration  
Sustainability—Small Town Carbon Calculator  
Adviser: Cameron Wake

**Charlotte Todd**
International Affairs and Spanish  
*UNH- S.T.A.R.S. Sustainability Tracking Assessment and Rating System*  
Adviser: Sara Cleaves

**Isabel Klein**
Women’s Studies  
*Daughters of Earth: Parallels in Gender, Race and Class as Represented during the Great Depression in Women’s Literature and Photography of the Farm Security Administration*  
Adviser: Lisa MacFarlane

**Andrew McKernan**
Russian and Linguistics  
*Christ or Lenin: To Whom Should One Construct a Monument?*  
Advisers: Cathy Frierson, Ronald LeBlanc

**Lauren Ouellet**
Spanish  
*A Comparison of Spanish Newspapers’ Portrayals of the Madrid Train Bombings*  
Adviser: Jaume Marti-Olivella

**John Parker**
History  
*General John Brown Gordon at Gettysburg*  
Adviser: Gregory McMahon

**Samantha Zoller (UNH McNair Scholar)**  
Anthropology and Women’s Studies  
*Health Care Practitioners’ Perspectives of their Lower-income Female Clients’ Accessibility to STI/STD Health Care*  
Adviser: Jean Elson

**MUb, Room 203**

**Multidisciplinary Session III**

**Moderator: Brent Bell**

**Jocelyn Bissonnette**
Economics  
*The Competing Roles of Government between Education and Aid for the Elderly*  
Adviser: Karen Conway

**Maria Crossman**
Psychology  
*Social Support: A Preventative Tool for a Negative Explanatory Style*  
Adviser: Victoria Banyard

**Francesca Devaney**
Family Studies  
*Parenting Challenges of Rural Low-Income Mothers: Differences Between Adolescent Mothers and Mothers Over 35*  
Adviser: Elizabeth Dolan

**Jared Murray**
Statistics  
*Median Polish Algorithm for Automated Anomaly Detection in Sensor Networks*  
Adviser: Ernst Linder

**Holly Robertson**
Linguistics  
*Phonological Development*  
Adviser: John Limber

**Samantha Withers**
Art Studio and Education  
*Flying Solo—The Impact Companionless Travel Plays in Photographic Artwork*  
Advisers: Julee Holcombe, Jennifer Moses
Parents Association Undergraduate Research Symposium

Oral Presentations, Session C

Friday, April 24
1:40–2:50 p.m.
Memorial Union Building

MUB, Room 332
Political Science—The Use of Force
Moderator: Alynna Lyon
Zachary Delambre
International Affairs and Spanish and Psychology
Investigating Divergent Outcomes in 19th-Century Revolutions in Cuba and Mexico
Adviser: Benjamin Cole

Andrew Fuller
Political Science
Ethnic Warfare: The Caucasian Powder Keg
Adviser: Lawrence Reardon

Jennifer McArdle
Political Science and Justice Studies
Why Do Militant Movements Renounce Their Paramilitary Wings?
Adviser: Lionel Ingram

Andrew Pratt
Political Science
NSC-68: Justified Reaction to Communist Expansion
Adviser: Lawrence Reardon

Madeline Sadowski
Political Science
A Theoretical Examination of Israel’s Gaza Offensive, January 2009
Adviser: Alynna Lyon

MUB, Room 334
Communication—Case Studies in Persuasion and the Politics of Local Problems
Moderator: James Farrell
Jamie Blumenthal
Ashley Bournival
Cody Kelley
Correy McMahon
Communication
How to Beat the Tax Cappers: Politics and Persuasion in Somersworth
Adviser: Lawrence Prelli

Daniel Dostoler
Kelly Hamilton
Michael Howard
Brian McKenney
Communication
Corporate Image Making through Pseudo-Communication: The Case of the New Hampshire Beer Distributors and Dover’s Youth-to-Youth Student Advocacy Group
Adviser: Lawrence Prelli

Michael Juozokas
Ashley Lavoie
Stephen Messa
Caitlin Randall
Communication
The Politics of Mutual Blame: The Issue of Affordable Student Housing in Durham
Advisers: Josh Lauer, Lawrence Prelli

MUB, Room 336
Communication Honors Projects: Performance, Narratives and Constructed Realities
Moderator: Michael Jackson
Haley Dunn
Communication
Performing Jewish Identity through Narration, as Seen on YouTube and Story Corps
Adviser: John Lannamann

Andrew Long
Communication
Feeble-Minded: The Social Reality of the Marked
Adviser: Josh Lauer

Kristin McKenna
Communication
The Nature and Force of Narrative in Forensic Argument: The Story of Clark Rockefeller
Adviser: Michael Jackson

Liana Moskowitz
Communication
The Global Image of America as Dictated by Hollywood
Adviser: Jennifer Borda
Estelle Hrabak, Ph.D.

ASSOCIATE PROFESSOR, DEPARTMENT OF MOLECULAR, CELLULAR, AND BIOMEDICAL SCIENCES
CO-CHAIR, GENETICS GRADUATE PROGRAM, COLLEGE OF LIFE SCIENCES AND AGRICULTURE

Estelle Hrabak has been at the forefront of undergraduate research programs at UNH since 1996, when she first attended the conference for students in the College of Life Sciences and Agriculture (COLSA).

Hrabak got involved in the COLSA conference the following year. And in 2000, she helped build URC participation among students and faculty when it became a university-wide event. Today, the URC features more than 800 students, representing every major on campus.

“It can be one of the most valuable experiences in an undergraduate’s time here,” says Hrabak, who chaired the COLSA section of the URC in 2002, 2003, and this year. She also serves on the University-wide planning committee this year.

She still finds inspiration in watching students who take on URC projects immerse themselves in research and collaborations they couldn’t experience otherwise.

“The ability to work in a lab alongside a faculty mentor, and then to present your work, is very much a confidence-building experience on many levels,” Hrabak says.

In her own work, Hrabak directs a lab that that uses molecular, genetic, and biochemical approaches to study enzymes involved in signal transduction processes in plants. Sounds complex? It is. So, imagine Hrabak’s delight when a student’s URC project teaches her something about an aspect of plant biology she hasn’t studied before.

“I’m constantly learning new things from the students, and that’s great,” Hrabak says. “It shows them that they can become expert at something, too. And just the fact that they’re willing to take something like this on, and stick with it, is what really makes them stand out.”
MUB, Theatre I

Dramatic Innovations: Students Present Drama Based on Pre-1800 Classics

Moderator: Cord Whitaker

Adam Wells
Communication
Amanda Beland
Kara Buckley
Michael Crossman
Kathryn Kalil
Rachael Kreckmann
Stephen Loftus
Alia Ponte
Michael Raven
Lisa Santilli
Alexandra Spannaus
English
Michaela Christensen
Jay Coorey
Kerrie Dodson
Justine Elliott
Chad Guarino
Alec Heilmann
Catherine Hodgdon
Emily Langsam
Alexis Macarchuk
Michael Riley
English/Journalism
Amanda Bourgoine
Abigail Rugg
Sara Tatnall
English Literature
Daniel Varga
Alyssa Wojicki
English Literature
Andrew Savoy
Music
Hannah Brown
Psychology
Adviser: Cord Whitaker

MUB, Theatre II

The Roots of Fiction: Flash Fiction and the Mysteries of the Creative Process

Moderator: Thomas Payne

Samuel Bennett
Communication
Christopher Baril
Jeremy Boniface
Alex Kotce
Brian Leahy
Ryan Neelon
Joseph O’Connell
Jacob Quarrell
Garrett Quinn
Peter Tonelli
Mary Zelie
Allison Zorawowicz
English
Jesse Cordaro
English/Journalism
Timothy King
Julie Raymond
English Literature
Danielle Foley
Monica Hackett
Kristyn Lattanzi
Kelly Sennott
Amanda Sousa
English Teaching
Matthew Di Pirro
Philosophy
Emma Duffy-Comparone
Political Science
Adviser: Thomas Payne

MUB, Room 338

Multidisciplinary Session IV

Moderator: TBD

Juliet Bluemling
Hospitality Management
The Future of Food
Adviser: Joanne Burke

Benjamin Chiang
Thaddaeus Webster
Chemical Engineering
Design of Algae Photobioreactor and Experiments with Salt Water Algae
Adviser: Ihab Farag

Stacy Farina
Marine and Freshwater Biology
Winter Flounder Stock Enhancement: Examining the Onset of Wild Weaning in Pellet-Reared Fish
Advisers: William Howell, Michelle Walsh

Sarah Gormady (UNH McNair Scholar)
International Affairs and Political Science
Bolshevik Intention to Soviet Oppression
Adviser: Cathy Frierson

Paul Kyriacopulos
Jillian Tombarelli
Chemical Engineering
Joshua Smith
General Biology
Growing Lipid-rich Microalgae in Ultraviolet-light-treated Waste Water Solutions for Biodiesel Production
Adviser: Ihab Farag

Andrew Middleton
Environmental Conservation Studies

Daniel Perrinez
Marine and Freshwater Biology
Biochemical Analysis of Selected Algal Harvests
Adviser: Ihab Farag

MUB, Room 340

Multidisciplinary Session V

Moderator: TBD

Danielle Blais
Sarah Humphreys
Jeffrey Vanasse
Kinesiology

Christina Coleman
Kinesiology and English/Journalism
Evaluating Burn-Out and Work-Related Stress in Intercollegiate Sports Information Personnel
Adviser: Heather Barber

Jeffrey Kaste
Mallory Murrell
History
Modern Student Movements: The Success and Failure of Lefist Student Thought and Action in the Hungarian Revolution and American, French and Italian Student Movements (1968–1969)
Adviser: Janet Polasky
John Lacroix  
Kinesiology  
Human Potential—Changing The Way We Think  
Adviser: Brent Bell

Christina Nagel  
Julianne St. Onge  
Nursing  
The Influence of Cultural Context on Management of Pain in End-of-Life Care  
Adviser: Catherine Bernosky de Flores

Calvin Vaillancourt  
(UNH McNair Scholar)  
Psychology and Kinesiology  
College Outdoor Orientation Program  
Sustainability  
Adviser: Brent Bell

Zachary Swick  
Anthropology  
Meditations on Cultural Relativism and Anthropology  
Adviser: Meghan Howey

The Naked Arts—Creativity Exposed (Act III)

Friday, April 24  
12:15–1 p.m.  
Memorial Union Building, Strafford Room

This event exposes the inner creative process of artists working in various disciplines. In Act III, students perform and discuss a collaborative piece made as a result of interdisciplinary creativity within the artistic disciplines—Art, Music, and Theatre/Dance.

Michael D’Errico  
Music Education

Kelsey Keenan  
Fine Arts  
Meaningful Relationships: Chance and Structural Identity in Isomorphic Art  
Adviser: Rob Haskins

College of Health and Human Services Grimes Award Competition

Friday, April 24  
1–4 p.m.  
Pettee Hall G-10

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 HHS faculty after rigorous scientific review of written proposals. Information on participants will be available at this event.

Honors English Undergraduate Research Conference

Friday, April 24  
1–5 p.m.  
Hamilton Smith, Rooms 128/129

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.

Joshua Clark  
English  
Anti-Heroes in Cinema  
Adviser: Delia Konzett

Gillian Graham  
English  
Gestures of Care: Images of Nursing in Michael Ondaatje’s Novels  
Adviser: Sandhya Shetty

Cade Harstedt  
English  
Realism in Cinema from Europe to Hollywood  
Adviser: Delia Konzett

Jennifer Hill  
Humanities and Women’s Studies  
Hale to Wilson: Critiques of the 19th Century Abolitionist Novel  
Adviser: David Watters

Janna Jobel  
English Teaching  
An Analysis of the Critical Reception of The Awakening and The Age of Innocence  
Adviser: Sarah Sherman

Kirsten Lindquist  
English and Environmental Conservation Studies  
Parallel Journeys: Movement of the Body and Mind in Travel Writing  
Adviser: Dawn Haines

Alissa Marchant  
English  
The Impact of 9/11 as Reflected in the Memoir Writing of Muslim American Women  
Adviser: Monica Chiu

Meaghan Odell  
English Teaching  
Relocation and Restructure: The Modern Relevance of Edith Wharton’s Summer  
Adviser: Sarah Sherman

Rebecca Romanoski  
English Teaching  
Societal Separation from Natural Means of Production through the Literature of F. Scott Fitzgerald  
Adviser: Sarah Sherman

Joel Waechter  
English  
Coffee Stained Pages  
Adviser: Clark Knowles

Belinda Woolfson  
English and Art Studio  
Boobs: The Rhetoric of Cosmetic Surgery in Modern Society  
Adviser: Sarah Sherman
Psychology Department
George M. Haslerud
Undergraduate Research Conference

Friday, April 24
1–4 p.m.
Conant Hall, Room 101

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

Cassandra Brennan
Psychology
Temporal Dynamics of the Venetian Blind Effect
Adviser: William Stine

Kristina Breton
Psychology
Dating Patterns at UNH: Hooking Up versus Dating or Committed Relationships
Adviser: Rebecca Warner

Maria Crossman
Psychology
Social Support: A Preventative Tool for a Negative Explanatory Style
Adviser: Victoria Banyard

Dallas Deogburn
Psychology
Reversible Inactivation of the Nucleus Reuniens/Rhomboid in a Delayed Non-Match-to-Sample Memory Task
Adviser: Robert Mair

Steven Falk
Psychology
The Effects of Parenting Style on Adolescent Substance Use
Adviser: Ellen Cohn

Jaime Gallagher
Psychology
Attributions of Responsibility for Unplanned Pregnancy: The Effects of Consent and Reputation
Adviser: Ellen Cohn

Maia Hazelwood
Psychology
Personal Intelligence of Leaders: Ratings of Life Expressions
Adviser: John Mayer

Corey Hill
Psychology
Sex Differences in Depression: Detecting Male Depressive Symptomatology
Adviser: Victor Benassi

Heather Macomber
Psychology
Does Desipramine Reverse Intermittent Swim Stress-induced Behavioral Depression?
Adviser: Robert Drugan

Maria Pierobello
Psychology
Moral Behavior, Contemporary Society, and Influences on Bystander Intervention in a Collegiate Setting
Adviser: Victoria Banyard

Marissa Romanovitch
Psychology
Cultural Variations in the Helping Behaviors of African American and European American Middle-Class Siblings
Adviser: Pablo Chavajay

Amanda Seavey
Psychology
Parents, Roommates, and TAs: Social Support and the Adjustment to College for First Year Students
Adviser: Victoria Banyard

Laura Shanteler
General Biology and Psychology
Do Documentation and Worksheets Enhance Children's Learning?
Adviser: Michelle Leichtman

Erica Sheldon
Psychology
Empathy in Preschool Age Children With and Without Autism and Asperger's Syndrome
Adviser: Pablo Chavajay

Margaret Wallace
Psychology
Performance of Children on the Traveling Salesperson Problem in a Real-world Environment
Adviser: Brett Gibson

Richard Wilson
Psychology and Justice Studies
Personal Intelligence of Leaders: Ratings of Life Expressions
Adviser: John Mayer

James Wrocklage
Psychology
Reversible Inactivation of Central Thalamic Nuclei Reuniens/Rhomboid of the Rat in the Radial Arm Maze Task
Adviser: Robert Mair

Philosophy
Undergraduate Research Conference

Friday, April 24
4–8:30 p.m.
Murkland G17

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. Standard presentations predominantly last fifteen minutes and are subsequently followed by a brief question-and-answer period.

Peter Anania Jr.
Philosophy
Liberalism vs. Libertarianism
Adviser: Paul McNamara
Student Composers’ Concert

Friday, April 24
8 p.m.
Paul Creative Arts Center, Bratton Recital Hall

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.

George Adams IV
Music Education
Music for Solo Piano
Advisers: Rob Haskins, Christopher Kies

Diane Anderson
Music
Prophecy for Flute and Piano Performed by Sara Ann Shea and Diane Anderson
Adviser: Lori Dobbins

Kelsey Parrillo
Preteaching
For All of the Moments—Dedicated to Robert and Kim Parrillo
Adviser: Christopher Kies

Benjamin Tibbetts
Music Theory
Composition 14 for Solo Clarinet and Guitar
Adviser: Christopher Kies

18th Annual COLSA Undergraduate Research Conference

Student presentations at the 18th Annual COLSA URC are based on research conducted in any of the college's departments and run the full gamut of research found in the college, from field studies to developmental to molecular biology and genomics studies. A number of studies are collaborative efforts between work here at UNH and work carried out in foreign countries.

Oral Presentations

Saturday, April 25
7:45 a.m.–2 p.m.
New England Center

Joshua Collins
Microbiology
Development of Non-Isotopic Gene Probes to Identify the Presence of Enterohemorrhagic Escherichia coli
Adviser: Stephen Torosian

Taylor Deasy
Nutritional Sciences
Renewing Social Critique Through a Pragmatic Reading of Foucault
Adviser: David Hiley

Anne Ronan (graduate student)
Oral Contraceptive Usage; Greater Insulin Resistance; and Poorer Quality of Life in College Age Women
Adviser: Anthony Tagliaferro

Kelsey Keenan
Fine Arts
Meaningful Relationships: Chance and Structural Identity in Isomorphic Art
Adviser: Rob Haskins

Jonathan Meadows
Philosophy and Humanities
An Exploration of the Contemporary Debate of Moral Responsibility’s Compatibility with Free Will and Determinism
Adviser: Paul McNamara

Nathaniel Coghlan
Philosophy and Women’s Studies
The Ethics of Food
Adviser: David Hiley

Laura LaPlante
Economics and Philosophy
What Cannot be Said—Short Comments on Wittgenstein
Adviser: Timm Triplett

Andrew Cote
Music Education
Stories from a Dream—For Marimba
Adviser: Christopher Kies

Michael D’Errico
Music Education
Kelsey Keenan
Fine Arts
Meaningful Relationships: Chance and Structural Identity in Isomorphic Art
Adviser: Rob Haskins

Eric Brown
Music Theory
Piano Cycle
Adviser: Christopher Kies

Michael D’Errico
Music Education
Dirty Dancing
Adviser: Christopher Kies

Andrew Cote
Music Education
Stories from a Dream—For Marimba
Adviser: Christopher Kies

Brett Gallo
Music Education
Structures for Two Marimbas
Adviser: Robert Haskins

Lucas Miller
Music Education
Winter Moon: String Quartet in 2 Movements
Adviser: Christopher Kies

Jeffrey Heim
Music Theory
Reflection
Adviser: Christopher Kies

Zachary Onett
Music Theory
Microtonal Experimentation
Adviser: Christopher Kies

David Orr
Music Theory and Performance
Piano Sonata in G minor i.
Allegro con fuoco
Adviser: Christopher Kies

Patrick Ryan
Philosophy
Renewing Social Critique Through a Pragmatic Reading of Foucault
Adviser: David Hiley

Michael D’Errico
Music Education
Dirty Dancing
Adviser: Christopher Kies

Jeffrey Heim
Music Theory
Reflection
Adviser: Christopher Kies

Lucas Miller
Music Education
Winter Moon: String Quartet in 2 Movements
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Zachary Onett
Music Theory
Microtonal Experimentation
Adviser: Christopher Kies

David Orr
Music Theory and Performance
Piano Sonata in G minor i.
Allegro con fuoco
Adviser: Christopher Kies
Benjamin Field
Biochemistry
Insulin Has Negative Regulatory Effects on Notch Ligand Expression
Adviser: Deena Small

Polina Prushevich
Biochemistry
Irviner Kaur (postdoctorate scientist)
Substituent Effects on Pentacene Stability
Adviser: Glen Miller

Lauren Longley
Animal Sciences: Pre-veterinary Medicine
Impacts of Tourism on People and Wildlife in Northwestern Namibia
Adviser: Andrew Conroy

Linden Rayton
General Biology
Horseshoe Crab Biological Clocks: From the Brain to the Bay
Adviser: Winsor Watson

Bethany Reutemann
Biochemistry
Organelle Movement Patterns in Caulerpa mexicana
Adviser: Wayne Fagerberg

Michael Rezaee
General Biology
Environmental Permitting Decisions Perceived to Impact Human Health: Examining the Communication between Governmental State Agencies and the Public in New Hampshire
Adviser: Rosemary Caron

18th Annual COLSA Undergraduate Research Conference

Poster Presentations

Saturday, April 25
7:45 a.m.–2 p.m.
New England Center

Anna Ronan (graduate student)
Chemical Flame Retardants and Their Possible Relationship to Insulin Secretion and Glucose Disposal
Adviser: Anthony Tagliaferro

Jacqueline Amante
Isabella Oleksy
Environmental Science: Ecosystems
Wookey Biomass as a Potential Energy Solution for the Burley-DeMerritt Farm
Adviser: John Aber

Kiley Anderson
General Biology
Megan Thompson (graduate student)
Cell File Orientation in Arabidopsis thaliana Protein Phosphatase 2A Mutants
Adviser: Estelle Hrabak

William Bailey
Rory Calnan
Environmental and Resource Economics
Economics and the Titan Program at the Oyster River High School
Adviser: John Halstead

Kevin Baldwin
Undeclared
Brian Biernat
Community and Environmental Planning
Estimating the Effects of Daily Weather Variations on the Number of Migrating Broad-winged Hawks during the Fall At Pack Monadnock, New Hampshire
Adviser: Stephen Hale

Bryan Ballard
Molecular, Cellular and Developmental Biology
Generation and Identification of Transposon Mutants with Alterations in Motility and Surface Properties for Photorhabdus symbiotica, and Emerging Human Pathogen.
Adviser: Louis Tisa

Eileen Balz
Animal Sciences: Bioscience and Technology
Changes in Brain Concentration of Gonadotropin-Releasing Hormone-I, -II, and -III and Plasma Estradiol During the Final Reproductive Period in Adult Male and Female Sea Lamprey, Petromyzon marinus
Adviser: Stacia Sower

Makenzie Benander
Paul Pelissier
Environmental Science: Ecosystems
Application of Geothermal Energy at UNH Organic Dairy
Adviser: John Aber

Bradley Best
Molecular, Cellular and Developmental Biology
Impact of PBDE Exposure on Insulin Signaling in Adipocytes
Adviser: Deena Small

Alyssa Birt
Animal Sciences: Bioscience and Technology

Rajtilak Majumdar (graduate student)
Regulation of Gene Expression of the Polyamine Pathway Genes: What Does a Promoter Look Like?
Adviser: Subhash Minocha

Juliet Bluemling
Hospitality Management/Ecogastronomy
The Origins of Food
Adviser: Joanne Burke

Kari Britt
Biochemistry
The Role of Jagged1/Notch and FGF2 Signaling in the Production of the Angiokine VEGFA in Murine Adipocytes
Adviser: Deena Small

Grace Smarsh
Zoology

Heidi Broadley (recent graduate)
Adaptive Intelligence of the Domestic Cat (Felis catus)
Adviser: Michelle Scott

Amy Cornell
Biochemistry
Karyn Cahill (graduate student)
Suzanne Matte (graduate student)
Understanding the Molecular Basis of Cone Photoreceptor Signaling and the Central Importance of Cone Phosphodiesterase-6 (PDE6)
Adviser: Rick Cote
Brendan Callahan  
**Nicholas Emmons**  
Shane Prisby  
Environmental and Resource Economics  

**Jessica DeLima**  
Environmental Conservation Studies  
The Social and Ecological Impacts of Renovating the Reservoir Brook Dam  
Adviser: John Halstead  

**David Cocozziello**  
Biochemistry  
Adipocyte and Osteoblast Cell Development in the Presence of Polybrominated Diphenyl Ethers (PBDEs) - a Chemical Flame Retardant  
Adviser: Deena Small  

**Katie Conrad**  
International Affairs and General Biology  
Toxic Cyanobacteria: Detecting Microcystins in Feathers  
Adviser: James Haney  

**Naomi Crystal**  
Biochemistry  
Comparison of Two Accepted Methods of Glycemic Index Testing  
Adviser: Joanne Curran-Celentano  

**Elizabeth DiBella**  
Molecular, Cellular and Developmental Biology  
Identification of Novel Hydroxyurea (HU) Sensitive Mutants in Arabidopsis thaliana  
Adviser: Kevin Culligan  

**Uyen-Mai Doan (UNH McNair Scholar)**  
Biochemistry  
The Charge on Beta-Lactoglobulin A and B under Self-associating Conditions  
Adviser: Thomas Laue  

**Mary Katherine Dokus**  
General Biology  
Smooth Muscle Cell Migration in Response to Hyperglycemia and Dyslipidemia  
Adviser: Thomas Foxall  

**Casey Doucette**  
Molecular, Cellular and Developmental Biology  
Effects of Polybrominated Diphenyl Ethers on Bone Density  
Adviser: Deena Small  

**Benjamin Dudek**  
Environmental Conservation Studies  
13C and 15N Isotope Analysis of National and Local Meat and Food Samples to Determine the Percentage of Corn in the New Hampshire Seacoast Area Diet  
Adviser: Erik Hobbie  

**Dean Elder (graduate student)**  
**Robert Gibson (graduate student)**  

**Sarah Kinsman**  
Animal Sciences: Pre-veterinary Medicine  
**Amanda Ramos**  
Microbiology  
**Amanda Rivers (graduate student)**  
Effect of Postpartum Uterine Pathogens on Ovarian Activity in the Dairy Cow  
Adviser: David Townsend  

**Stacy Farina**  
Marine and Freshwater Biology  
Winter Flounder Stock Enhancement: Examining the Onset of Wild Weaning in Pellet-Reared Fish  
Advisers: William Howell, Michelle Walsh  

**Jonathan Gately**  
Microbiology  
Identification of Photorhabdus temperata Mutants Defective in Symbiosis  
Adviser: Louis Tisa  

**Robert Gibson (graduate student)**  

**Amanda Hurley**  
Microbiology  
Specific Pathogen Free Management and Practices: Application and Recommendations for a NH SPF Sheep Farm  
Adviser: Aaron Margolin  

**Mariah Gavin**  
Microbiology  
Differential Expression of a Putative Virulence Factor of Vibrio parahaemolyticus  
Adviser: Cheryl Whistler  

**Lauren Hufnagel**  
General Biology  
Ad Libitum Feeding of Rats: Effect on Adipocyte Insulin Stimulated Glucose Oxidation  
Adviser: Gale Carey  

**Sauwai Hung**  
Zoology  
Somatic Growth of Juvenile Green Sea Urchins (Strongylocentrotus droebachiensis) Fed Artificial Feeds of Varying Nutritional Composition  
Adviser: Larry Harris  

**Whitney Hunter**  
Biochemistry  
**Megan Thompson (graduate student)**  
Gravity Responses of Arabidopsis thaliana With a Mutated Protein Phosphatase 2A Gene  
Adviser: Estelle Hrabak  

**Katherine Hutchins**  
Amanda Ramos  
Microbiology  
**Lia Jeffrey (graduate student)**  
Shiga Toxin Induced Apoptosis in Blood Neutrophils  
Adviser: Frank Rodgers  

**Ashley James**  
Amanda Landry  
Kelsey Silfenius  
Environmental and Resource Economics  
Examining the Role and Impact of Local Versus Non-local Businesses on the Upper Valley Economy  
Adviser: John Halstead  

**Maura Keeley**  
Animal Sciences: Pre-veterinary Medicine  
Microbiology  
Specific Pathogen Free Management and Practices: Application and Recommendations for a NH SPF Sheep Farm  
Adviser: Aaron Margolin  

**Amy Keith**  
Forestry: Forest Science  
Do Mycorrhizal Networks Support Seedlings in a Forest?  
Adviser: Erik Hobbie  

**Alice Kirega**  
Microbiology  
Determining the Stable Microbial Flora in Lettuce  
Adviser: Stephen Torosian  

**Benjamin Dudek**  
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Adviser: Aaron Margolin  

**Amy Keith**  
Forestry: Forest Science  
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Adviser: Erik Hobbie  

**Alice Kirega**  
Microbiology  
Determining the Stable Microbial Flora in Lettuce  
Adviser: Stephen Torosian
Elise Koob
Marine and Freshwater Biology
*Condition Changes to the Forage Base in the Gulf of Maine and Its Influence on Top Predators.*
Adviser: Maryellen Lutcavage

Sarah Kruzel
General Biology
*Effects of PBDE’s on Adipocyte Lipolysis in a Rat Model After Gestational and Lactational Exposure.*
Adviser: Gale Carey

Cammie Kwong
Biochemistry
*Variations in Morphological Features of Copepods Between and Within Species and Lakes in Relation to DNA Barcodes*
Adviser: James Haney

Ryan Lariviere
Molecular, Cellular and Developmental Biology
*Role of a Prenyl Binding Protein (PrBP/δ) in Photoreceptor Visual Signaling*
Advisers: Rick Cote, Suzanne Matte

Jack Lepine
Plant Biology
*Characterization of Transcript Production in Arabidopsis Palmitoyltransferase Mutants*
Adviser: Estelle Hrabak

Alexandra Manakos
Microbiology
*Detection of Male-specific Coliphage as an Indicator of Fecal Contamination on Lettuce*
Advisers: Aaron Margolin, Stephen Torosian

Holly Midkiff
Animal Sciences: Pre-veterinary Medicine
*Function of the Aggregate Duct Nodules of Black Widows*
Adviser: Edward Tillinghast

Rachel Mixon
General Biology and Classics
*A Comparison of Breeding System and Fruit Production in Invasive and Native Shrubs*
Adviser: Thomas Lee

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Amanda Putnam, URC 2006

**Biochemistry and Molecular Biology, College of Life Sciences and Agriculture**

Preparing for the 2006 URC, Amanda Putnam learned there’s a big difference between taking a lab course and conducting an ambitious independent project in a lab—in her case, about 40 hours a week worth of difference.

Putnam’s research found her spending long hours between the UNH dairy facilities and the lab, collecting and studying cells that play a critical role in bovine fertility.

Putnam says the URC gave her a deeper understanding of the scientific process, and helped her organize, and present, her findings for audiences ranging from experienced research professionals to the general public.

**Where is she now?**

Putnam’s URC work helped her secure a full-time job in biotechnology two months before she graduated.

“They told me upon hiring that my lab experience was impressive,” Putnam says. “Pulling together the final URC project, writing a summary, and creating a poster for the URC conference involved meeting a tight deadline, troubleshooting, and making a presentation, all of which would become part of my daily work after graduation.”

Putnam is now a senior research and development associate at First Light Biosciences in Bedford, Mass., a small, early-stage biotechnology company developing ultra-sensitive detection technologies and medical diagnostics for the healthcare and bio-defense industries. She’s also taken an interest in business, and is helping with the company’s business development projects.

“The URC project was well worth going the extra mile, as was any extra effort I put into my lab experience while at UNH,” Putnam says. “It was a key contributor to my securing a great job out of college.”
Julie Morrison  
Biochemistry  
A Novel Entomopathogenic Serratia  
Adviser: Vaughn Cooper

Elizabeth Morrissey  
Zoology  
Bioacoustics: Interactions Between the American Lobster and Atlantic Cod  
Adviser: Winsor Watson

Danielle Morse  
Microbiology  
Side Effects of Antibiotic Resistance in Evolved Burkholderia cenocepacia HI2424 Populations  
Adviser: Vaughn Cooper

Michael O’Hara Jr  
Benjamin Seiler  
Microbiology  
Assessing Methods to Inactivate Recombinant DNA  
Adviser: Stephen Torosian

Danielle Oliveri  
General Biology  
Daily Patterns of Salivary α-Amylase and Salivary Cortisol in Children with Autism Spectrum Disorder (ASD)  
Advisers: David Townson, Barbara White

Danielle Oliveri  
General Biology  
Anatomical Study of Oak Apple Galls  
Adviser: Wayne Fagerberg

Gwangli Park  
Biochemistry  
Morin and Silymarin Modulate NF-κB Activity via Suppressing ROS and ONOO  
Adviser: Thomas Laue

Gabriel Perkins  
Environmental Science: Ecosystems and English  
Assessing Avenues for Sustainability: Evaluating Nitrogen Flows at UNH’s Organis Research Dairy Farm  
Adviser: John Aber

Thomas Perry  
Microbiology  
Quinolone-Resistance in Ancestral and Evolved E. Coli Lineages  
Adviser: Vaughn Cooper

Nicolette Pocius  
Marine and Freshwater Biology  
Temperature Dependent Development of Atlantic Cod (Gadus morhua)  
Adviser: David Berlinsky

Monica Quimby  
Molecular, Cellular and Developmental Biology  
Are Mitochondrial Genes Maternally Inherited in Strawberry Fragaria (Rosaceae)?  
Adviser: Thomas Davis

Michael Rezace  
General Biology  
Reads Evaluates Applies Disaster Special Needs Shelters (the READS Project)  
Adviser: Lisa Brown

Rebecca Riding  
Ecology, Evolution and Behavior  
Megan Thompson (graduate student)  
Detection of Amyloplasts in Roots of Protein Phosphatase Mutant Plants  
Adviser: Estelle Hrabak

Katie Robertson  
Zoology  
Diet Composition of Wild Juvenile Flounder Collected Near the Piscataqua River Mouth, Great Bay Estuary, New Hampshire  
Adviser: William Howell

Valerie Schoepfer  
Environmental Science: Soil and Watershed Management  
Leaf Leaching as a Source of Carbon and Nutrients in Tropical Streams  
Adviser: William McDowell

Melanie Schroer  
Environmental Conservation Studies  
Genetic Variation in a Wild Strawberry (Fragaria virginiana) Along an Environmental Gradient in Relation to Glacial Recession and Future Climate Change  
Adviser: Thomas Davis

Erica Sennott  
Microbiology  
Kate Stefani (graduate student)  
The Effects of Antibiotics on Toxin Production in Escherichia coli O157:H7  
Adviser: Frank Rodgers

Nicholas Sherman  
Animal Sciences: Pre-veterinary Medicine  
Expression of Cellular Flice Inhibitory Protein (cFLIP) in the Bovine Corpus Luteum.  
Adviser: David Townson

Wesley Smith  
Wildlife Ecology  
Ecology of Nuisance, Suburban Black Bears in Southern New Hampshire  
Adviser: Peter Pekins

Hilary Snyder  
Molecular, Cellular and Developmental Biology  
Exploring Macular Pigment: Lutein Transport and Deposition During 120-days of Lutein Supplementation  
Adviser: Joanne Curran-Celentano

Ryan Soderquist  
Biochemistry  
The Role of RPA and ATR in the Maintenance of the DNA Damage Response in Arabidopsis Thaliana  
Adviser: Kevin Culligan

Krista Stegemann  
Marine and Freshwater Biology  
Growth Trends of the Green Sea Urchin, Strongylocentrotus droebachiensis  
Adviser: Larry Harris

Amy Taetzsch  
Nutritional Sciences  
Does Developmental Exposure to Flame Retardants Promote Obesity and Diabetes in Rats?  
Adviser: Gale Carey

Rechab Towne  
Biochemistry  
Megan Thompson (graduate student)  
Comparison of Root Growth of Arabidopsis thaliana Wildtype and Mutant Plants  
Adviser: Estelle Hrabak
Chemistry Department Poster Exhibition

Poster Presentations

**Friday, May 8**
3–4:30 p.m.
**Parsons Hall, Iddles Wing**

The Chemistry Department Poster Exhibition is the result of students' yearlong senior thesis research in such areas as organic, inorganic, physical or analytical chemistry, and under the direction of their research adviser.

**Nicholas Bencivenga**
Chemistry
*Preparation of Novel Bifunctional Polymerizable Copper(II) Ligands*
Advisers: Roy Planalp, Rudolph Seitz

**Justin Harney**
Chemistry
*Studies in Ternary Complexes of Zn(II) Cross-Bridged Cyclen*
Adviser: Edward Wong

**Andrew Hart**
Chemistry
*Development of a System for Measurements of OVOCs*
Advisers: Howard Mayne, Barkley Sive

**Jennifer Pollock**
Chemistry
*Optical Properties of Dicarboxylic Acids—Common Components of Atmospheric Aerosols*
Adviser: Margaret Greenslade

**Morgan Stanton**
Chemistry
*Atmospheric Chemistry at Thompson Farm*
Adviser: Barkley Sive

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Whittemore School of Business and Economics Paul J. Holloway Prize

University-wide
Innovation-to-Market Competition
Championship Round

**Wednesday, May 13**
8 a.m.–2 p.m.
**Holloway Commons**

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.

Information on participants will be available at this event.
The Undergraduate Research Conference (URC) distributed awards of excellence to sixty-seven students for outstanding presentations at URC ’08. Seven students received honorable mentions.

Cash and tuition waiver awards totaled $15,500. Sponsors included the following University offices and departments: The Office of the Vice President for Student and Academic Services; the UNH Parents Association; the Institute for the Study of Earth, Oceans, and Space; the New Hampshire Space Grant Consortium; the College of Engineering and Physical Sciences, the Environmental Research Group; the College of Life Sciences and Agriculture; the College of Engineering and Physical Sciences Alumni Association; the Center for International Education; UNH Manchester; and Phi Beta Kappa.

Visit the URC Web site to view the award-winning presentations. http://www.unh.edu/urc/index.cfm

The following presenters received awards of excellence:

Sara Arnoudse ’08
Spanish Health Care

Emma Baillargeon ’09
Little People Big World: Reality Television, Hyperembodiment, and the Rhetorics of Normalization

Anna Brown ’10
The Shanghai Six: Military Threat or Economic Alliance?

Jeffrey Brunelle ’10
The Strength of the Uni-Multipolar System: The Concert of Europe

Jesse Burdwood ’11
A Day in the Life of Someone with Developmental Disabilities

Ryan Carney ’08
Christopher Famolare ’08
James Gealy, Graduate Student
Christopher Hill ’08
Zachary Kelton ’08
Jeffrey Kite ’08
Patrick Lee, Graduate Student
David Levine, Graduate Student
Melissa Minuti ’08
Robert Terry ’08
UNH WildCatSat Senior Design Project

Benjamin Chiang ’10
Thadeaus Webster ’10
Seaing Green: Algae Grown in Salt Water as a Potential Source of Biodiesel

George Clark ’08
Star Sensor Flight Calibration for the Interstellar Boundary Explorer

Joshua Clark ’09
Ali: Man Behind the Myth

Allison Collopy ’10
The Effects of Organic vs. Conventional Farming on Nitrogen Levels in Soil Water Leachate

Shari Davis ’08
Malaria Prevention Efforts

Emily Dewey ’08
Panel ”From Classroom to Community: Women’s Studies Theory in Practice”

Walter Durack ’08
Heather Newton ’08
Craig Shillaber ’08
Matthew Valle ’08
One Small Bridge at a Time

Christopher Feeney ’08
Michael Soha ’08
Ross Tinkham ’08
The Rhetoric of Dover’s Tax Cap Campaign

Jonathan Felch ’08
Water Resources Assessment of Appledore Island, ME

Sergei Fischev ’08
Guy Poisson ’08
Narrow Band Light for Alzheimer’s

Marisha Florissant ’08
Critical Care Nurses Perspectives toward End-of-Life Care in the Intensive Care Unit

Janine Fraschetti ’08
Geochemical Constraints on the Origin of a Shallow Ash Occurrence in the Mahanadi Basin, offshore India

Cara Gadapee ’08
The Feminist Health Center of Portsmouth

Kate Gannon ’08

Emily Gifford ’08
Patagonia: Trouble in Paradise

Lauren Hardies ’08
Outcome Measures for the New Hampshire Healthy Hearing Program

James Hart ’08
China and the World Bank: A Challenge of Differing Agendas

Adam Hernandez ’08
A Gender Comparison of Lower Extremity Landing Biomechanics Utilizing Different Tasks: Implications in ACL Injury Research

Kirsten Hildonen ’08
The Chinese Must Go: Debates Surrounding the Chinese Exclusion Act of 1882

Muhammad Islam ’08
Active Noise Cancellation Headset

Elizabeth Joseph ’08
In the Arms of the Community

Maxim King ’08
Reemergence of the Russian Military
Tavia Lee-Goldstein ’08
“But Inside Doesn’t Matter”: Making Meaning in Murder in “American Psycho”

Rebecca Lehr ’09
Developing a Climate Action Plan for UNH

Jacqueline Lewis ’10
Business as Usual: China’s Infatuation with the Oil of the Genocidal Regime of Sudan

Skye MacKay ’08
College Students’ Knowledge, Attitudes, and Testing Behaviors in Regard to HIV/AIDS

Jenna Madore ’09
The Association between Chronic Disease Risk Factors and Prescription Medication Use of Young Adults

Margret Mansfield ’08
Tracking the Timeline of the Progression of Verticillium Wilt Infection in Susceptible and Resistant Plants of Mentha longifolia

Meghan Marcus ’10
Suggestion of Roles in Gay Advertising: A Modern Application of Erving Goffman

Trevor Mauck ’08
The Dynamic between the Moroccan Legislature and Monarchy

Kyle McAdam ’11
New Hampshire Sierra Club

Ryann Mead ’08
Moroccan Immigration into Spain

Lisa Merrill ’08
The Dred Scott Decision and Black Citizenship*

Jamie Morrill ’08

Brenna O’Connor ’08
Security Interests Trump Humanitarian Concerns: China’s Economic Relations with Sudan

Caitlin O’Connor ’08
Reviving Russia: Can a Legacy of Limited Economic Stability Be Broken?

Michelle Pizzillo ’10
Alternative Break Challenge

Catherine Reno ’08
Why Jihad: A Study of What Drives Individuals to Wage Jihad

Jarred Rego ’09
The Candidacy of Rudy Giuliani

Samantha Riemer ’08
Importance of Remittances to Senegalese

Emily Roberts ’08
Nurses Performing Triage in Uganda: Decision-Making in Low Resource Settings

Alan Schulte ’08
Running with Keith Shields: A Personal Profile

Lauren Schweizer ’08
Case Study on the Lawyers’ Environmental Action Team (LEAT) and Their Position on Two Cases of Indigenous Land Rights: The Ngorongoro Conservation Area and Usangu Basin, Tanzania

Emily Silfies ’09
A Material Portrait: The Clothing of Temperance Pickering Knight

Laura Smetana ’08
Real Life on the Stage: The Story of a Macedonian Immigrant

Heidi Soucy ’08
The Enactment of Ritual Drama: News Coverage of the Columbine Shootings

The following presenters received honorable mentions:

Rick Boulanger ’09
Edward Callahan ’08
Steven Zarse ’09
Volunteer Management System for Salvation Army in Manchester

Darlene Delano ’08
African-American Portrayals in Musical Theatre 1920’s-1930’s

Tami Geaghan ’09
“Out of the Field” A One Act Play

Hilel Gubenko ’08
Effects of Meaningful Versus Ambiguous Targets in Motion-Induced Blindness

Jacob Wen ’11
The Day
Committed to Undergraduate Research

Engagement in research: For those students who get involved, it’s the defining factor of a UNH undergraduate education. And it is exactly what you will see at this week’s URC. The conference is an annual celebration of the remarkable research and learning between motivated undergraduates and active faculty researchers here at UNH.

This student-faculty collaboration is the backbone of the UNH research experience. It begins in the classroom with research-intensive coursework, but exists everywhere across campus and beyond. Look around and you’ll find undergraduates in faculty labs, teaming up with their teachers to find solutions that benefit society. You’ll see them in UNH’s many living labs such as the greenhouses, the farms, and the New England Center; or at one of more than 40 centers and institutes dedicated to studying a wide range of issues, where undergraduates conduct research alongside experts in their fields. In UNH theatres, studios, and recital halls, our creative arts students explore the intellectual processes behind their works.

Nourishing these undergraduate-faculty relationships is UNH’s Hamel Center for Undergraduate Research, which gives students the opportunity to make research and creative explorations a more formal part of their academic experience. Each semester, dozens of students from varied academic disciplines apply for grants and fellowships from the center’s Undergraduate and International Research Opportunities Programs (UROP and IROP). The funds enable them to embark on collaborative research projects with faculty mentors, and to learn the key elements of any research project—from proposal and budget to research and presentation of results to peers. Many of the students presenting here this week conducted their research using UROP and IROP grants.

The McNair Graduate Opportunity Program also fosters student-faculty collaboration. As a graduate school preparation program, McNair includes an intensive research component. Students may design a research project, receive funds to implement the project, take a research methods course, participate in writing skills workshops, and have the opportunity to present their findings at the UNH McNair Program Summer Research Symposium, among other activities.

In addition, the Research and Discover Program offers a series of two summer internships to eligible students—the first summer at UNH, the second at NASA Goddard Space Flight Center. Research and Discover interns work alongside environmental scientists on the groundbreaking discoveries underway at the UNH Institute for the Study of Earth, Oceans, and Space, such as investigating the effects of human activities on the Earth, including the causes and effects of global climate change and deforestation; studying dynamic processes in the Earth, oceans, and atmosphere using remote sensing, GIS, computer models, and other state-of-the-art tools; and exploring chemical, physical, and biological oceanography.

This direct participation in meaningful research is one of the unique characteristics of a UNH education, where students, together with faculty, push back the frontiers of knowledge.

How to get involved in undergraduate research at UNH:

- talk to a favorite professor, faculty adviser, or teaching assistant;
- visit the UNH Hamel Center for Undergraduate Research, which sponsors student research projects at home and abroad;
- pay attention to department bulletin boards and Web sites, which often post job openings in UNH labs or departments where students can work on actual, ongoing research projects;
- take a research-intensive course, such as INCO 590 “Student Research Experience.”

Inquiry journal of undergraduate research

The URC is but one means for students to share their findings. Some of the works you see here today might become the basis of a University honors or master’s thesis; others may find their way to national conferences and professional meetings where UNH undergraduates present their work to future colleagues and peers; still others may appear in Inquiry, UNH’s online journal of undergraduate research. Published annually, Inquiry features the research articles, briefs, and commentaries of undergraduates.

Read more at www.unh.edu/inquiryjournal

Links to research opportunities

Centers and Institutes at UNH www.unh.edu/research/centers

Center for International Education www.unh.edu/cie

Hamel Center for Undergraduate Research www.unh.edu/undergrad-research

McNair Graduate Opportunity Program www.unh.edu/mcnair

Outreach and Research Opportunities www.unh.edu/outreach/opportunities.html

Research and Discover Summer Internship Program in Earth Sciences www.eos.sr.unh.edu/ResearchAndDiscover/

University Honors Program www.unh.edu/honors-program
Acknowledgements

The UNH Undergraduate Research Conference, one of the largest and most diverse conferences of its kind in the country, has grown to become a signature event at the University and an annual highlight of the spring semester. Bringing the URC to fruition each year is the result of a collaborative, behind-the-scenes network of a great many campus community members. Here, we acknowledge these folks and thank them for helping make URC 2009 happen.

Special thanks to:
Office of the Vice President for Research
Office of the Vice President for Student and Academic Services
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UNH Admissions
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UNH Printing Services
UNH Transportation Services and Dirk Timmons, Director
UNH Video Services
URC Program Assistants Megan Zerega ’10 and Katie McCabe ’12
Web Solutions
Wildcat Properties
Whittemore School of Business and Economics Marketing and Advertising Club (Lindsay Thibeault ’09, Team Leader)

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Delia Konzett, Honors English Undergraduate Research Conference
Peter Masucci and Cynthia Nizzari-McClain, WSBE URC
Catherine Mazur and Jennifer Moses, Senior B.A., B.F.A. and M.F.A. Exhibition Preview Reception
Jeff Melton, Ruth Varner, and Debra Williams, Interdisciplinary Science and Engineering Symposium (ISE)
Jennifer Moses, Naked Arts—Creativity Exposed!
Dan Reagan and Carol Swiech, UNH Manchester Undergraduate Research Conferences
Cindi Rohwer, Chemistry Department Poster Exhibition
Patrick Ryan, Philosophy Department URC
Lucy Salyer, History Department URC
Neil Vroman, College of Health and Human Services Grimes Award Competition
Brittany Williams, Graduate Research Conference
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Presenting my research to a professional community, answering challenging questions, and receiving positive feedback really fostered my development as a professional marine biologist. I was also proud of my ability to communicate complicated scientific analyses in a clear and concise manner. • The most memorable aspect of the URC was making the actual presentation. I had been practicing it and I didn't think it was up-to-par, but once I got up to the podium everything flowed well. I surprised myself. After the questions were over, I was so excited that it had gone well and that I actually did it. • I felt so honored to explain my project to everyone who came to the conference, and also I gained more courage than I had before. • The most memorable aspect of my involvement was how supportive the faculty and the students were, and the caliber of presentations at the URC. • It was great talking about our projects to other people, including our families, so they could attain some understanding about what it is we have been working on. • Although I was incredibly nervous about giving an oral presentation, the environment was positive and calming. I felt confident and more relaxed as a result. • The most memorable and beneficial aspect of presenting was learning how to take a complex issue and simplify it for members of the public with less experience in the field. • The intense learning experience of creating a professional presentation and the pride in having created something I never had before. • The entire process was memorable for me because research is such a detailed process. I did not have the confidence to see this through at the beginning, but it was very rewarding at the end. • It was awesome to share my experiences with the UNH community, and it was inspiring to see other students’ projects. • How easy it was for everyone to present their posters without feeling a lot of pressure to do so. It was a very relaxed learning environment. • I met many students who did great research projects that made me feel great about UNH and the advocacy for student research that the University puts forth. • It was so rewarding to present research that we’ve been working hard on all year to other peers and potential employers. • Several people have told me my presentation skills were very good. As a shy person, that was nice to hear. • The number of people presenting was staggering. It is nice to see how much the University contributes to science and learning. • This was my first year participating in the URC, and I was quite pleased with the amount of interest that the community showed in seeing the presentations. • The most memorable part of the URC for me was taking research that I had put so much effort into, and sharing it with the UNH community, friends, and family. • It was great having my parents watch me in an academic venue. It was the first time they really heard what my two-year research project was about! • The most memorable aspect was the public speaking challenge. In any career, public speaking involving research is essential and I think the URC provided a great opportunity to hone those skills. • It was a very memorable occasion to speak in front of my peers and their parents. I found it challenging, but a positive experience to be pushed beyond my comfort zone. • When I was finished, I felt so confident about my subject that when the questions came I was not nervous at all! • The most memorable part was of course the presentation, but also just being in the intellectually stimulating environment, having discussions afterwards, etc. • The conference itself was the best part. I was able to see all of my hard work come to fruition, and the feedback I received from the faculty members who listened was great. I found the other presenters’ speeches interesting as well. • Because I was part of the Marketing Workshop group that promoted the URC as a group project, the entire experience as a whole was something I will never forget. The hours upon hours that were put into increasing attendance and participation in the URC truly paid off when we got to see all the people who attended! • I loved sharing the knowledge I’ve gained with my friends and family.