

The Mount David Summit

The Mount David Summit is an annual celebration of student research, artistic work, and community-based scholarship at Bates College. Each year students from all classes present their work to each other and to faculty, staff, family, and community members in a symposium format at the end of the winter semester. The Summit spotlights the rich and varied academic activities of Bates students across the disciplines and honors the vibrant intellectual life of the college.

Named for the landmark "mountain" on the campus, the Summit is guided by the motto of the college
—*Amore ac Studio*—
loosely translated, With Love and Zeal, With Ardor and Devotion:
devotion to scholarship, creativity, and the life of the mind.

The Mount David Summit is sponsored by the Office of the Dean of the Faculty.
We are grateful to Ralph T. Perry '51 and Mary Louise Seldenfleur,
who have been generous and devoted supporters of the Summit since its first year.

~ About the 2016 Summit ~

The 2016 Mount David Summit, held on April 1, features the research, creative work, and performances of students from all Bates classes. It is organized into four sessions, three in the afternoon and one in the evening. The summit program is published in this booklet; students' abstracts are available in a separate booklet or on the Web.

The faculty believes that all Bates students are developing as scholars in their own right, and are ready to articulate and defend their ideas in a public forum. The college's General Education program, major programs of study, and the senior thesis/senior project requirement are designed both to prepare students and challenge them to conduct original research and contribute to our knowledge of the world. Many students who present their work at the Mount David Summit are senior thesis writers, approaching the summit of their academic career at Bates. Their presentation—which might be a research poster or a short, 15-minute talk—represents hundreds of hours of work, remarkable commitment to their studies, and a synthesis of all that they have learned at Bates. Other presenters are at different points in this journey; they may be first-years just beginning to explore ideas in depth, or they may be sophomores or juniors in the process of developing the skills and insights that will serve their thesis work in the future. The artists who participate in the summit—the poets, fiction writers, dancers, film makers, and photographers—bring to their work a combination of technique, cultural and intellectual context, ways of thinking and seeing the world, and raw talent that is nurtured in a liberal arts environment.

The kind of individualized education celebrated at the Mount David Summit would not be possible without the unflagging dedication of faculty advisors. Bates faculty work one-on-one with seniors on the thesis; in this process they are both demanding and supportive, guiding research methods, thoughtful interpretation, and effective writing. Many Bates staff members—assistants in instruction, lab technicians, writing and quantitative reasoning specialists, museum curators, theater designers, digital media specialists, librarians and archivists, and community-engagement staff—also work closely with student-scholars. These members of the Bates community offer students a wide range of skills and expertise.

Thank you

At Bates we believe that every student is an emerging scholar.

Supporting student research and creative work requires wisdom, time, and resources. Bates student researchers and their faculty mentors thank the many individuals and foundations whose contributions to these funds help make student research vibrant, challenging, and filled with discovery.

We are deeply grateful to alumni, parents, faculty and friends whose support sustains research opportunities for our students.

The Bates Fund
The Arthur and Helen Baer Foundation Student Research Support Fund for Studio Art Majors
The Professor Leland and Claudina Bechtel Fund
The Blanchard Fund for Student-Faculty Research in Economics
The Bonner Leader Program
The Bruce Bouley Fund for Geology
The Bertha A. Bauer, M.D. Student Thesis Support Fund for the Department of Art and Visual Culture
The Class of 2000 Endowment for Community Service
The Penelope Ellis Fund
The Moses Feldman Family Foundation Student Research Grants
The Hamill Family Fund for Student Fieldwork and Research in Anthropology
The Hoffman Fund for Student Research
The John and Sally Kelsey Prize for Neuroscience Student Research
The Howard and Gail Loeb Kunreuther Endowed Fund for Faculty Research in Economics
The Dorothy Dole Johnson '41 Fund for Student Research in the Sciences
The Walter A. Lawrance Student Research Fund
The Susan Majeski McKnight '70 Fund for Environmental Studies
The Morrill Family Research Fund
The Mount David Research Fellowship Fund
The Vincent Mulford Internship and Research Fund
The Natt Family Fund in Biology
The Philip J. Otis Fund
The Helen A. Papaioanou Fund
The Anthony B. and Raeflyn R. Pelliccia Fund
The Charles Franklin and Evelyn Minard Phillips Fund
The John Pribram and George Ruff Fund for Research in Physics
The Linda E. Rawlings Student Research Fund for Mathematics
The Whitney Richey '05 Fund
The Ruggles Scholar Research Fund
The Sargent Student Research Fund
The Scher Fellowship Fund
The Ellen Seeling Design Fellowship Fund
The Michael I. Sklar '94 Music Research Fund
The Stangle Family Research Fund for Economics and Law
The Dr. Jason M. Tanzer Fund
The Sarah H. Trafton Memorial in the Bates-Morse Mountain Reserve Fund
The Aaron R. Winkler '92 Fund for Student Research in Biology

Mount David Summit

Schedule of Events

Friday, 1 April 2016

1:30 -1:45 PM

Call to the Summit:

Michel Rondeau (b. 1948): *Fanfares of St. Charbel* (1995)
Kiernan Majerus-Collins '16, trumpet, and Alexander Perrone '16, trumpet

Perry Atrium

Welcome

A. Clayton Spencer, President

Matthew R. Auer, Vice President for Academic Affairs and Dean of the Faculty

Pettengill Hall

16th Annual Barlow Off-Campus Study Photography Exhibition

Note: Within each event, students are listed in the order in which they will speak

Concurrent Session I

1:45 – 3:00 PM

Perry Atrium

Poster Session I: African studies, biochemistry, biology, chemistry, environmental studies, history, mathematics, psychology, and sociology

Pettengill G04

The World, The Self, and the Poet

Poets Joseph Alp '18, Jake Atwood '19, Chardon Brooks '19, Jio'vanni Delvalle '19, Abby Horrisberger '18, and Rakiya Mohamed '18 read their work

Moderator: Lavina Dhingra, English

Pettengill G10

Research in Psychology

Research in social, developmental, and organizational psychology

Emma Conover '16: The Psychology of Eating Animals: How Pro-Environmental Attitudes Inform Choices

Gretchen Cates-Carney '16: Examining the Role of Birth Plans and Locus of Control in Childbirth Satisfaction

Jessica Segal '16: The Presence of Flow in Kindergartners While Engaging in Art-Making Activities

Karen Lockhart '16: Athletic Identity and the Impact of Career Transitions

Nat Brown '19: Arbitration in Major League Baseball

Moderator: Rebecca Fraser-Thill, Psychology

1:45 – 3:00 PM

Everything You Always Wanted to Know about Chaucer But Were Afraid to Ask: Gender, Politics, and Sexuality in *The Canterbury Tales*

Pettengill G21

Chaucerians consider a range of perspectives on late medieval culture

Cheyenne Cannarozzo '16, Jeremy Glover '17, Michael Horowicz '17, Sam Myers '16, Theodore Pender '18, Max Petrie '18, and Roderick Pratt '18

Moderator: Sylvia Federico, English

Pettengill G50

Individuals and Society: Power, Control, Opportunity

An interdisciplinary look at how society functions—or doesn't

Mallory Cohen '17: Creative Intervention: Arts Education for Incarcerated Youth

Evan Molinari '16: Black and Labeled Red by White and Brooklyn Blue: Paul Robeson, Jackie Robinson, and their Competing Perspectives within the Struggle for Black Equality during the Second Red Scare

Rachel Neckes '16: Justifying Moral Evaluations: The Capabilities Approach to Female Genital Surgeries

Bria Riggs '18: Revolutionizing Conservation: Biocultural Diversity, Co-management, and Indigenous Peoples

Teddy Rube '16: Searching for Blood in the Streets: Mapping Political Violence onto Urban Topography in Ciceronian Rome, 80-50 BCE

Moderator: Michael Rocque, Sociology

Pettengill G52

Analyzing Stereotypes of Muslims on Television and Their Impact on the Muslim Community

Students in ACS 100, Introduction to American Studies, and AC/RE 272, Islam in America, discuss the ways Muslims are stereotyped on television drawing on media analysis, community-based research, and interviews

Moderator: Aimée Bessire, American Cultural Studies, and Samaneh Oladi Ghadikolaei, Religious Studies

Pettengill G54

Museological Experience and Independent Projects in Art Museums

Elizabeth Laverghetta '16, Lindsey Prelgovisk '16, Hannah Gottlieb '16, and Michela Moscufo '16 discuss their museum internships, which offer both rich academic experiences and valuable professional training

Moderator: Anthony Shostak, Museum of Art

**1:45 – 3:00 PM
Pettengill G65**

Knowledge and the Public Good: Community-Engaged Research across the Disciplines

The Harvard Center for Community Partnerships encourages students to conduct research with community partners in addressing social and educational issues

Constance Brimelow '16: Second-Generation Immigrant Youth in Lewiston, ME: A Documentary Glimpse

Katrina Buchta '16: Understanding College Access for African Immigrant, Refugee, and Asylee Youth in Lewiston, ME: A Community-Engaged Research Project in Partnership with Tree Street Youth and Lewiston High School

Britta Clark '16: Environmental Curriculum Development at Whiting Farm in Auburn, ME

Laurel Meyer '16: Community and Autonomy among Senior Citizens in Two Independent Living Facilities in Lewiston, ME

Megumi Milla Achahue '16: Barriers to College Enrollment for Latino Students at English High School in Boston

Alexandra Morrow '16: We Are Twenty-first Century: Building Organizational Capacity through Multimedia Storytelling

Joe Tulip '18: Math Learning Impacts of a Lego Mindstorm Robotics Curriculum

Moderator: Darby Ray, Harvard Center for Community Partnerships

Pettengill 116

Contemporary Middle East Politics

In the first of two politics panels, students examine the changing political landscape of Syria, Yemen, and Tunisia

Adam Blau '18: The Coercive Apparatus: The Reason Bashar al-Assad Still Holds Power in Syria

Colby Galliher '18: The *Khat* Problem: Socioeconomic Degradation and Policy Enforcement in Yemen

Mats Terwiesch '18: Tunisia: Arab Spring Outlier

Moderator: Senem Aslan, Politics

Pettengill 162

Senior Research in Biology and Neuroscience

Life sciences research from ecosystems to the inner workings of the brain

William Curley '16: EEG Evidence of Command Following in Patients with Severe Brain Injury and Healthy Controls

Julia Fisher '16: Red Maple and Red Oak Exhibit Spatial and Temporal Variation in Vulnerability to Embolism

Rebecca Leloudis '16: Water Pollution and Infectious Disease among Maine Anurans

Marit Wettstein '16: Prevalence and Transmission of *Mycoplasma bovis* in Dairy Cattle at Brigeen Farms in Turner, ME

1:45 – 3:00 PM

Welles Mathison '16: Cleaning Up: A Chemical Basis for the Financial and Ecological Improvement of Maine's Mill-Based Economy

Moderator: Brett Huggett, Biology

Pettengill 257

Environmental Electronica

Student composers in MUS 237, Music, Computers, and the Arts, have stored their pieces on Soundcloud, which attendees can access with QR reader apps on their smartphones, creating an environmental soundscape

Moderator: William Matthews, Music

Concurrent Session II

3:15 – 4:30 PM

Perry Atrium

Poster Session II: African studies, biochemistry, biology, chemistry, economics, education, English, geology, mathematics, neuroscience, philosophy, physics, politics, and psychology

Pettengill G04

Can Women Paint? Can Women Write? Worldly Women as Artists

Allie Freed '16 and Jessica Plotnikov '16 explore the role of female artistry in literary texts

Moderator: Lavina Dhingra, English

Pettengill G10

Global Scholarship: Research While Studying Abroad

Conducting research while studying abroad presents opportunity and challenge

Meredith Colleary '16: Sexual and Reproductive Health Education for Boys in Kapchorwa, Uganda

Phillip Dube '16: Street Actors, Dancers, and Musicians: An Examination of Public Performances in São Paulo, Brazil; Ahmadabad, India; and Cape Town, South Africa

Mitchell Rider '17: Assessing the Effectiveness of the Turks and Caicos Government's Marine Protected Areas and Size Regulations in Relation to Snapper Populations in South Caicos

Moderator: Stephen Sawyer, Office of Off-Campus Study

Pettengill G21

Contemporary Political Issues in Turkey

In this second politics panel, students examine the complex political dynamics of modern Turkey

Elizabeth Dolgicer '16: Turkey's 2010 Constitutional Referendum: Consolidating Democracy or Authoritarianism?

Fan Dong '17: The Diyanet under *alla Turca* Laicism

3:15 – 4:30 PM

Charlie Wilmerding '18: Turkish Politics and the Kurdish Conflict: Trends of Electoral Needs and Violence

Moderator: Senem Aslan, Politics

Pettengill G50

Research in Physics and Biochemistry

Modeling, imaging, and observing in the sciences

Wade Rosko '17: Modelling Freezing and Thawing of Arctic Permafrost

Khoi Tuan Nguyen '16: Characterizing Optical Aberrations in Fluorescence Correlation Spectroscopy

Nancy Tran '16: Role of Nrf1 in the Transcriptional Response to Mono(2-ethylhexyl) phthalate (MEHP) Exposure in Zebrafish (*Danio rerio*)

Moderator: Travis Gould, Physics

Pettengill G52

Senior Thesis Research in Sociology

Sociology majors explore a wide range of topics from race to religion to political organization

Jalen Baker '16: Why Do I Have to Say Black Lives Matter? Gauging Bates Students' Perceptions of Black Lives Matter in an Age of Color-Blind Racism

Emma Bilodeau '16: It's Not All Black and White: Black Young Adults' Perceptions of Transracial Adoption

Bridget Feldmann '16: "*Para que nadie diga después: 'Yo no sabía nada.'*": What Determines How People Remember? An Examination of Imperialism, Ideological Divisions, and Strategies of Collective Memory in Post-dictatorship Chile

Josh Giesler '16: Reimagining the South African Nation: Case Studies of the 1995 Rugby World Cup and the 2010 FIFA World Cup

Tommy Graziano '16: Equal in Value, Distinct in Purpose: Practicalities of Evangelical Christian Marriages

Moderator: Francesco Duina, Sociology

Pettengill G54

From "Refugees" to "Productive Citizens": Creating Bhutanese Spaces of Belonging in New Hampshire

Anthropology major Isabel Koyama '16 studied the transition to life in New Hampshire of Nepali-speaking Bhutanese refugees, who join her in this discussion

Pettengill G65

Senior Research in Neuroscience

Neuroscience majors examine the scientific underpinnings of behavior and emotion

Gregg Heller '16: Rearing in Male Odor Decreases Signal Propagation in the Mouse Olfactory Bulb

3:15 – 4:30 PM

Seth Lieberman '16: Development of Selective Plane Illumination Microscopy to Investigate the Molecular Underpinnings of the Mitral Cell Layer in the Olfactory Bulb of Transgenic Mice

Adriane Spiro '16: Effect of Endogenous Oxytocin on Psychosocial Adjustment as Mediated by Emotional Receptivity

Moderator: Jason Castro, Psychology

Pettengill 116

Perspectives on Jewish Religion and Culture

Religious studies majors Melissa Carp '16, Esperanza Gilbert '16, Wendy Goldman '16, Emilie Muller '16, and Alex Tritell '16 discuss their thesis work on the social and political implications of modern Judaism

Moderator: Thomas Tracy, Philosophy and Religious Studies

Pettengill 162

Language, Culture, and Identity

Spanish and French and Francophone Studies majors investigate farm labor, writing, and the sociocultural context of comics

Gary Kersbergen '16: *Reconociendo el Esfuerzo*: The Unnoticed Contributions of Migrant Farm Labor in Maine

Erin Montanez '16: Readings from "*Quehaceres domésticos*": Meditations on Seeing and Writing Bilingually

Hannah Zeltner '16: Tintin in Context

Moderator: Kirk Read, French and Francophone Studies

Pettengill 257

Senior Theses in Dance

Dance majors Kelsey Schober '16 and Mary Anne Bodnar '16 describe the process of integrating abstract movement and personal stories when setting dance works

Moderator: Carol Dilley, Dance

Concurrent Session III

4:45 – 6:00 PM

Perry Atrium

Poster Session III: African studies, biochemistry, biology, chemistry, economics, mathematics, neuroscience, physics, psychology, and religious studies

Pettengill G10

Environmental Justice in the Americas

Nina Doonan '16, Elise Emil '17, Mary Krathwohl '16, and Nina Sevilla '16 discuss environmental movements in Brazil, Peru, and the United States

Moderator: Melinda Plastas, African American Studies, Environmental Studies, and Women and Gender Studies

4:45 – 6:00 PM

Pettengill G21

Fall Semester Abroad 2015: Berlin Projects

Participants in the 2015 Bates Fall Semester Abroad Program in Berlin, who studied language, the history and culture of Berlin, and the history of science and mathematics, share some of the projects they undertook while abroad

Moderator: Meredith Greer, Mathematics

Pettengill G50

Negotiating Cultural Difference Abroad

Your study-abroad home-stay mother makes racist remarks. What do you do? Elsa Case '17, Tayla Duarte '17, Katherine Stevenson '17, and Katherine Van Patten '17 discuss cultural difference and its challenges

Moderator: David Das, Office of Off-Campus Study

Pettengill G52

Literary Reading by Creative Thesis Writers

Senior creative thesis writers Hannah Albertine '16, Alexandra Berman '16, Benjamin Cuba '16, Montana Hirsch '16, Grace Kenney '16, Mary Mignone '16, and Christopher Shaw '16 read their poetry, fiction, and creative nonfiction

Moderator: Jessica Anthony, English

Pettengill G54

The Francophone Faces of Lewiston: An Exploration of The Spindle City's French-Speaking Past, Present, and Future

Kei Matsunami '16, Graham Leathers '16, and Tara Das '16 explore how French language is evolving in Lewiston, a city of immigrants, many from Québec and Francophone Africa

Moderator: Laura Balladur, French and Francophone Studies

Pettengill G65

Ovid's *Metamorphoses* and Trigger Warnings

Students in FYS 345, Classical Myths and Contemporary Art, consider the prevalence of violence against women in Ovid: Should we be forewarned?

Moderator: Lisa Maurizio, Classical and Medieval Studies

Pettengill 116

Beyond the Ivory Tower: Anthropology for Social Justice

Senior anthropology majors apply their disciplinary training and perspective to social issues

Ashley Bryant '16: Making Americans: Negotiating the Boundaries of Somali Identity in the Public Education System of Lewiston, ME

Detmer Kremer '16: Drops of One Ocean: Encountering and Understanding Globalization in the Baha'i Faith Communities of Samoa, Latvia, Lithuania, and the Netherlands

Katherine McNally '17: Story Telling and Social Justice in Coastal Communities

Carly Peruccio '16: *Les Femmes Guides de Montagne*: Negotiating Gendered Spaces in Morocco

4:45 – 6:00 PM

Madelene Santizo '16: Navigating "Gringolandia": Student Narratives of Performing Ethnic Identity in a New England Liberal Arts College

Moderator: Loring Danforth, Anthropology

Pettengill 162

Putin's Russia: Memory, Image, and Motive

Benjamin Brimelow '16, Tommy Fitzgerald '16, and Christopher Van Hare '16 discuss monuments, memorials, film, narrative, and the creation of Russian identity in the Putin era

Moderator: Dennis Browne, Russian

Pettengill 257

What We're Watching: Film and Television Analysis

Rhetoric students explore what film and television reveals about the art form itself as well as the particular social and cultural moment

Garrett Anderson '18: An Exploration of Nagisa Oshima's Political Filmmaking "Style"

Rebecca Schwartz '16: The Awkward, (Un)Desirable, and Enticing Politics of Sex and Reproductive Health in HBO's *Girls*

Rebecca Bassell '16: "This is the Story of Man Named Stanley": Authorship, Agency, and Narratology in *The Stanley Parable*

Moderator: Jonathan Cavellero, Rhetoric

Evening Session

**7:00 PM
Olin Concert Hall**

Senior Thesis Recital: Sohee Ki '16, viola

James Parakilas, Music, piano

Works by Bach, Brahms, and Fuchs

**7:30 PM
Schaeffer Theatre**

Bates Dance Company Spring Dance Concert

Carol Dilley, Dance

This program of works by dance students and dance majors also will be presented Sunday, April 3, at 2:00 PM. An alternate program of works by dance students is presented on Saturday, April 2, at 5:00 PM, and on Monday, April 4, at 7:30 PM.

Tickets required. \$6 general admission; \$3 Bates faculty, staff, senior citizens, and non-Bates students; free for Bates students. For tickets, visit www.batestickets.com

**8:30 PM
Benjamin Mays '20 Center**

Merimanders Senior A Cappella Concert

Mount David Summit Poster Presenters

Note: The number following each title indicates the location of the poster in the session

1:45 - 3:00 PM	Poster Session I	Wall #
Adair Andre '18	Comparing Nollywood and Burkina Faso Film Industries	15
Alexander Arau '16	Quantitative Analysis of <i>Borrelia burgdorferi</i> Ribonuclease Expression, the Means to Novel Medicinal Treatment of Lyme Disease	24
Ruthie Baker '16	An Investigation of the Toxicity of Lake Auburn's <i>Gloeotrichia echinulate</i>	31
Anna Berenson '16	Identifying RNase III Cleavage Sites in <i>Borrelia burgdorferi</i>	25
Mikaela Bradley '16	Functional Consequences of BRCA1 polymorphisms in Northern Indian Women	4
Camille Champion '16	Synthesis of Substituted Benzimidazolones via Oxidative C-H Amination: Optimization of Substrate Synthesis and Examination of Substrate Scope	13
Mark Chatkin '16	Examining the Scope of Benzimidazolone Synthesis via C-H Amination: Effect of <i>N</i> -Substitution	11
Camille Cushman '16	Attenuation of Ubiquitin E3 Ligases Causes a Delay in EMCV Virion Production in Mouse Fibroblast Tissue Culture	20
Lucia De Rose '16	Use of Fourier Analysis in Edge Detection for Applications in Image Processing	18
Roberto Diaz III '16	Human-Induced Pluripotent Stem Cell Therapy Coupled with an Increased Consumption of Organic Nitrates Displays Potential in the Treatment of Avascular Necrosis of the Femoral Head	3
Jake Henderson '16	Utilizing Chromatin Immunoprecipitation (ChIP) to Investigate Transcriptional Regulation in Zebrafish (<i>Danio rerio</i>) during Early Development	5
Caroline Holme '16	Confirming regulatory regions in <i>flab</i> and <i>bpuR</i> transcripts and RNase III cleavage sites in <i>Borrelia burgdorferi</i>	26
Eleanor Hough '16	Protective Factors against the Internalization of Body-Image Ideals	35
Raja Junaid Jahangir '16	Exploring the Fourier Transform	17
Hannah Jeffrey '16	An Application of Fourier Series to the Most Significant Digit Problem	16
Katie Kaplan '16	Examining Potential Biomarkers of Breast Cancer Risk Marker Lesions	1
Michelle Kelley '16	A Confocal Analysis of the Morphological Changes in Neuromasts and the Inner Ear of <i>Danio rerio</i> in Response to Oxidative Stress and Absence of <i>nfe2</i> Protein	6
Sohee Ki '16	Diversity-Oriented Synthesis of Fused Bicyclic Beta-lactams	10
Jillian Legere '16	Synthesis of Amino-substituted 2-methylresorcinarene as a Chiral Solvating Agent	30
Nate Levin '16	Structural, Cultural, and Political Factors that Facilitate an Unfair Exchange for Collegiate Athletes at the Division I Level	34
Mikka Kei Macdonald '16	Japanese American Internment Camps: A Narrative Collection	33
Avery Margerum '18	Comparing Nollywood and Burkina Faso Film Industries	15

1:45 - 3:00 PM	Poster Session I	Wall #
Jane McLarney '16	Expression, Isolation, and Purification of the E3 Ubiquitin-Protein Ligase, DTX3L, Using NEB Express© <i>E. coli</i> and the Bac-to-Bac© sf9 Expression Systems	23
Lydia Merizon '16	Exploring the Fourier Transform	17
Filip Michalsky '16	Detecting Nonlinear Optical Signals Generated by Single Gold Nanoparticles	8
Cira Mollings Puentes '16	Phosphated Cyclodextrins as Water-soluble Chiral NMR Solvating Agents	29
Peter Novello '16	A Wet Chemical Approach to Control the Geometry of Plasmonic Gold Nanoparticles	9
Jia-Ahn Pan '16	An Application of Fourier Series to the Most Significant Digit Problem	16
Brian Pansius '19	The Remnants of Oppression: Race-based Economic Inequality in Post-Apartheid South Africa	14
James Pardo '18	Comparing Nollywood and Burkina Faso Film Industries	15
Bryant Perkins '16	Characterizing the Interactions of Plant Alkaloids and Flavonoids with DNA and tRNA	22
James Peterson '16	Application of Synthetic Peptides as Potential Inhibitors to <i>Borrelia burgdorferi</i> Pathogenicity	27
Samuel Predham '16	Synthesis of Benzimidazolone Derivatives via Palladium Catalyzed Oxidative C-H Amination: Relating Substrate Acidity to Reactivity	12
Ian Ramsay '16	Characterizing the Activity of a Truncated <i>Mycobacterium Tuberculosis</i> H37Rv 1-monooxygenase (AlkB) for Insight into Protein Structure, Active Site Determination, and Reaction Mechanism	7
Dylan Ray '16	1-(1-Naphthyl)Ethylurea Derivatives of Amino Acids as Chiral Solvating Agents	28
Rosa Reyes '16	Characterization of RSK1 and p27kip1 in Metastatic Breast Cancers	2
Larissa Sambel '16	Characterization of the Ubiquitin-Protein Ligase E6AP	21
Miles Schelling '16	Tensegrity Structures	19
Elena Schroeder '16	An Application of Fourier Series to the Most Significant Digit Problem	16
King Valdez '19	The Remnants of Oppression: Race-based Economic Inequality in Post-Apartheid South Africa	14
Brandon Williams '17	The Remnants of Oppression: Race-based Economic Inequality in Post-Apartheid South Africa	14
Mi Hui Wong '16	An Application of Fourier Series to the Most Significant Digit Problem	16
Mara Woollard '16	Courage, Violence, and the Unseen Wounds: Post-Traumatic Stress Disorder in the Civil War	32
3:15 - 4:30 PM	Poster Session II	Wall #
Kenisha Allen-Daley '16	Children's Literature with Cultural Authenticity: Understanding the Complexities and Importance	28

3:15 - 4:30 PM	Poster Session II	Wall #
Caran Arora '16	Dissonance-Based Intervention to Reduce Sexual Objectification	32
Claire Bartell '16	Can Robots be Moral? Machine Ethics in a Technological World	35
Carolyn Benner '16	RSA and Public Key Cryptography	21
Nicole Bermudez '16	The Relationship between U.S. Asylum and Refugee Policy and U.S. Foreign Policy	27
Peter Boyer '19	Women in Politics: Rwanda's Successes and Remaining Challenges	17
Chris Bradbury '16	An Experimental Study of the Metal-Silicate Partitioning Behavior of Fe, Mn, Cr, and V	18
Andre Brittis-Tannenbaum '16	Monitoring Marine Derived Nitrogen Inputs Due to an Alewife Migration in Nequasset Lake, Woolwich, ME	12
Dana Cohen-Kaplan '16	Methane Emissions from a Hydrologically Altered Region of the Sprague River Salt Marsh, Phippsburg, ME	13
Jacqueline Cooper '17	Family Matters: The Pros and Cons of Child Marriage in Northern Nigeria	16
Robert DiFranco '16	Self-Regulatory Theory and Green Advertising	34
Tanner Dirstine '16	Chronic 30% Hyperoxia from Birth Causes an Early Development of the Hypoxic Ventilatory Response in Neonatal Rats	3
Callum Douglass '16	Nanopositioning Gold Nanoparticles for the Study of Plasmonics	7
Arianna Fano '19	Women in Politics: Rwanda's Successes and Remaining Challenges	17
Katharine Gaillard '19	What is Intelligence?	10
Matt Gee '16	Empathic Emotional Responses and Cortisol Reactivity Independently Predict Charity and Social Justice-Oriented Volunteering	33
Paige Guevarra '18	Dendrology Course Project: The Bates Canopy	15
Cailene Gunn '16	Methane Fluxes along a Salinity Gradient on a Restored Salt Marsh, Harpswell, ME	14
Justin Haley '16	Diamond Disaster: The Institutional Development of Sierra Leone	24
Marisol Hernandez '19	Women in Politics: Rwanda's Successes and Remaining Challenges	17
Andrew Hoopes '16	Modeling Calcium Dynamics in Dendritic Spines	4
Joshua Kolbert '16	Prevalence of Antibiotic Resistant Staphylococcus in Dogs (<i>Canis lupus familiaris</i>)	2
Abigail Leberman '16	Investigating Intra-Laminar Heterogeneity of the Main Olfactory Bulb	31
Megan Lubetkin '16	Hydrothermal Nontronite Formation at Seamount Number 3 (Wolf-Darwin Seamount Chain, Galapagos Marine Reserve)	20
Madeline McGonagle '18	Dendrology Course Project: The Bates Canopy	15
Alanna Morque '18	Family Matters: The Pros and Cons of Child Marriage in Northern Nigeria	16

3:15 - 4:30 PM	Poster Session II	Wall #
James Naso '16	Quantifying Malarial Parasitemia in Whole Blood Using a Novel qPCR Strategy	6
Alexandra Nason '18	Family Matters: The Pros and Cons of Child Marriage in Northern Nigeria	16
Kyle Olehnik '16	From Mosul to Raqqa: The Rapid Rise of the Islamic State	25
Elizabeth Patterson '16	Stocks and Sources of Carbon Buried in the Salt Marshes and Seagrass Beds of Patos Lagoon Estuary, Southern Brazil	11
Thomas Sacchetti '16	The Hypergeometric Function in Physics and Mathematics	22
Michaela Scanzillo '16	Investigating the Properties of High-Power Vertical-Cavity Surface-Emitting Lasers (VCSELs) Subject to Optical Feedback	36
Amy Schmidt '16	Keep the Water Flowing: Balancing Utility Revenue Stability and Changing Consumption Demand	8
Maxwell Silverman '16	Masculinity, Depression, and Access to Mental Health Supports among Boys in High School	9
Alison Simmons '16	Diversity of Bacterial Microbiota in the Midgut of Blacklegged Ticks (<i>Ixodes scapularis</i>) across the Northeastern United States	1
Becky Smith '16	Effect of the Na:K Ratio on Melt Viscosity within the SiO ₂ -NaAlSiO ₄ -KAlSiO ₄ System	19
Katherine Solman '16	The Role of Self-Constraint in Vulnerability to Depression	29
Nathan Stephansky '17	Dendrology Course Project: The Bates Canopy	15
Lauren Stimpert '16	Due Process in the War on Terror	26
Dylan Thombs '18	Dendrology Course Project: The Bates Canopy	15
Christopher Tso '16	Mental Health in the Lewiston-Auburn Community	5
Mallory Turner '17	Family Matters: The Pros and Cons of Child Marriage in Northern Nigeria	16
Katharine Wick '16	Determining Mechanisms of Delta-Opioid Receptor Neuromodulation in the Accessory Olfactory Bulb	30
4:45 - 6:00 PM	Poster Session III	Wall #
Nizamuddin Ahmady '17	Charity and Experimental Games: Investigating the Charitable Giving Behavior of Religious and Non Religious Agents	19
Maxwell Alley '16	Predicting Explicit and Implicit Attitudes toward Sociosexuality Using the Big-Five Personality Traits	29
Melody Altschuler '17	Naturalistic Social Cognition in Berlin	28
Camden Bock '16	Mixed K-means Clustering in Computer Adaptive Learning	8
Kiria Borak '19	All Lives Matter... Really?	15
Timothy Chamberlin '16	Quadcopter Dynamics	11
Yuying Chen '16	High-throughput Ras Degradation Compound Screen	7

4:45 - 6:00 PM	Poster Session III	Wall #
Marquise Clarke '19	The People's Revolution: Democratization in Northern Africa	16
Tiago Correia '17	Progress toward Spatially Resolved Single-atom Imaging of 6Li in a Multi-well Potential	9
Malcolm Delpeche '17	All Lives Matter... Really?	15
Mary Deneen '16	Four-Dot Object Substitution Masking and the Depth of Processing of Masked Words	23
Becky Dobbin '16	Manual Denervation of the Caudal Fin in Zebrafish (<i>Danio rerio</i>) Impairs Regeneration	4
Sarah Freyd '19	"Trash" as Means of Economic and Environmental Renewal in Africa	14
Olivia Fried '19	The People's Revolution: Democratization in Northern Africa	16
Livie Gilbert '19	Humanitarian Work's Hidden Agendas: Treating HIV/AIDS in Tanzania and Swaziland	17
Kathleen Gildea '19	"Trash" as Means of Economic and Environmental Renewal in Africa	14
Julia Gordon '16	The Influence of Lineup Procedures on Eyewitness Decision Making	31
Shannon Griffin '16	The Effect of Social Media and Activism Hashtags on Black College Students' Sense of Belonging and Perceived Academic Self-Efficacy	21
Robert Haran '16	Change Localization versus Detection in the Other-Race Effect: Another Failed Attempt to Show Changes in Holistic Processing for Other-Race Faces	22
Porter Harrast '16	The Role of Buccal-A Cluster Cells in the Central Pattern Generator Controlling Rasping Tooth Movement in <i>Helisoma trivolvis</i>	3
Saya Higano '16	Knowledge of Negative Consequences of Diet Influenced by Masculinity	25
Gideon Ikpekaogu '17	Charity and Experimental Games: Investigating the Charitable Giving Behavior of Religious and Non Religious Agents	19
Faaiz Irfan '17	Charity and Experimental Games: Investigating the Charitable Giving Behavior of Religious and Non Religious Agents	19
Tomas Jurgensen '17	"Trash" as Means of Economic and Environmental Renewal in Africa	14
Hugh Kenny '18	Mozambique's Discovery of Natural Gas: Opportunity or Curse?	18
Anissa Kersche	The People's Revolution: Democratization in Northern Africa	16
Khidong Kim '16	RNase III Cleavage of Species: Investigation on Evolutionary Conservation of Cleavage Site And Innovations in Double-Stranded RNA Visualization System	6
Sasha Lennon '16	Women and Men's Self-Esteem across the Four Years at Bates	32
Gibbs Lilly '16	The Elaboration Likelihood Model: The Moderating Role of Personal Variables in the Processing of Persuasive Appeals	26
Hannah Loeb '16	Understanding the Effect of Metronidazole on Zebrafish Caudal Fin Regeneration	2
Henry Loeffler '17	Humanitarian Work's Hidden Agendas: Treating HIV/AIDS in Tanzania and Swaziland	17

4:45 - 6:00 PM	Poster Session III	Wall #
Colin McIntire '16	Pollination Facilitation via Bumblebees	1
Elizabeth Miller '16	The Effect of Drawing on the Development of Emergent Literacy Skills in Early Childhood Education	27
Abbey Nolan '19	Humanitarian Work's Hidden Agendas: Treating HIV/AIDS in Tanzania and Swaziland	17
Ezra Oliff-Lieberman '18	Creating Communal Re-Entry Programs for Lewiston's Formerly Incarcerated Immigrant Youth	13
Melissa Paione '16	The Implications of Processing our First Names without Awareness in Continuous Flash Suppression (CFS)	24
Daniel Paseltiner '16	Progress toward Bose-Einstein Condensation on an Atom Chip as a Functional Testbed for Experiments aboard the Orbital NASA Cold Atom Laboratory	10
Lydia Rosenfield '16	The Efficacy of Social Stories for Young Children with Emotional and Behavioral Disorders	12
Paul Runyambo '17	Mozambique's Discovery of Natural Gas: Opportunity or Curse?	18
Alexia Sahue '19	All Lives Matter... Really?	15
Taylor Saucier '17	Effects of Dehumanizing Associations on Judgments of Athletes Accused of Doping	30
Ahmed Sheikh '17	Creating Communal Re-Entry Programs for Lewiston's Formerly Incarcerated Immigrant Youth	13
Rose Snyder '16	The Biochemical Origins of Homosexuality and Sexual Expression	5
Robben Tian '19	Mozambique's Discovery of Natural Gas: Opportunity or Curse?	18
Cristina Vega '16	Ego-Depletion Theory, Autonomy Support, and Its Effect on Alcohol Consumption	20

**Analyzing Stereotypes of Muslims on Television and Their Impact on the Muslim Community
ACS 100 and AC/RE 272 Class Participants**

Olivia Amdur '19	Lyse Henshaw '18	MacKenzie Nocek '16
Alexa Bourque '16	Justin Hoden '18	Mark Riley '16
Bernadette Connors '17	Shahrukh Khan '19	Maddy Shmalo '19
Charlotte Cutshall '18	Usman Khan '16	Claire Sickinger '19
Robert Daniels '18	Erika Lemere '19	Desirae Valentin '18
Paul DiBenedetto '18	Taylor Lough '19	Brynn Wendel '16
Joaquin Espinosa '16	Sam Maher '16	Aliza White '19
Claire Hammer '19	Cassidy McCarns '19	

**Fall Semester Abroad: Berlin Projects
Bates Fall Semester Abroad Participants**

Katherine Blandford '18	Kiyona Mizuno '18	Nick Sergay '18
Holly Bushman '16	Toby Myers '16	
Praneet Kang '17	Parker Nelson '17	

**Environmental Electronica
MUS 237 Class Participants**

Jack Adons '17
Gordon Batchelder '16
Tyler Baum '19
Abbey Bierman '17
Alex Brown '17

Charles Colony '17
Brandon Galloway '19
Grace Link '19
Andrew Mikula '19
Jacob Rothstein '19

Ti Tran '19
Sally Varner '19
Nick Wilder '19

**Ovid's Metamorphoses and Trigger Warnings
FYS 345 Class Participants**

Rohan Bhat '19
Mimi Crowley '19
Marcel Delvalle '19
Yanni Falaras '19
Sebastian Gallegos '19
Quinn Healy '19

Ruben Hinojosa '19
Max Hummel '19
Anna Jarnryd '19
Joshua Langer '19
Ariel Lee '19
Talia Regenstein '19

Preston Richard '19
Andrea Russo '19
Sarah Sigman '19
Amanda Sobotka '19

Sixteenth Annual Barlow Off-Campus Study Photography Exhibition

Max Alley '16
Emily Bandoni '15
Nicole Bermudez '16
Katherine Blandford '18
Will Bolduc '17
Mikaela Bradley '16
Ashley Bryant '16
Charlotte Cabot '17
Meredith Colleary '16
Alyssa Connors '16
Tara Das '16
Mary Deneen '16
Thuy My Do '16
Elizabeth Dolgicer '16
Brent Feldman '17
Bridget Feldmann '16
Isabel Ferguson '16
Creighton Foulkes '17
Brendan Fox '17

Fiona Frick '16
Angela Gao '17
Caitrin Griffin '16
Cailene Gunn '16
Ali Haymes '16
Matt Herbst '16
Sunny Hong '16
Clara Jessup '16
Daly Johnson '16
Kathleen Knox '16
Mary Krathwohl '16
N. Aubyn Link '17
Chase Lis '17
Mikka Kei Macdonald '16
Joe Maffly-Kipp '16
Kelsey McDermott '17
Colin McIntire '16
Andrew Melvin '17
Kiyona Mizuno '18

Jake Nemeroff '16
Carly Peruccio '16
Margaret Pope '16
Alicia Rabideau '17
Kaylee Riggi '16
Kelsey Schober '16
Rebecca Schwartz '16
Lyle Seebeck '16
Nathaniel Stephenson '18
Christopher Tso '16
Isabelle Unger '16
Fritz Windover '17
Grace Wright '16

Bates Dance Company

Dancers

Alisa Amador '18
Isa Barrengos '19
Lindsey Beauregard '18
Flannery Black-Ingersoll '19
Madeline Bruno '17
Gretchen Cates-Carney '16

Cecelia Carey-Snow '17
Raegine Clouden-Mallett '18
Allison Cormier '19
Peter Cottingham '18
Tara Das '16
Isabella Del Priore '19

Victoria Dobbin '18
Woods Fairchild '18
Sebastian Gallegos '19
Sophie Gardephe '18
Sofia Gnabasik '17
Paige Guevarra '18

Colby Harrison '17
Johanna Hayes '19
Jake Henderson '16
Montana Hirsch '16
Sara Hollenberg '19
Sara Hoye '17
Helen Keyes '17
Charlie Klein '17
Elise Krims '16
Yutong Li '18
Julia Lipner '16
Brennen Malone '17

Choreographers

Mary Anne Bodnar '16 (thesis)
Michaela Britt '17
Keila Ching '18
Mallory Cohen '17
Charlotte Cramer '19
Sofi Elbadawi '18

Crew and Collaborators

Saleha Belgaumi '18
Gretchen Cates-Carney '16
Daniel Pasetliner '16

Jane McLarney '16
Mickai Mercer '19
Johan Mohatarudin '16
Ellis O'Brien '19
Hannah Otten '16
Daniel Peeples '17
Christopher Pelz '16
Caleb Perlman '19
Brett Ranieri '16
Fergus Scott '17
Amanda Sobotka '19
Claire Sullivan '19

Riley Hopkins '18
Grace Ingabire '18
Chaesong Kim '18
Bryana Newton '16
Jorge Piccole '18
Laura Pietropaoli '17

Phathutshedzo Rambau '17
Jason Ross '19
Divyamaan Sahoo '17
Nicholas Wilder '19

Amy Turtz '19
Emilio Valadez '18
Benjamin Wilson '18
Sarah Wainshal '16
Kasey Wood '18
Louisa Woodhouse '19
Kyle Zollo '17
Emma Zulch '18

Geoffrey Pyke '18
Kelsey Schober '16 (thesis)
Gavin Schuerch '18
Claire Sickinger '19
Emma Stern '16