

MINERVA

a publication of

THE HONORS COLLEGE AT THE UNIVERSITY OF MAINE

2012

*I believe that you are embarking
on an **educational opportunity**
that is **unsurpassed** anywhere.*

*The **interdisciplinary** curriculum and experiences
provided by the **Honors College** coupled with
the ability to work closely with **outstanding faculty**
members in your major disciplines produces a
tremendously rich education.*

*Of course, you have to be an **active participant**;*

this is not an opportunity that benefits a passive observer.

- Charlie Slavin, Honors Dean 1997-2012



THE IMPACT & LEGACY OF CHARLIE SLAVIN



David Gross, Interim Dean

MINERVA

Editor

Emily Ann Cain

Contributing Writers

- Breana Bennett
- Emily Ann Cain
- David Gross
- Barbara Ouellette
- Samantha Paradis

Printing

UMaine Printing Services

Readers should send comments to:
minerva_letters@umit.maine.edu

MINERVA is produced annually by the staff of the UMaine Honors College, Thomson Honors Center, Colvin Hall, Orono, ME 04469, 207.581.3263. Design Printing of MINERVA is underwritten through gifts to the Honors College.

© 2012

Front Cover: Dean Charlie Slavin smiles at graduates at UMaine Commencement in May, 2012. Photo by Monty Rand.

Opposite: An early-morning sunrise over the desert during the 2011 NCHC Conference in Phoenix, AZ.

Back Cover: Photos from "Fill the Steins to Charlie," an event held simultaneously at locations around the world to remember and celebrate Charlie only days after he passed away.

In complying with the letter and spirit of applicable laws and in pursuing its own goals of pluralism, the University of Maine shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, national origin or citizenship status, age, disability, or veterans status in employment, education, and other areas of the University. The University provides reasonable accommodations to qualified individuals with disabilities upon request. Questions and complaints about discrimination in any area of the University should be directed to the Director of Equal Opportunity, 101 N. Stevens, 207-581-1226. Inquiries about discrimination may also be referred to the Maine Human Rights Commission, U.S. Equal Employment Opportunity Commission, Office for Civil Rights for U.S. Department of Education or other appropriate federal or state agencies.

A member of the University of Maine System.



FROM THE DEAN



Dean for a year

For all of us in the UMaine Honors community, this is the year when we've had to come to grips with beloved Honors Dean Charlie Slavin being gone. Since Charlie's passing in July, everyone affiliated with the Honors College - students, faculty, staff, graduates, and friends - balances a deep sense of loss with a deep sense of gratitude for all that Charlie gave to each of us, and the immense impact he had on the University of Maine and beyond in his more than thirty years on this campus.

As interim dean, that is especially true for me. I come to work every day in what will always seem to me to be Charlie's office. Big shoes to fill, of course, really impossible. But since I so strongly believe in what Charlie accomplished in the Honors College, it is also an exciting opportunity for me to continue what Charlie had going here, to build on it, and to try to move forward, guided by his vision of Honors at the University of Maine.

Since my experience in Honors before suddenly having this job thrust on me was as a preceptor in HON 211 and 212, I have been particularly excited to be working on the *Civilizations* sequence. Our four semester-long interdisciplinary course sequence for first- and second-year Honors students is unique in the US Honors community. It is longer than others, more inclusive, and special for its inclusion of scientists and science texts in a substantial and meaningful way - an aspect of the courses that was very important to Charlie.

We have a great group of veteran preceptors who lead the discussions in our highly unusually limited enrollment (no more than 14 students per class) preceptorials, along with some new preceptors who are bringing energy and knowledge to their classes. As I keep telling them, I envy the preceptors (this year I am not teaching) when I hear them chatting about discussions of *Frankenstein* or Darwin. There is always something deeply gratifying for the preceptor when thirteen or fourteen Honors first- or second-year students are engaged in serious, thoughtful consideration of important works that have shaped our world.

In this issue of MINERVA you will read about other exciting things happening in the Honors College. 2012 has been another great year as our students continue to impress and excel, winning awards, breaking new ground in important research, and adding so much value to the Honors community at UMaine. Many of our students have even traveled the world and left their mark! At the same time, our faculty push us to challenge our students and themselves to think bigger and broader about what "Honors" means to UMaine. And nationally, our institutional peers continue to look to us for guidance.

There is much more I could say about my whirlwind experience as "dean for a year." A national search for Charlie's successor is underway as I write, and I am confident we will have a fine new dean in place next fall. And I will be back in the trenches as a preceptor, loving every minute.

David Gross
Interim Honors Dean

4 Celebrating
Charlie

8 Honors News

11 Blue Sky Plan

12 Academics

14 Traditions

16 Travel

19 Alumni &
Friends

21 Profiles

M

I

N

E

R

V

A

EDITOR'S NOTE

Charlie Slavin's favorite color was pink. In fact, Charlie loved all kinds of bright colors, but his signature attire was a pink button-up shirt with khaki shorts or khaki pants, sandals (or crocs), and a baseball cap (which he was always leaving around campus after meetings). The 2012 edition of MINERVA is themed in **pink** in honor of Charlie.

As Editor of MINERVA for the past six years, this is the first edition I have completed without Charlie's guidance and keen eye for editing. Hopefully, I have learned enough over the years that you won't notice the difference!

This year's MINERVA presented a unique challenge: to properly express the sadness of this immense loss, while simultaneously celebrating where we are and the incredible momentum we have as a college looking to a bright future. By focusing on the impact Charlie had over the years and how he built a foundation that will propel Honors forward, I hope we have managed to strike the right balance.

Two events occurred following Charlie's death that can not be effectively captured in this magazine:

First, within hours of the news, former Honors students were posting messages and remembrances on Facebook. One Honors grad, Kris Kuhns '10, created an event called *Fill the Steins to Charlie Slavin* and set it for 10pm on Thursday, 2 August 2012. RSVPs began pouring in from around the world. Hundreds of people around the globe honored Charlie that night, and you can view some of the photos that were submitted on the back cover of this magazine.

Second, on 14 September 2012, more than 700 members of the UMaine community – students, faculty, staff – as well as Charlie's family and friends gathered at the Collins Center for the Arts to remember him and his impact on so many lives. Speakers included UMaine President Paul Ferguson, Provost Susan Hunter, Barbara Ouellette, Charlie's best friend Bob Franzosa, me, Charlie's sister in law, Terri Perelman-Hall, and his son, Matt Westhoven. In addition to the touching remarks, the evening included a fun video of photos over the years, and an incredible rendition of "Hallelujah" performed by UMaine's female a cappella group, Renaissance. The entire event was recorded and can be seen at www.honors.umaine.edu/celebrating-charlie.

I hope you enjoy Minerva 2012 and the story it shares, not just about Charlie, but about how far we have come as a college and as a community of scholars, and how much we have to look forward to as we begin a new chapter of Honors at UMaine.

Emily



NCHC Remembers Charlie

Over the course of Charlie's fifteen years as Director, then Dean of the Honors College at UMaine he was incredibly involved with the National Collegiate Honors Council, the professional association for honors programs and colleges. Charlie served on the Executive Board of the NCHC, led professional development programs for new Directors and Deans, wrote for the NCHC Journal, and visited other colleges and universities as a consultant over the years.

Without question, one of Charlie's favorite times each fall was taking a large group of students (thanks to the generosity of Betsy & Bill Leitch!) to the annual NCHC Conference. Over the years, Charlie took students to Orlando, FL, Washington, DC, Chicago, IL, Salt Lake City, UT, New Orleans, LA, St. Louis, MO, Philadelphia, PA, Denver, CO, San Antonio, TX, Kansas City, MO, and Phoenix, AZ.

The conference is a chance for our students to present their research, and for the Honors College to share our successes with peer institutions, and to pick up new ideas to use at UMaine. Charlie would always return with a small notebook full of ideas he had borrowed from his colleagues, all focused on how to improve and expand opportunities for Honors students at UMaine.

At the 2012 conference in Boston, MA, Charlie was recognized posthumously as an NCHC Fellow. While Charlie would have hated being recognized, he would love to know that he was honored alongside some of his favorite Honors Directors and Deans from around the country. UMaine students, faculty, and staff were on hand in Boston during the conference to accept the award on Charlie's behalf. ■ ■ ■



Each August, Charlie welcomed new students with a lecture that, unlike most “Charlie talks,” had a more serious tone. In his own words, here is Charlie’s best advice for success at UMaine as an Honors student. Words to live by, in fact.

This I believe...

In the words of Charlie Slavin

In the early 1950s, a very famous journalist, Edward R. Murrow, produced a series of short essays for CBS News entitled *This I Believe*. If you are an NPR/Public Radio junkie like I am, you know NPR revived that series between 2005 and 2009. They invited people, famous or not, to write about what they believe. Today, I’d like to share with you what “I Believe” about you and the Honors College:

I believe that you are embarking on an educational opportunity that is unsurpassed anywhere. The interdisciplinary curriculum and experiences provided by the Honors College coupled with the ability to work closely with outstanding faculty members in your major disciplines produces a tremendously rich education. Of course, you have to be an active participant; this is not an opportunity that benefits a passive observer.

Over your time in Honors you will be exposed to ideas, perspectives, and ways of thinking that may be strange or foreign to you. I encourage you to engage them – don’t shy away, don’t reject them out of hand, don’t accept them because they’re stated by someone with “authority,” but rather ENGAGE them – weigh them, consider them, analyze them, and evaluate them. Give them the consideration that you would like people to give to your ideas and perspectives – and allow yourselves to grow through that process.

I believe success in Honors, or at UMaine, requires dedication, hard work, and making good choices. There’s nothing wrong with that. All of you need to develop good academic habits and employ them from the first day of classes. Don’t wait until you’re underwater – at that point, it’s too late. Being smart is not something to be ashamed of; doing well in college is good (as, of course, is having fun). And they are certainly not mutually exclusive. Will you occasionally have to choose between playing and studying? Sure. Make your decisions wisely, and you won’t have to always choose studying!

These academic habits I’m talking about, particularly for Honors, are pretty straightforward. Let me emphasize three:

Attend your classes – both your preceptorials and the weekly lectures. Sure, this is a requirement and an expectation of the College, but that’s not all. There is always something to learn, from your peers and from faculty members – take advantage of these opportunities! I’m fairly certain that there will be Honors lectures that don’t engage your interest, but I’m also fairly certain that those lectures, like the ones that do excite you, will be important to attend. This is part of the hard work.

Do the assigned reading – yes, I know it seems as if there is a ton of reading assigned in Honors. And, yes, I know, you will hear students say “Oh, I didn’t do the reading and I did fine.” I’m not here to debate that assertion; in fact, I’m pretty sure that has happened. So what? The plan here is to engage in these courses and with the assigned texts – to do that you have to do the reading. If the goal was seeking meaningless good grades, why bother?

Explore the possibilities – the heart of an Honors education is intellectual risk taking. The Honors core curriculum is a broad, multi-disciplinary trajectory and it will take all of you into areas that will challenge your abilities (and probably your interests). Indeed, that’s the challenge we put before you: for the English majors to struggle with quantum mechanics while the engineers struggle with Virginia Woolf. I truly hope these experiences will open up a world of possibilities for you to explore. And perhaps find some new passions.

I believe respect is at the heart of success in education (and perhaps in every other endeavor). If you treat your faculty members and peers with respect, you will have a much easier go of it. Most importantly, they will treat you with respect as well. So, attend classes, be punctual, do the assigned work on time, learn to listen and not interrupt your classmates – all of those are good things. Read your email and respond in a reasonable amount of time – it’s okay if your primary means of communication is text or Facebook, but it’s also respectful to respond to requests and act on information you receive from your instructors and even administrators, like me. Oh, and turn on the automatic spell check in email – why wouldn’t you?

You also might ask, if they don’t tell you, how your instructors would like to be addressed. I prefer, “Charlie.” I don’t feel disrespected, but I appreciate that some might. My own sense is that actions and behavior, more so than titles, lead to respect. I encourage you all to keep the idea of respect in the forefront of your thoughts.

Arguably the most important aspect of respect in a University setting is a commitment to academic integrity. Cheating, plagiarizing, or fabricating in your schoolwork is disrespectful of your peers, your instructors, the University, the intellectual work of others, and our society. If you are unclear about this, talk with your Honors preceptor or a member of the Honors College staff. Engaging in any of these behaviors intentionally is completely unacceptable.

I believe the Honors College provides tremendous opportunities in and out of the classroom. I hope you will take advantage of them. Get involved and bring your friends. Come chat with me, just for fun. Chat with our staff. Chat with your preceptors. Find out what’s going on and jump in. It’s a great way to connect, and can lead to additional opportunities down the road. You never know!

I believe and hope that all of you can join me at the Honors Celebration in four years where we recognize your graduation with Honors! Unfortunately, I’m pretty sure that won’t happen. However, I do know that it could happen. All of you have the talent and ability to post excellent grades, write a first-rate thesis, and graduate with Honors. We wouldn’t have invited and accepted you into the Honors College otherwise. The choice truly is in your hands. If you work hard, treat others with respect, and become engaged in your education, there is no reason you can’t be there that day to receive your medallion, your stein, and your entry into a distinguished group of very special graduates of UMaine.

Now you know some of what I believe. I hope you believe much of this, too. I also believe that I have the best job on campus – because my job is pretty much dedicated to supporting you in your academic endeavors. Don’t be afraid to let me know if there is something I can do to help or if you just want to chat about a question or a concern. ■ ■ ■

"[Charlie's] impact on Honors has been profound. It has grown exponentially. It is now a College. It is now a community of learning with a residential component; it has a structure to facilitate faculty/student research and so much more. Building Honors was not an exercise in empire building. Every program, every aspect is generated by Charlie's vision of the Honors journey. All has grown out of Charlie Slavin the teacher and his commitment to students and teachers alike having an environment in which they can continue their journey.

Charlie Slavin is the finest teacher I have ever known. His physical passing leaves a tremendous hole. But his legacy and spirit live on in a multitude of places and a multitude of hearts, including mine. Our challenge is that Charlie's legacy be continued by all of us."

- James Gallagher, Honors Preceptor, Professor Emeritus, friend of Charlie

- Charlie becomes Director of Honors Program
- Total number of Honors student: 225



1997



- Honors motto chosen by students: *Studium eruditionis ardescens* (Igniting a passion for learning)
- First year of Colvin Hall Honors Housing

1999

- Provosts Commission on an Honors College Final Report
- First Honors Spring Break MDIBL Course



2001

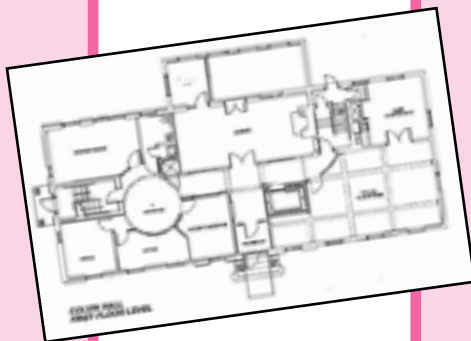


- First MINERVA
- Balentine Hall renovated for Honors Housing
- First Rezendes Ethics Lecture (REL): Sut Jhally
- DHG: Carolyn Reed '72
- 1st Honors Trip to DC
- HR: *Guns, Germs, & Steel* – J. Diamond

2003

>>> THE IMPACT OF CHARLIE SLAVIN

1998



- Colvin Hall Renovation Committee created
- First class of students recruited by Charlie
- First major Honors Celebration

2000

- Addition of 1935 to Honors Logo
- Provost's Commission on an Honors College established
- Demolition of the original Honors Center
- Colvin Hall opens as the Thomson Honors Center



2002



- Honors College Opened
- First Honors Associates: Emily Cain & Sarah Paul
- 1st Distinguished Honors Graduate (DHG) lecture: Jim Tierney '69
- *Civilizations: Past, Present & Future* adopted
- Charlie begins teaching the first Honors Read (HR): *Honeymoon in Purdah* – A. Waring

2004

- Charlie appointed as first Honors College Dean
- HON 180: *A Cultural Odyssey* begins
- DHG: Charles Stanhope '71
- REL: Lijun Yuan
- HR: *Living Downstream* – S. Steingraber





Charlie talks with students – NCHC conference in Phoenix, 2011



Charlie caught in a rare surprise by Class of 2006 grads – all wearing pink!

- First Honors Thesis Fellowships: Lown, Quimby
- MINERVA wins 2nd place at NCHC in St. Louis
- REL: Eric Meslin
- DHG: George Singal '67
- HR: *Waiting for the Barbarians* – J.M. Coetzee
- Visit & lecture by author Sandra Steingraber



- REL: Chris Hedges
- First full-time Honors faculty members
- MINERVA wins 1st place at NCHC in Denver
- New thesis fellowships: Reed, Jones
- HR: *Zen & the Art of Motorcycle Maintenance* – R. Pirsig

- MINERVA wins 1st place at NCHC in Washington, DC
- Leitch Funds Endowed to support research & travel, cultural experiences, and faculty development
- Visiting Faculty Suite opens
- INBRE grant started
- Honors joins Facebook
- REL: Robert Shetterly
- HR: *The Lucifer Effect* – P. Zimbardo



- First four CLAS-Honors Preceptors created
- Honors Theses go online: digitalcommons.library.umaine.edu
- MINERVA wins 2nd place at NCHC
- HON 150: *Genome Discovery I: From Dirt to DNA*
- DHG: Bruce Stanton '74
- HR: *The Omnivore's Dilemma* – M. Pollan

2005

2007

2009

2011

IN , HONORS DEAN 1997 - 2012 >>>

2006



- First class of Honors College graduates
- Honors-High School Articulation Agreements
- REL: Lily Yeh
- DHG: Dan Christensen '77
- HR: *War is a Force That Gives Us Meaning* – C. Hedges

2008

- Completion of Colvin Hall – 2nd, 3rd, 4th floors
- HON 170: *Currents & Contexts* begins
- Rezendes Global Volunteers Fund created
- REL/DHG: Dr. Bernard Lown '42, Nobel Peace Prize Winner
- Stanhope Study Abroad Fellowship created
- Center for Undergraduate Research created
- HR: *The Survival of the Bark Canoe* – J. McPhee



2010



- Celebrating 75 years of Honors at the University of Maine
- REL: Dick Hill
- DHG: Bettina Boxall '77
- HR: *Persepolis* – M. Satriapi

2012

- Largest Honors College graduating class
- Citizen Scholar Initiative started
- REL: Robert Kenner
- DHG: Kristen Gwinn-Becker '97
- Fill the Steins to Charlie
- HR: *What is the What* – D. Eggers
- Total number of Honors students: 800+



The students, faculty, staff, and graduates of the Honors College never cease to amaze us with their dedication to taking intellectual risks, to building community, and to carrying on the Honors College tradition of excellence.

Erin Carter '13 Earns Goldwater Recognition

U Maine Honors student Erin Victoria Carter has won a scholarship from the Barry M. Goldwater Foundation. Carter, who is majoring in biochemistry and molecular/cellular biology, hopes to earn a doctoral degree in immunology or molecular biology, and her career goal is to conduct AIDS or autoimmune disease research for a university or other research facility. There were 282 Goldwater scholarships awarded nationwide for the 2012-2013 academic year. The purpose of the foundation is to provide a continuing source of highly qualified scientists, mathematicians and engineers by awarding scholarships to college students who intend to pursue careers in these fields. ■ ■ ■



Two Honors Students Awarded Hollings Scholarships



U Maine Honors Students Theo Koboski '14 (left) and Alex Jensen '13 (right) are recipients of the National Oceanic and Atmospheric Association's 2012 Ernest F. Hollings Undergraduate Scholarship Program. This scholarship consists of two separate \$8,000 scholarships (one given for junior year and one given for senior year) as well as a ten week paid internship at the NOAA facility of the student's choice. Both students are Marine Science majors. ■ ■ ■



Celeste Lozier '14 Awarded George J. Mitchell Peace Scholarship

Celeste Lozier was named one of two recipients of the George J. Mitchell Peace Scholarship for 2011-2012. Celeste is an Honors student majoring in English, with a concentration in Technical/Professional Writing. The scholarship, named after former US Senator from Maine George J. Mitchell, who brokered the peace accord between Northern Ireland and the United Kingdom in 1998, funds a student exchange program between Maine and Ireland at the University and Technical College level. During the 2012 spring semester, Celeste attended the University College Cork of the National University of Ireland.

In Ireland, Celeste continued her degree track in English, with a focus on the Gaelic literature tradition. Before going, Celeste said, "One of my goals is to take full advantage of a five month immersion in a different culture by learning, seeing and experiencing as much as is feasible. I will be in communication with the University of Maine while overseas in the form of a blog and perhaps other forms of updates."



Celeste's semester in Ireland also provided opportunities to further her current research at the University of Maine. Celeste is involved in research focused on Maine's creation of a deepwater offshore wind power industry. She says, "My work in this area of energy production will be complemented by my international location, as Europe is the global leader in offshore wind, with close to 1250 turbines in the water spread across 49 wind farms in 9 different European countries." Working with advisor Damon Hall, they are analyzing public outreach data to better inform developers and agencies in Maine as to how to best introduce this new industry into established communities and economies.

Celeste's future goals involve continuing to develop her writing abilities so as to facilitate communication between academia and public policy. ■ ■ ■

Carolyn Reed Fellow: Paige Martin '13

Paige Martin '13 is this year's winner of the Carolyn E. Reed Honors Thesis Fellowship. Paige, who hopes to become a physician, is pursuing a thesis titled *The Effect of Cataract Surgery on Depression and Vision-Related Quality of Life in an Elderly Population* (advisor: K. Lira Yoon, psychology). By combining real-life clinical experience working in a Maine ophthalmologist's office with research in psychology, Paige hopes to explore and understand both the physical and mental health elements of treating patients. The Reed fellowship is awarded annually and Fellows receive a stipend of up to \$2,500 to support their thesis work. ■■■



Preceptor Melissa Ladenheim Recognized for Leadership in Service Learning



Honors College preceptor Melissa Ladenheim is one of three faculty members in Maine awarded the Donald Harward Faculty Award for Service-Learning Excellence from the Maine Campus Compact. This coalition of 18 member campuses in Maine, annually selects recipients who use service-learning and/or community action as an innovative teaching tool to engage students in civic learning.

Melissa argues that the point of service learning, "... is to not only move learning beyond the conventional classroom and augment the resources and capacity of community partners, but also to inculcate in students the value and benefits of being an engaged citizen."

Melissa was recognized for her numerous initiatives that advocate service-learning and community action on campus and in the local community. She developed and taught HON 319 *Justice or Charity: Community Service in Theory and Practice* which involved scholarly study and real-world experience at Crossroads Resource Center in Old Town. Melissa has worked with others to develop a Citizen Scholar Initiative within the Honors College, is part of CERTS (Community Engaged Research, Teaching and Service) at UMaine, and has engaged in developing partnerships with community organizations such as the Islamic Center of Maine, and continues to spread the word about service learning through presentations at National Collegiate Honors Council conferences. ■■■

Edith Patch Award: Maggie Burns '12

Honors student Margaret "Maggie" Burns is the 2012 recipient of the undergraduate-level Edith Patch Award. The Award, named for the first woman scientist at UMaine, is given to graduate and undergraduate women to acknowledge their work on campus and in recognition of their promise for future contributions to the fields of science, agriculture, engineering, or environmental education. Awardees receive an honorarium, and are invited to present about their work at the Annual Earth Day Reception in honor of Dr. Edith Marion Patch. Maggie now attends the University of Colorado at Boulder for graduate school. ■■■



Recognizing Excellence in Functional Genomics

Honors Students Funded for Research as Undergraduates

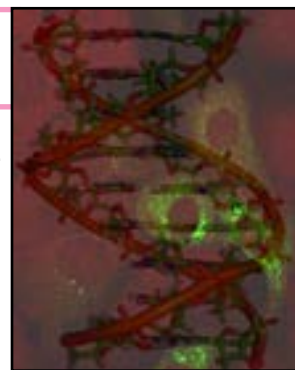
The Maine IDeA Network for Biomedical Research Excellence (INBRE) is an NCRR/NIH supported network of thirteen Maine institutions with an overall goal of strengthening Maine's capacity to conduct NIH-competitive biomedical research.

Seven Honors students (and their advisors) have been selected to receive INBRE Functional Genomics Thesis Fellowships, at \$2575 each, for the 2012-2013 academic year:

Justin Bolinger (Keith Hutchison), **Anna Burgess** (Clarissa Henry), **Erin Carter** (Robert Wheeler), **Siobhan Cusack** (Benildo de los Reyes), **Erica Hidu** (Robert Wheeler),

Jennifer MacDowell (Alireza Sarvestani and Sharon Ashworth), and **Alejandro Velez** (Julie Gosse).

Additionally, Honors student **Joshua Jones** was awarded a \$1000 INBRE Functional Genomics Junior Year Research Award. ■■■



Amy Foley '10 Published in *Nature*



Amy Foley's interest in regenerative medicine began while doing her 2010 Honors thesis research studying microgravity's effect on cell development. This interest carried her to The University of California, San Francisco where she has been working as a Stem Cell Biochemist investigating heart regeneration for over two years. In Spring 2012, Amy's research paper was published in the journal *Nature* about a new technology discovered to reverse the cardiac damage caused by a heart attack.

The heart is primarily composed of two cell types: cardiac fibroblast, which are non-contractile cells that act as a skeleton to the heart, and cardiomyocytes, which are the contractile muscle cells that pump the blood. During a heart attack, cardiomyocytes are killed, dramatically reducing the heart's functionality and causing premature death to the individual.

Amy's research was an *in vivo* mouse study consisting of injecting three genes (small DNA pieces) into the heart after simulating a heart attack. These genes were able to "reprogram" a cardiac fibroblast into a functioning cardiomyocyte, returning the heart to nearly full functionality and reversing the damage.

This research was awarded a five million dollar grant from the California Institute of Regenerative Medicine to continue the research in pigs, the next step towards FDA approval for human application. ■ ■ ■

Check it out for yourself... *In vivo* reprogramming of murine cardiac fibroblasts into induced cardiomyocytes; Li Qian, Yu Huang, C. Ian Spencer, Amy Foley, Vasanth Vedantham, et al.; *Nature* 485, 593-598.

ASSOCIATE ADVENTURES:

Bre Bennett '12 and Sam Paradis '12 to the rescue!

From weekly battles with the Neville 101 sound system to saving thesis writers from the perils of procrastination and missed deadlines, the 2012-2013 Honors Associates are doing their best to protect and serve the faculty, staff, and students of the Honors College. This dynamic duo balances the forces of the sciences and humanities, as Bre Bennett '12 recently graduated with a degree in Biochemistry and Sam Paradis '12 with a degree in History and Theatre. Despite their disparate disciplines, the Associates stand united by their childhoods in Maine and their mutual enjoyment of *The Office*. Outside of the realm of the Honors College, Bre enjoys spending her spare time outdoors, preferably on mountains and set to the tune of The Decemberists, while Sam enjoys running and biking, as well as stage managing various theatre productions. However, never fear, because when there is an Honors College cry for help, the Associates waste no time in leaving the comforts of Holmes hall to dart down the fire escape and assist in any way possible.

The Associates' latest mission involves further developing the Honors College community. With the loss of our beloved dean, Charlie, this idea of having a strong Honors community seems even more invaluable. There are two projects underway that they hope will bring faculty, staff, and students together.



Starting in 2013, the Honors College will be hosting monthly Brown Bag Lunches, which will provide an informal setting for students and faculty to discuss a wide range of honors related topics outside of the classroom. The Student Advisory Board, under the leadership of the Associates, will also host events highlighting Honors faculty members. The first event will feature David Gross, the Interim Dean. Once again, the goal is to provide an informal atmosphere where faculty members can share their stories and experiences with students. ■ ■ ■

www.honors.umaine.edu/community

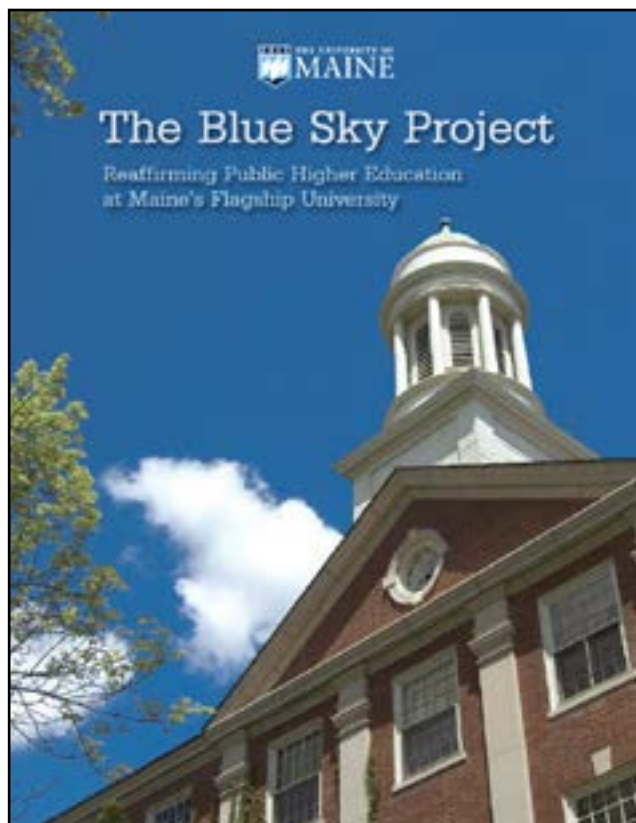
Honors College Featured Prominently in UMaine Strategic Plan

University of Maine President Paul Ferguson has officially released a strategic plan that creates a blueprint for the state's flagship public university to become one of the most distinctive universities in the country for student achievement and community engagement.

The plan, *The Blue Sky Project: Reaffirming Public Higher Education at Maine's Flagship University*, was accepted by the University of Maine System trustees over the summer.

"This plan isn't just about making the University of Maine a bigger, better and more financially sustainable institution," says Ferguson. "It also is about reconnecting the university to the people of Maine so that we can have a major impact on the future growth and prosperity of our state in the 21st century."

The plan is centered around investing in UMaine's existing areas of distinction and launching a number of new initiatives to better align the university's resources and programs with the needs of the state. It outlines five strategic pathways, summarized as the "Five M's," and a series of related initiatives and strategies to transform UMaine in the next five years:



President Ferguson speaks at the 2012 CUGR Showcase

Pathway #1 - Maine's Renewal—Ensure that UMaine teaching, research, outreach, workforce & economic development program excellence are in close alignment with Maine's priority needs.

Pathway #2 - Money and Management—Optimize operating efficiencies & control expenditures within a financially sustainable business model, and seek new & entrepreneurial revenue sources.

Pathway #3 - Morale & Marketing—Invest in faculty & staff professional development, refresh the UMaine brand & improve communication among all constituencies.

Pathway #4 - Mentoring and Modeling—Promote undergraduate & graduate opportunities for student success, including value-added residential life, research fellowships, internships, & more effective advising & learning environments.

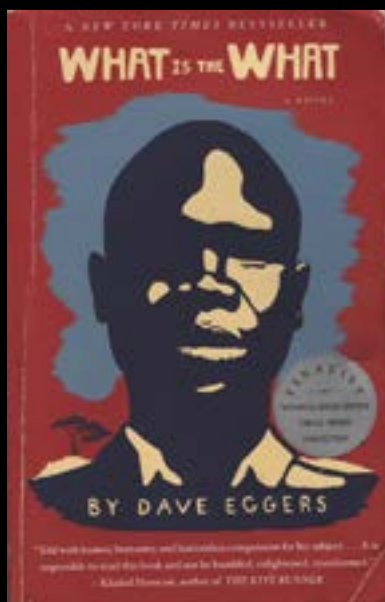
Pathway #5 - Master Plan and Maintenance—Restore & create UMaine's physical plant and technology infrastructure to ensure a vibrant place of learning & discovery.

The Honors College, which has been a key element of UMaine's academic and community fabric since 1935, is mentioned in *Blue Sky* several times. Specifically, as one of the "highly impacting opportunities for promoting student leadership at UMaine" (p.18), and under Pathway 4, it is explicitly stated that "we will strengthen our signature Honors College" (p.31), and a stated initiative, "Continue to develop the unique quality of the Honors College as an unparalleled 'value added' UMaine undergraduate experience" (p.32).

Interim Honors Dean David Gross is excited about the opportunity. "Our community of motivated students, faculty, and staff is ready to make *Blue Sky* a success. The Honors College has a daily focus on undergraduate research, interdisciplinary teaching and learning, and critically engaging students and faculty in extraordinary ways. *Blue Sky* is a chance to take that to a new level while maintaining quality and excellence."

Ferguson, who came to UMaine in July 2011 and was formally inaugurated as the 19th president this past April, began the "Blue Sky" project shortly after arriving on campus. "This has been a comprehensive, inclusive process that has united the entire University community around a renewed sense of pride, purpose and commitment to serving the people of Maine," Ferguson says. "There is much work to be done, but we see blue skies ahead for this great University and the State of Maine." ■■■

www.umaine.edu/blueskyplan



Honors Read 2012

What is the What, by Dave Eggers, tells the tale of Valentino Achak Deng, a lost boy from Southern Sudan. Valentino was forced to flee his homeland at a young age. His harrowing journey through Sudan, Ethiopia and Kenya eventually led him to the United States where he connected with Dave Eggers to share his story. The students who selected this book felt that one of the greatest challenges it presented was the idea of truth. While Valentino is a real person with a real story, language barriers led him to narrate his story to Eggers, who admits to rearranging events in order to better portray what he saw as the ultimate truth of Valentino's story.



In their first Honors lecture, the class of 2016 had the opportunity to speak with Aruna Kenyi, a local "lost boy" currently living in Portland. Aruna was able to meet Valentino and Dave Eggers at The Telling Room in Portland and was inspired to write his own memoir, *Between Two Rivers*, chronicling his journey to the US. Before the lecture, our first-year students were given the opportunity to meet with Aruna (pictured here with Elizabeth Wood). In the lecture, Aruna shared his journey and talked about the Sudanese School Lunch Program he has been working on in Maine. He then gave our students time to ask questions about growing up in a region of conflict, fleeing from home, and moving to a foreign land. His responses, while informative, were mixed with humor and provided a special perspective on the Honors Read. ■ ■ ■



CUGR enjoyed another successful school year in 2011-2012. CUGR was awarded a Presidential Requests for Visions of University Excellence (PRE-VUE) grant to support "Enhancing Undergraduate Academic Experiences through Student-Faculty Research Collaborations." Through grants, students are provided the opportunity to apply for research funds, including stipends and travel/supplies costs. Faculty apply to become CUGR Fellows, who are trained in undergraduate research mentoring.

In other exciting news, CUGR again hosted the annual Undergraduate Research and Academic Showcase where over 100 undergraduates presented research in exhibits, oral presentations and poster formats. A wide variety of academic programs were represented by these student-scholars, including education, new media, engineering, animal and veterinary sciences, biology, psychology and marine sciences.

The Honors College had its largest number of participants ever, with prizes being awarded to several students, including: Haley Richardson (*Classroom Realities: Traditionally and Alternatively Certified Secondary Science Teachers' Preparedness to Teach Students with Disabilities*); Breana Bennett (*The Haptotactic Motility of Angiogenic Endothelial Cells*); Charles Bergeron (*Imagining a Better World: A Study of Imagined Intergroup Contact*); Justin Bollinger, Colleen Buckless, Gabriel Vachon, Paige Miles, Jordan Gagne (*A Study of Changes in Gene Expression During Limb Regeneration*).

CUGR offered, for the first time, a new graduate course on research mentoring. Taught by Professor Mike Kinnison, the class was a huge success, attesting to the importance of the "generational" nature of mentoring, with faculty mentoring both graduate and undergraduate students, and graduate students providing significant support to undergraduate students. ■ ■ ■



Why I Teach in the Honors College

Mark Brewer, Political Science



The question of why I teach in the Honors College is actually one that I think about and get asked quite a bit. There are many reasons, but in the interest of parsimony I will offer the big three. The first is because I am a fervent believer in and defender of the value of a liberal arts education. In my view, one cannot be considered truly educated unless she or he has been exposed to, done work in, and thought critically about the arts, the humanities, the social sciences, and the natural sciences. The Honors *Civilizations* course sequence thrusts students into each of these four areas, and forces them to think deeply and critically. I am

forced to do the same. For me, this is a truly rewarding experience.

The second reason I teach in Honors is a desire to get out of my academic comfort zone. I am a political scientist, and I truly love what I do. But sometimes it is refreshing to engage material where I have no expertise whatsoever, no preconceived notions or biases. Many of the texts we read/listen to/view in Honors are texts that I had not even thought about since my undergraduate days, or even high school. I enjoy reacting to these texts and interacting with my students as they react as well.

The final reason I teach in Honors is Charlie Slavin, the dear friend that many of us miss so much. Charlie was one of the people with whom I interviewed when I visited the UMaine campus as a job applicant, and his enthusiasm struck me immediately. I realized quickly that he had something pretty cool going on in Honors, and that if I came to UMaine I wanted to be a part of it. Charlie wrote a letter for me when I came up for tenure and was one of the first people to congratulate me when it was announced that I had been successful in this regard. In that same conversation he asked if I was ready to start teaching regularly in the *Civilizations* sequence. I said yes, and I have never regretted it. ■ ■ ■

Elizabeth Nieman, English

I have taught Honors 111 each fall semester since becoming a part of the University of Maine community in 2008. That first fall my little girl was born. The third spring I completed my Ph.D. in English literature. These two events seem utterly unrelated—and indeed, some might say, almost incompatible, given the extensive time required for both babies and dissertations. But engaging in these two very different kinds of work brought together different aspects of my personality. That is, I learned that seemingly competing values and ways of being and living were not actually at odds—and when they were at odds, I learned new approaches to the problems I faced.



The Honors curriculum asks students to occupy a similarly uncomfortable zone, both by drawing together students from a wide range of disciplines and by expanding the notion of a “Great Books” course to include seminal scientific and mathematical texts. Students encounter questions and lines of inquiry that draw from multiple disciplines, often before becoming a student of a particular discipline. I enjoy helping students navigate the new spaces that Honors 111 creates, for both critical engagement with difficult texts and for self-reflection and personal growth.

While I teach Honors for multiple reasons, such as the small class sizes and the space this course creates for students to learn from each other, all my reasons stem from what Honors fundamentally does at a base level. The curriculum historicizes ways of being and living in the world, teaches students to think critically about what it means to create knowledge, and prepares students to create bridges between seemingly disparate aspects of their coursework and even their lives. This curriculum teaches me how to be a better teacher to students outside my own field of study, as do my students. ■ ■ ■

John M. Rezendes Visiting Scholar in Ethics

THE HONORS COLLEGE AT THE UNIVERSITY OF MAINE

THE 2012 JOHN M. REZENDES VISITING SCHOLAR IN ETHICS

ROBERT KENNER



FOOD, INC.

THE ETHICS OF HOW WE EAT

THURSDAY, APRIL 19, 2012

Talk: 3:30 p.m., Hauck Auditorium, Memorial Union
University of Maine

Robert Kenner is an award-winning American film and television screenwriter, director and producer. His documentary film, *Food, Inc.*, examines large-scale agricultural food production in the United States and has played a prominent role in the discussion of environmental sustainability, food safety, and the treatment of animals and employees.



The John M. Rezendes Ethics Lecture was established to critically engage students, faculty members and the surrounding community with ethical issues of national importance.

This event is sponsored in part by the Cultural Affairs/Distinguished Lecture Series Fund, College of Liberal Arts and Sciences, College of Natural Sciences, Forestry, and Agriculture, College of Engineering, University of Maine Cooperative Extension, Department of Plant, Soil and Environmental Sciences, and Department of Food Science and Human Nutrition.

In complying with the letter and spirit of applicable laws and pursuing its own goals of diversity, the University of Maine shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, including transgender status or gender expression, national origin, citizenship status, age, disability, genetic information or veteran's status in employment, education and all other areas of the University of Maine. The university provides reasonable accommodations to qualified individuals with disabilities upon request. Questions and complaints about discrimination in any area of the university should be directed to Karen Kemble, Esq., Director of Equal Opportunity, ADA Coordinator, Title IX Coordinator, Rehabilitation Act Section 504 Coordinator, University of Maine, 5754 North Stevens Hall, Room 101, Orono, ME 04469-5754, telephone 207-581-1226, TTY 207-581-9484.

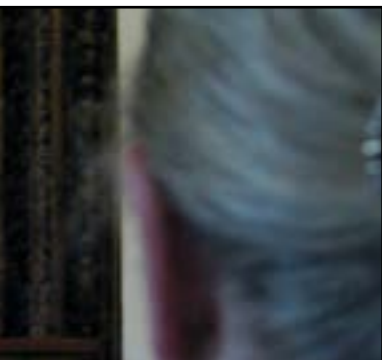
One of Maine's public universities



The annual Rezendes Ethics Lecture and Essay Competition is made possible by the generosity of Dennis '57 and Beau Rezendes through the John M. Rezendes Ethics Fund, dedicated to providing our students and community access to important ethical issues.

FMI, www.honors.umaine.edu/traditions

Distinguished Honors Graduate Lecture



THE HONORS COLLEGE AT THE UNIVERSITY OF MAINE

2012 DISTINGUISHED HONORS GRADUATE LECTURE SERIES

Kristen Gwinn-Becker



Navigating Entrepreneurship and the Humanities

Wednesday, October 24, 2012

Reception: 4 p.m., Andrews Leadership Hall, Buchanan Alumni House

Lecture: 4:30 p.m., McIntire Room, Buchanan Alumni House

Dr. Kristen Gwinn-Becker maintains several professional identities, including historian, technologist, author, businesswoman, strategist and general rabble-rouser. She brings her interdisciplinary approach to both education and business. She graduated from UMaine with a B.A. in History at age 19, becoming the youngest graduate of the university. She also earned a Master's of Philosophy in International Peace Studies from Trinity College Dublin and a Ph.D. in U.S. History from George Washington University. She is the author of *Emily Greene Balch: The Long Road to Internationalism*, a biography of the second U.S. woman to receive the Nobel Peace Prize. As a database and Web developer, she has always integrated her technology skills into her various roles working with a range of nonprofit organizations and small businesses. In 2012, she founded and currently serves as CEO of HistoryIT, an information technology business that bridges the gap between technology, humanities scholarship and digital resources.



The Distinguished Honors Graduate Lecture series was established in 2002. Each year, this award highlights the accomplishments of a UMaine Honors graduate. The lectures serve as an opportunity for the university community to recognize the individual's accomplishments, vision and connection with UMaine.

Honors College
OF THE UNIVERSITY OF MAINE

The University of Maine does not discriminate on the grounds of race, color, religion, sex, sexual orientation, including transgender status and gender expression, national origin, citizenship status, age, disability, genetic information or veteran's status in employment, education, and all other programs and activities. The following person has been designated to handle inquiries regarding nondiscrimination policies: Director, Office of Equal Opportunity, 101 North Stevens Hall, (207) 581-1226.

Each year since 2002, we have successfully endeavored to host a distinguished honors graduate for a meaningful visit to campus, including conversation with Honors students, faculty, and the UMaine community relevant to the honoree's life, experience, and work.

FMI, www.honors.umaine.edu/traditions

Thanks again, to the generosity of Betsy & Bill Leitch, 15 students, 6 faculty, and 4 staff members presented the following sessions and posters at the 2011 NCHC in Phoenix, AZ!



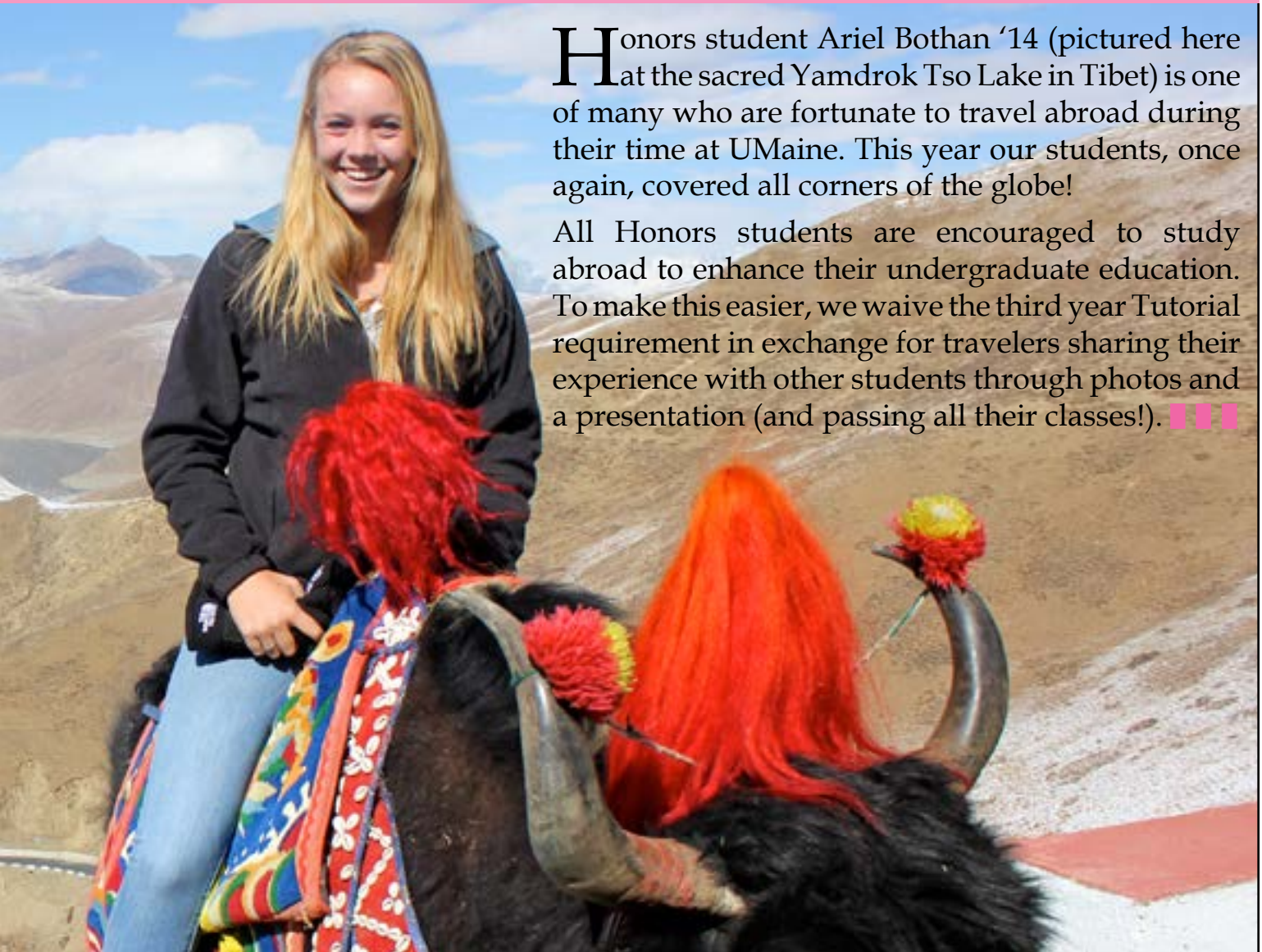
POSTCARDS

Nicole Begley '14 – Secondary Education, French – France
 Ariel Berthel '13 – Zoology – Australia
 Ariel Bothen '14 – International Affairs, Anthropology – Semester at Sea
 Robert Brown '13 – Finance – Australia
 Sarah Denslow '13 – International Affairs, French – Canada
 Matthew Dzaugis '13 – Marine Biology – Semester at Sea
 Kyle Franklin '14 – Financial Economics – Jordan
 Kelsey Hickey '13 – Psychology – Italy
 Eliza Kane '14 – Earth Sciences, Anthropology – Brazil
 Emily Kelsey '14 – Civil Engineering – Semester at Sea
 Amanda Livingston '15 – Anthropology – Finland
 Celeste Lozier '14 – English – Ireland
 Harold Lyons '14 – Political Science – Jordan
 Kevin McCord '13 – International Affairs – Turkey
 Allison Priole '14 – New Media, Elementary Education – Canada
 Elizabeth Reynolds '14 – Civil Engineering – “The Grand Tour: Art in Europe”
 Amanda Richards '14 – Communication – Semester at Sea
 Hannah Siebert '14 – International Affairs – Spain
 Tess Tacka '15 – International Affairs – Canada
 Courtney Thibault '14 – Anthropology – England
 Rosehannah Vachon '14 – Food Science & Human Nutrition – New Zealand
 Sophie Veilleux '14 – Psychology – England
 Sarah Watts '13 – Ecology and Environmental Science – Ireland
 Seth Wegner '15 – Spanish – Argentina
 Melissa Williams '14 – Marine Science – Australia
 Shona Workman '14 – Secondary Education, French – Chile

A Lateral Field Excited Thin Film Bulk Acoustic Wave Sensor—**Michael Fitzgerald** • *How the West Was Won: A Look at the History, Development, & Issues of Irrigation*—**Jordann Hatfield** • *Politically Charged Pop-Art: The Darfur Tragedy*—**Meghan White** • *Collegial Colliding Worlds*—**Robert Glover, Mark Haggerty, Sarah Harlan-Haughey, Mimi Killinger, Jordan LaBouff, Justin Martin, Charlie Slavin** • *Inclusivity: All Under One Roof*—**Hannah Hudson, Elizabeth Kevit** • *What Does Plato Have to Say About Poverty: Honors and Social Justice*—**Nicole Begley, Andrea Flannery, Christine Gilbert, Erica Hidu, Melissa Ladenheim** • *Dynamic & Diverse Discussion in Honors*—**Paige Eggleston, Molly Flanagan, Mark Haggerty, Mimi Killinger** • *Great Works: Creating an Honors College Book Exchange Program*—**Samantha Paradis, Keri West** • *Unifying Western and Traditional Medicine: Ethics, Implications, and Solutions to a Cultural Crisis*—**Karin Baard, Morgan Brockington, Kalie Hess**



FROM HONORS



Honors student Ariel Bothan '14 (pictured here at the sacred Yamdrok Tso Lake in Tibet) is one of many who are fortunate to travel abroad during their time at UMaine. This year our students, once again, covered all corners of the globe!

All Honors students are encouraged to study abroad to enhance their undergraduate education. To make this easier, we waive the third year Tutorial requirement in exchange for travelers sharing their experience with other students through photos and a presentation (and passing all their classes!). ■■■

Current Student Profile: Kyle Franklin

2012 Charles V. Stanhope Study Abroad Fellow

musings from Amman, Jordan

I am fortunate to live in Western Amman, the wealthier area in the capital city of Jordan. The Khalifa building is located on a particularly modern corner of University St., a short distance from the University of Jordan's main gate. The first floor has several businesses in it, and their signs are all in Arabic and English, or sometimes just English.

While sitting under a large sign that said Gloria Jean's Coffees, I saw a Western Union ATM and a small electronics shop that sells the popular headphones Beats. The front of the Khalifa building is all glass, a strong contrast to the almost exclusively limestone buildings just several stories high that make up the city.

I was waiting for a prearranged driver to arrive who would take me to the airport to find my luggage that arrived late. The driver arrived early and when I reached into my pocket to answer my buzzing phone, he was standing just behind me with his phone in hand and smiling. "Are you ready to go?" he asked me with his son tugging on his left arm. I guessed that his son was four or five years old. We went to his black, unmarked van and his son climbed up onto the middle seat, and I sat in the front passenger seat beside him.

We went back down the road, passing a Burger King and a McDonalds before reaching the main gate of UJ and driving over the tunnel that is used by pedestrians to cross to the other side of the road from the University. Inside the tunnel are small vendors selling items like watches, belts, and cheap trinkets.

As we were exiting the city, I started to see the poorer areas that I wasn't as familiar with and couldn't see when I had arrived a week earlier in the dead of night. The father was casually pointing to cars and signs and asking his son what they said, and his son would respond quietly with the make and model of the vehicle. The driver told me that he speaks English and he is trying to teach his son. Many of the natives here speak English. I have frequently met cab drivers who have worked in the U.S. but moved back and took up cab driving as a side job for some extra money, or else couldn't find a job, a monumental task here. None of them know of Vermont or Maine so far.

As the buildings continued to thin out, I started noticing older, abandoned one story limestone houses. Some of them had fallen in on themselves. I saw one that had a decent sized palm tree protruding from the center of the faded red roof, and very sparse greenery around the house. The man and I chatted about where we were from originally and what it is like there. He told me he has been to the east coast, but did not recall Vermont or Maine. His son got up the nerve by half way through the ride to start saying short sentences to me in English, and with a proud smile.

On the sides of the road I began to see tents with at least one hundred goats and sheep surrounding them. Sometimes the animals were sedentary but sometimes moving with visible dust clouds and a man shepherding them with a bow.

I wished I had thought to bring my camera, especially when I began to see herds of camels, but I was simultane-

I don't know where I want to end up, but the farther away I get, the more I see what I have in Maine. Through the good experiences and the bad, in the Honors College as well as in Jordan, I've come out the other end with a clearer image of what is important to me, and more strength to pursue it.

- Kyle Franklin '14



ously happy I had forgotten it as the man and I got deeper into conversation. I realized that having a camera would have changed the experience I had with the driver, as a camera would have made me a tourist, rather than someone who lives here.

I certainly did not have expectations of coming with cameras blazing, flashing people's eyes and temporarily blinding them, but I had not realized quite how discrete I wanted to be in order not to alienate myself as well as others.

Eventually, we were driving through areas that were completely barren, except for the occasional short and thick palm tree. I was reminded of the long stretches of I-95 which are north of Orono, where you don't see any signs of civilization, and how I am in a place totally different, but at the same time, in a way I can't put my finger on, familiar. ■ ■ ■

*It all started with the Honors College...***Heidi Crosby '03 & Richard Becker '03**

The Honors College has a way of bringing people together and creating life-long friendships through small classes and the living-learning environment of Colvin Hall. But for Class of 2003 Honors graduates Richard Becker and Heidi Crosby, the Honors College was the start of something even more special—a lifetime of happiness, partnership, and academic exploration.

Richard and Heidi lived across the hall on the third floor of Colvin Hall their first year at UMaine. It was the fall of 1999 and the first year Colvin was home to Honors housing. Richard, a Union, ME native, and Heidi, who is from Orono, met and started dating after the first week of classes. Their first date was a trip to the Jordan Observatory.

After graduating from UMaine and the Honors College in 2003, Richard and Heidi moved to Wisconsin to earn their master's degrees at UW-Madison; Richard in geology, and Heidi in geomicrobiology. Today, Heidi is on the verge of completing her PhD in microbiology from UW-Madison and will start a new post-doctoral position in the microbiology department at the University of Washington. Richard took a break to teach and work for the National Park service in Alaska before returning to UW-Madison to work on his PhD in geology (estimated completion, 2014).

***Oh yeah, and in the middle of all that, they got married!***

Richard and Heidi came to Honors for the engaging small classes and unique Honors community, they both found much more.

Heidi describes the Colvin community as a big part of her Honors experience. She lived there her first year and then returned as a Resident Assistant her senior year. She attended "Honors Teas" with Charlie, and the NCHC Conferences in Chicago and Salt Lake City. Specifically she recalls Charlie hosting dinner at the House of Blues in Chicago. Heidi also credits writing and defending her honors thesis as the beginning of her scientific career: "It taught me how to read scientific papers and really think about what I was doing in the lab."

Richard's favorite memories are of the people he shared Honors with. In particular he remembers trips to the annual NCHC Conference and gatherings in Colvin and outside on the Estabrook lawn, yet there is one Honors memory that stands out. Five years after graduation Richard stopped by to see Charlie. "Charlie recognized me immediately and welcomed me into his office where we had a brief chat. Without intending it, he gave me a lot of encouragement, and the conversation is one that I carry with me to this day."

Honors, and Charlie, had a lasting impact on Heidi and Richard. Because of Honors, they met and started their journey together from traveling and seeing the world, to continuing their education and pursuing their goals. ■ ■ ■

Associate Catch Up: Rachel Snell '06

The Honors College is, in many ways, still my home at the University of Maine. When my Associate position ended in 2010, I moved a short walk away to Stevens Hall and the Department of History. Currently, I am researching my dissertation project; examining the ways women defined domesticity through cookbooks, conduct manuals, sentimental literature, and lady's magazines in the United States and Canada during the first half of the nineteenth century. I am particularly interested in the ways these definitions forged and legitimated a more significant public role for women in society. I also have an interest in the emerging field of digital humanities and co-founded the history graduate student blog, a place where students in the history graduate program share their research with a wider audience (umaine.edu/khronikos). The past two years have brought



other milestones as well, including a re-dedication to distance running, leading to the completion of two marathons and many half marathons. In June 2012, I married my running partner and fellow historian, Joe Miller, in Northeast Harbor surrounded by our friends, family, and with our dog serving as ring bearer. Despite these changes, some things remain the same. Tuesday afternoons still find me at Honors lecture and several times a week I make the short walk to Colvin Hall. Not just to visit with Barbara and Deb, but to facilitate discussion among bright, motivated first-year Honors students in my own Honors preceptorial. This experience maintains my own enthusiasm in academia. As an Honors student and then an Associate, I hoped to one day have the opportunity to teach in Honors. I never imagined I the opportunity would come this quickly. The Honors College has made all the difference in my UMaine experience, and I am proud to continue to be a part of this institution and Charlie's legacy. ■ ■ ■

IN MEMORIAM

Honors graduate and friend Carolyn E. Reed '72, MD, renowned cardiothoracic surgeon, educator, mentor and beloved oncologist, died Nov. 16 after a short illness. She was 62.

Carolyn earned a BA in Chemistry with Highest Honors from UMaine and was valedictorian of her class. She received her M.D. from the University of Rochester School of Medicine in 1977 and completed a general surgical residency at New York Hospital, Cornell Medical Center. She entered a surgical oncology fellowship at Memorial Sloan-Kettering Cancer Center and found her career in thoracic oncology and cardiothoracic surgery, which led her to the Medical University of South Carolina where she spent the remainder of her career.

In 2003, Carolyn returned to UMaine for the first time to deliver the Distinguished Honors Graduate Lecture. *Breaking the Glass Ceiling: Medicine and Beyond* focused on her life, women in medicine, and how it is often "lonely at the top." Carolyn generously supported the renovation of Colvin Hall, naming the Chemistry and Pre-Medical Honors Suite, and endowing the Carolyn E. Reed Pre-Medical Honors Thesis Fellowship (see pg. 9). In 2005, Carolyn was awarded an honorary degree from UMaine and delivered the commencement address, one of the greatest honors in her life. ■ ■ ■



Special Recognition

The Honors College would like to recognize the following Honors College students for their outstanding achievements during the 2011-2012 academic year. Congratulations!

Valedictorian – **Rachel Binder-Hathaway '12**
(Finance, Accounting and Financial Economics)

Salutatorian – **Kayla Marie Peard '12**
(Music Education)

Outstanding Student, Natural Sciences, Forestry & Agriculture:
Amanda Lynn Chaney '12 (Animal & Veterinary Sciences)

Outstanding Student, Business, Public Policy & Health:
Rachel Binder-Hathaway '12

The Honors College annually recognizes Honors students with these special awards:

The John Ferdinand Steinmetz Memorial Award was established in 1962 through a gift from the family of the late John Ferdinand Steinmetz '43. The income of this fund is to be used annually as an award for first-year Honors students demonstrating outstanding characteristics and appropriate need.

Gwen Beacham '15 Marissa Giroux '15 Sara Lyons '15

The Robert B. Thomson Memorial Awards were established in 1984 by family and friends. The income from the fund is awarded to outstanding Honors College juniors majoring in Political Science and in Art.

Mark A. Rucci '13 (Political Science) **Caroline Robe '13** (Studio Art)

The Professor Melvin Gershman Scholarship Fund was established at the University of Maine in 1998 with gifts from family, friends, and associates. The income from the fund shall be used to provide scholarship assistance to meritorious science students enrolled at the University of Maine. Preference shall be given to students in the Honors College whose curriculum includes a strong emphasis in the humanities.

Molly Flanagan '13 (Marine Science)

The Honors College Service Award is presented to one or more graduates of the Honors College for outstanding commitment and contributions to the University of Maine Honors community. The award is supported by gifts from our graduates.

Breana Bennett '12 (Biochemistry) **Samantha Paradis '12** (History, Theater)
Keri Elise Westbaker '12 (History)

HONORS INDEX*

2012 Honors Graduates at a Glance

Average GPA of 2012 Graduates: 3.688

Number of states represented: 12

Percentage of graduates in Phi Beta Kappa: 53%

Number of varsity athletes: 5

Percentage of graduates who attended at least one Honors trip: 36%

Number of international students: 2

Percentage of graduates who presented at an academic conference: 34%

Number of graduates who studied abroad: 15

Percentage of graduates who were officers in student organizations: 49%

Percentage of graduates who worked while in school: 73%

Percentage of graduates in a Greek Organization: 17%

Number of graduates who published while an undergraduate: 12

Percentage of graduates who lived in Honors housing: 58%

Percentage of graduates who completed a tutorial alternative: 28%

Number of graduates with the Honors Dean on their thesis committee: 10

Number of graduates with a parent/grandparent who graduated from UMaine: 20

Number of graduates with a parent/grandparent who graduated from the Honors College: 3

Percentage of graduates involved with music/theatre/dance: 14%

Number of graduates with a double major: 14

Number of graduates with a triple major: 1

Percentage of class Valedictorians: 100%

Percentage of class Salutatorians: 100%

Number of graduates in club sports: 11

Percentage of graduates who participated in student government: 18%

Number of transfer students: 4

Percentage of graduates planning to attend graduate school upon graduation: 37.5%



KAITLYN ELAINE ANDERSON
Anthropology
Earth Sciences, Spanish

Kennebunk, ME
Kennebunk High School

A History of the Use of Swedish Language in New Sweden, Maine

Advisor: Pauleena MacDougall

Thesis description: Swedish language has a significant role in the history of Aroostook County. In the 1870s, a group of Swedish immigrants settled in the then newly-formed State of Maine's Swedish Colony. They brought traditional Swedish customs, dress, food and language. While many of the oldest generation of Swedes in New Sweden know this older style of Swedish, the language was not readily passed down to their children or grandchildren. While English is spoken in daily life, the Swedish language still has a presence today and continues to mark Swedish identity in Maine's Swedish Colony.

Future plans: Although the immediate future is somewhat undecided, I know that eventually I would like to teach. I plan to work in a Maine school system, and after that I will likely be pursuing a Masters of Arts in Teaching degree, with an emphasis on Gifted and Talented education.



KRISTINA SKYE ANDERSON
Psychology

Old Town, ME
Old Town High School

Transdiagnostic Factors: The Mediating Role of Rumination in Health Anxiety and Premenstrual Stress

Advisor: Sandra Sigmon

Thesis description: My thesis involved the study of rumination, which can be defined as the process of repetitive negative thinking, and its role in the development and maintenance of co-occurring psychological constructs. I used an archival data set which consisted of (N = 715) female undergraduate students who were attending the University of Maine. Regression and mediational analyses confirmed that rumination partially accounted for the co-occurrence of symptoms in specific psychological health constructs, namely health anxiety and premenstrual distress.

Future plans: I plan to take a year off from school to travel and work before attending graduate school in clinical psychology where I hope to earn my PhD. Eventually, I plan to conduct anxiety related research and also counsel individuals suffering from anxiety disorders.



DANIELLE SUE ARMITAGE
Art Education
Art History, Studio Art

South Berwick, ME
Marshwood High School

Can Picture Books Aid in the Development of Visual Literacy?

Advisor: Constant Albertson

Thesis description: I looked at whether picture books are beneficial in the formation of visual literacy among elementary aged students in the art classroom. For the purposes of the study "visual literacy" was defined as the ability to comprehend and create images and "picture books" consisted of illustrated children's literature. Seventeen art educators from the greater Bangor, ME area participated by answering questions concerning their use of picture books with art students. The findings, although limited by a small participant population, concluded that the use of picture books in the art classroom is beneficial in the formation of visual literacy. The data also revealed that fifteen of the seventeen participants had previously, currently, or planned in the future to use picture books in their art classroom.

Future plans: I plan to teach art in elementary or high school and plan to earn an MFA in Illustration. I also plan to travel a lot.



KARIN EILEEN BAARD
English, Spanish

Brunswick, ME
Brunswick High School

Immigration, Emigration and Interculturality: Stories from Spain

Advisor: Kathleen March

Thesis description: My thesis consisted of translating six stories and three forewords (all from the same collection: "Inmigración, emigración e interculturalidad: Primer Concurso de Relatos de UGT") from Spanish into English. I also wrote an introduction to the set of translations which consisted of three parts: a section on translation theory and my own personal decisions as a translator; a section on the historical and social context of immigration to and from Spain; and a literary analysis of the original collection as a whole and the stories individually.

Future plans: I plan to work for a few years, traveling as much as possible, before I return to graduate school.



BREANA E. BENNETT
Biochemistry

Freedom, ME
Mount View High School

The Haptotactic Motility of Angiogenic Endothelial Cells

Advisor: Sharon Ashworth, Alireza Sarvestani

Thesis description: Angiogenesis, the formation of new blood vessels from preexisting blood vasculature, is a necessary biological process, but cancerous tumors exploit it for pathological purposes. Angiogenesis requires the directed migration of the endothelial cells lining the preexisting blood vessels. My thesis focused on directed endothelial cell migration in response to increasing concentrations of extracellular matrix (ECM) proteins, or haptotaxis. We created a preliminary, two-dimensional model to study the haptotactic motility of endothelial cells using a step change in concentration of the ECM protein fibronectin. We found that bovine aortic endothelial cells (BAECs) exhibited directional motility towards the higher concentration side, and BAEC motility decreased on higher fibronectin concentrations.

Future plans: My plans will involve meandering to the melodies of The Decemberists, and uniting my background in biochemistry with my interest in food and agricultural sustainability.



CHARLES J. BERGERON
Political Science, Psychology
Legal Studies, Neuroscience

Hampden, ME
John Bapst Memorial High School

Imagine A Better World: The Effects of Imagined Intergroup Contact on Intergroup Attitudes

Advisor: Jordan LaBouff

Thesis description: A growing body of evidence indicates that interactions with outgroups positively influence attitudes towards those outgroups. This research investigates the effects of imagining intergroup contact with a Muslim person on implicit and explicit anti-Muslim prejudice among those who are most ideologically intolerant. Local and national participants were asked to complete a short imaginative exercise followed by a brief online questionnaire. Results indicate that imagined intergroup interaction was effective at improving attitudes towards Muslims even among those who were the most prejudiced and ideologically intolerant. Implications and potential practical applications, including diplomatic and educational initiatives, are discussed.

Future plans: I plan to work with my advisor to prepare my research for publication and figure out where I want to go next.



RACHEL A. BINDER-HATHAWAY
Financial Economics,
Accounting, Finance

Millinocket, ME
Stearns High School

Meaningful Contributions to Poverty Alleviation through Microfinance

Advisor: Rick Borgman

Thesis description: My thesis is a comparative analysis of Bangladesh's two most prominent Microfinance Institutions (MFI's), Grameen Bank and BRAC Bank. Microfinance helps those in abject poverty lift themselves to solvency and beyond. This simple and effective, economic strategy has globally impacted millions of families. Each MFI has effective and ineffective and/or potentially harmful elements. This thesis seeks to isolate those elements which hinder borrower outreach potential and MFI operational viability. Alternative suggestions for best practices are offered so that these MFIs might gain efficiency and allow them to increase outreach efforts and remain operationally viable over the long run.

Future plans: I am living in Bangladesh and working as a Fulbright Fellow on poverty alleviation through microfinance. I plan to earn my PhD and seek a career in economic development.



JACLYN LILIAS BOUSQUET
Art Education
Art History, Studio Art

South Berwick, ME
Marshwood High School

Chinese Shadow Puppetry and Intangible Culture

Advisor: Laurie Hicks

Thesis description: This thesis was a collaborative research project to make both intangible and material Chinese culture available to an English speaking audience. Research materials for the project included photographs and videos that explore the nature of Chinese art forms, specifically Qibao Shadow Theater. Based on this research, written and visual information on Chinese Shadow Puppetry was created and organized to be accessible on the ChinaVine website (www.ChinaVine.org) to a broad array of audiences, including students and educators. Educational materials were also developed to facilitate a complete understanding of traditional and emerging Chinese tangible and intangible culture as it related to Shadow Puppetry.

Future plans: I plan to travel for a year before applying for a teaching position in the arts.



MORGAN HALEY BROCKINGTON
Anthropology
Pre-Medical Studies

Saco, ME
 Thornton Academy

Assessing the Controversy:

Female Genital Mutilation or Legitimate Rite of Passage

Advisor: Henry Munson

Thesis description: My thesis addressed the ethical debate over female genital cutting/circumcision (FGC), a common practice in many parts of Africa. To supporters, FGC is a legitimate, culturally approved rite of passage that is steeped in tradition. Opponents of female genital cutting emphasize the practice is a ritualized form of violence and a detriment to women's health. My thesis provided a cross-cultural overview of the debate, including justification for the continued practice, and those advocating its cessation, and formulated a culturally sensitive plan of action for the eradication of FGC. Ultimately, I assert that FGC is genital mutilation and a violation of basic human rights.

Future plans: I plan to earn a joint Masters in Medical Anthropology focusing on immigrants and women, and a medical degree in Emergency Medicine or Infectious Disease. I hope to combine an-



SHANNON WHITNEY BROWN
Marine Sciences (Marine Biology)

Lake Peekskill, NY
 Putnam Valley High School

Salinity Tolerance of the

Oyster Mudworm *Polydora Websteri*

Advisor: Paul Rawson

Thesis description: *Polydora websteri* is a marine worm that burrows into the shells of oysters where mud subsequently accumulates. Although the oyster secretes new shell material over the burrows, the resulting blisters are unsightly and decrease the market value of the oyster. Proposed methods used to eradicate the worm can be expensive, toxic, or unreliable. I investigated the salinity tolerance of *P. websteri* outside the oyster shell and the efficacy of salinity-based treatments for the worm inside the shell. My results indicate that *P. websteri* is intolerant to freshwater and when a freshwater soak is combined with dry storage, 100% of worms die within 10 days with little oyster mortality.

Future plans: I plan to earn a master's degree in Marine Science and hope someday to work with a government or environmental agency doing marine research and community outreach.



MARGARET A. BURNS
Ecology & Environmental Sciences
(Environmental Sciences)

Berwick, ME
 Noble High School

The Hydrological and Geochemical Role of the C Horizon in a Glacial Till Mantled Headwater Catchment

Advisor: Ivan Fernandez

Thesis description: The C horizon is the deepest soil layer that is typically unweathered. My thesis looked at the role of the C horizon in the watershed hydrologic cycle. Results indicate that the C horizon is hydrologically active and is contributing to water flow paths. Due to its contribution to water flow paths, the boundary between the B and C horizons is much less defined than previously expected. Results suggest that C horizon weathering is heterogeneous with no apparent patterns with depth or across the watershed. Characterizing water flow paths and chemistry is important to understanding issues such as contaminant transport and flood control.

Future plans: This research was conducted at Hubbard Brook Experimental Forest in Thornton, New Hampshire. I plan to continue my writing and research to ultimately publish with my advisors from Hubbard Brook.



ALEXANDER CADDELL
Biological Engineering

Winterport, ME
 Hampden Academy

Development of Polymeric Porous Plastic Implant for use in Orthopedic Applications

Advisor: David Neivandt

Thesis description: My objective was to develop a means of creating porous implants in a manner that is both quick and economical. The idea behind a porous implant is that in percutaneous applications it will facilitate soft tissue in-growth and create a biological seal, thus preventing infections. The method that was developed was to use a rapid prototype 3D printer to create porous plastic implants designed using CAD software. The implants were then tested for soft tissue in-growth capability in a small animal trial.

Future plans: The summer after graduation I will be finishing up research projects I have going on. After that I plan on taking some time to travel and volunteer.



ANNE CATHERINE CAMPBELL
Chemistry

Belfast, ME
Belfast Area High School

Comparative Analysis of Limb Regeneration Using High Throughput Gene Expression Data from *Danio rerio* and *Ambystoma mexicanum*

Advisor: Keith Hutchison, Ben King

Thesis description: The zebrafish (*Danio rerio*) and the axolotl (*Ambystoma mexicanum*) are two well-established model organisms used to study limb regeneration. Both follow similar mechanisms of healing upon amputation, so we hypothesized that a specific set of genes is conserved to enable regeneration. Using bioinformatics techniques and gene expression data, a small set of potentially interesting genes was discovered. These included genes and2, snai2 and cx43 of the zebrafish. The last is notable as it is significantly represented in both organisms and is a critical component of morphogenesis. It can thus be concluded that these gene expression analyses support our hypothesis of conserved molecular mechanism among regenerating organisms.

Future plans: I plan to study bioinformatics and medicine.



KACI CARON
Psychology (Abnormal/Social)
Child Development & Family
Relations, Legal Studies

New Canada, ME
Community High School

The Relationship Between Trauma & Language in the "Young Child"

Advisor: Victoria S. Bennett-Armistead

Thesis description: This literature review explores the relationship between non-directive play therapy and the way that children communicate their trauma. Available studies in the areas of filial and child-centered play therapy were examined. Several studies were found for each subcategory, including meta-analysis, case studies, and experimental data. It highlights commonalities through the presented data, as well as notes, deficiencies and areas for further and expanded research. The idea that play is a successful method of expression of trauma for children and can take the place of verbal description was a similar belief found in all methods. It was also discovered to be beneficial to combine therapy methods. Evidence was present in numerous studies for improved self-concept as well as a gain in the child's ability to form relationships. It is also made present that though many opinions exist on the subject, empirical data is difficult to come by.



RACHEL ANNE CARTER
Biology, English

Richmond, ME
Richmond High School

The Space Explorer

Advisor: Gregory Howard

Thesis description: We may pass through our lives thinking our surroundings have little effect on who we are. *The Space Explorer* is an anthology of creative short stories, poems, prose, and imitations. These writings explore the idea of space and how every exploration of it defines us. Whether it is landscape, memories, or what we didn't do, it introduces us to the space of identity. Ultimately, our spaces have shaped us into who we are and who we strive to be. The characters in *The Space Explorer* have developed due to the catalyst of their surroundings. The setting of each writing has served as the vehicle for their actions. These characters are situated in locales such as: the American West, a small town in Appalachia, a farm in rural Canada, a forest in northern New England, and many more.

Future plans: I hope to have my writing published, but until then I will utilize my dual-majors in order to obtain employment and ultimately I plan to earn a doctoral degree.



AMANDA LYNN CHANEY
Animal & Veterinary Science
(Pre-Veterinary)

Searsport, ME
Searsport District High School

Identification of Internal Parasites of Sheep and Goats

Advisor: James Weber

Thesis description: Abomasal worms are a major cause of small ruminant disease. Differentiation of the most pathogenic nematode, *H. contortus*, from the other common species can be difficult using standard diagnostic fecal flotation techniques because the ova are similar in size and morphology. Known pure culture *H. contortus* fecal samples from West Virginia University were used to develop morphologic assays using FITC-labeled lectin agglutination and immunocytochemistry to identify species of abomasal worms. These assays were applied to assess disease due to abomasal worms on selected small ruminant farms in Maine. The diagnostic tests were used to test the hypothesis that *H. contortus* is the most common internal parasite found on sheep and goat farms in Maine.



KATHRYN CASSIDY CHENARD
Wildlife Ecology

Rochester, NY
Gates-Chili Senior High School

***The Effects of Noise Disturbance on Zebra Finch Behavior;
Does Disturbance Predictability Matter?***

Advisor: Rebecca Holberton

Thesis description: The progress of human civilization has altered the natural landscape of the world in a range of ways, from merely aesthetic to irreparably destructive. One impact is increased and altered levels of background noise on the natural acoustic landscape, which can hinder species, such as songbirds, that rely on acoustic signals as a vital part of many social processes. These impediments can increase stress levels and levels of predation, erode pair bonds, and decrease population survival in the acoustic environments we have created. While the effects of masking noise on various species of birds have been studied before, this is the first study designed to understand what effect the predictability of such noise disturbances may have on zebra finch (*Taeniopygia guttata*) behavior. The results point towards the predictability of the disturbance not having a significant effect on initiation or time spent vocalizing after the end of a disturbance block.



TODD M. CONNER
Chemistry

Camden, ME
Camden Hills Regional High School

***Development of Pesticide Sensing Polyaniline Electrode
through Detection of Alachlor by Cyclic Voltammetry***

Advisor: Mitchell Bruce

Thesis description: Alachlor is a chlorinated herbicide used to kill broadleaf weeds that grow mainly in corn, peanuts, and soybeans. The purpose of this project was to develop an environmentally friendly sensor in the form of an electrode that will be able to detect alachlor in aqueous samples. The way this was done was by using an electrochemical instrumentation technique called cyclic voltammetry. Polyaniline, a conducting polymer, was grown on a platinum substrate and the resulting electrode was cycled in various concentrations of alachlor in aqueous buffered samples at pH 4. By monitoring the current produced from the polymer on the metal substrate, a change in the electrical current from interaction with the herbicide signaled its detection. Through additional instrumentation by SEM and FTIR it was suggested that a chemical reaction was responsible for the change in current produced by polyaniline.



JOHN F. COX
Political Science

Bangor, ME
Bangor High School

The Role of the Economy in Presidential Elections

Advisor: Richard Powell

Thesis description: I compared the 1992 and 2004 United States presidential elections. My initial contention was that the economy is the decisive factor in presidential elections, but my research revealed otherwise. Despite two bad election year economies in 1992 and 2004, the results could not have been any more different. In 1992, George H. W. Bush was throttled in his reelection attempt and in 2004 George W. Bush was victorious. The thesis reveals what each incumbent and challenger candidate did to lead to the discrepancy in results despite similar economies.

Future plans: I plan to attend the University of Maine Law School.



GEOFFREY A. DAVIS
Biochemistry

Las Vegas, NV
Ed W. Clark High School

***Optimization of a Fluorescent in situ Hybridization Protocol
in the Chloroplast Hosting Mollusc Elysia chlorotica***

Advisor: Mary Rumpho

Thesis description: While feeding on alga, *E. chlorotica* takes up the algal chloroplasts into its digestive cells. They are not digested, but all other algal cellular materials are. Chloroplasts rely on nuclear genes for continued function and photosynthesis, and in *E. chlorotica* the chloroplasts do not have the necessary algal nuclear genes to continue to function. I created fluorescently labeled DNA probes to target genes in *E. chlorotica* and optimized a procedure to perform fluorescent *in situ* hybridization. The probes bind to the genes they were designed to match, allowing visualization of where in a cell a gene is located. The development of this protocol will allow direct molecular investigation of horizontal gene transfer in *E. chlorotica*.

Future plans: I will attend Michigan State University as a doctoral student in Biochemistry and Molecular Biology. I plan to study the biochemistry of plants and intend to stay in research for a career.



JACOB F. DAY
Accounting (Finance)

Byram, NJ
Lenape Valley Regional High School

Private Public Utility Tax-Exempt Bond Issuance

Advisor: Robert Strong

Thesis description: This work presents the current status of investor owned electric utilities today. In utilizing current financial data, interviewing with individuals from Bangor Hydro Electric, and through research conducted, I concluded that it could potentially be in society's economic best interest to allow privately-owned electric utilities to issue tax-exempt securities in specific scenarios. In the long-term, this assessment may be useful in the determination of the most efficient methods for public utility capital taxation. Infrastructure development is critical to the success and sustainability of a developed nation. Through sensitivity and scenario analysis I concluded that this option will be ideal for poorly structured and over-leveraged utilities and their issuance could be determined on a case-by-case basis.

Future plans: I will study for and take the CPA Exam before beginning work at Baker Newman Noyes in Portland, ME in the fall.



PARDIS DELIJANI
International Affairs
Legal Studies

Portland, ME
Deering High School

An Assessment of the Egyptian Military and the Iranian Revolutionary Guards in Connection to the Emergence Theory

Advisor: Seth Singleton

Thesis description: The thesis provides an in-depth analysis of the internal operations of the Egyptian military and the Islamic Revolutionary Guard Corps. In light of recent rebellions in Egypt and Iran, the thesis examines how the security, economic, and political role of these two institutions has led to Egypt's betrayal of President Mubarak, and the IRGC's loyalty to the Iranian leadership. The role of these two institutions will be investigated using Steven Johnson's Emergence Theory. In using Johnson's theory, this thesis will aim to uncover the function, performance, and system of two institutions that have become autonomous within their respective state.

Future plans: I will attend the University of Maine Law School.



ALISE REBECCA DEMARIS
Communication Sciences & Disorders
Child Development & Family Relations

Big Lake Township, ME

Characteristics of Young Children's Longest Utterances

Advisor: Allan B. Smith

Thesis description: I proposed and examined a new measure of expressive language development in young children. To determine the usefulness and validity of this measure, longest length of utterance (LLU), I conducted an in-depth analysis of language samples from interviews with three preschool-age participants. I examined LLU's correlation with established measures of child language abilities, the distribution of utterance lengths in each speech sample, the way LLU varies with the amount of language analyzed, and the conversational context of longest utterances. The results showed that LLU is an incredibly variable measure, but may provide information about some aspects of expressive language ability not captured by other measures.

Future plans: I will attend UMaine to earn a master's in Communication Sciences and Disorders. I hope to become a successful speech-language pathologist or researcher, have a family, and live on a lake in Maine.



EBEN GRANT ESTELL
Biological Engineering

Monroe, ME
Mount View High School

Substrate Adhesivity and Rigidity Influence Hippocampal Neuron Axonal Growth

Advisor: Alireza Sarvestani, Michael Mason

Thesis description: The nervous system is integral to function and survival, yet our understanding of neural cells is lacking. From advances in modern cell biology, we know that the development and function of a cell intrinsically depend partly on the stiffness of the substrate on which it grows, as well as the nature of the adhesive interaction between molecular ligands on the substrate surface and the cell surface. This thesis studies the influence of external environmental conditions, namely substrate rigidity and adhesivity, on neural cell growth, most importantly the development and growth of the axon, the cellular extension by which neurons send information in the form of electrical impulses from cell to cell throughout the neural tissue.

Future plans: I hope to publish this research before earning my Ph.D. at Columbia University in NYC. In life I plan to hike the Appalachian Trail and travel as much as possible.



KYLE ETTINGER
Biology
Chemistry

Camden, ME
Camden Hills Regional High School

Effects of Arsenic Trioxide on Sarcoplasmic Reticulum Calcium ATPase in Wild Type Flies and Those Having the Serca Mutation

Advisor: Harold Dowse

Thesis description: The fact that long-term arsenic exposure can be detrimental to health has led to stringent regulations on the amount allowed in drinking water. Arsenic trioxide is a form of inorganic arsenic known to cause cascade events in many cellular processes. Its specific target, the protein PML, makes it useful in the treatment of a certain type of leukemia. Recent studies have shown that this type of arsenic interferes with normal calcium concentrations within the cell. Calcium is integral in the proper functioning of the heart, and so we studied the effects of arsenic on the *Drosophila* heartbeat.

Future plans: I plan to pursue a career as a physician and attend medical school.



ANDREA JOY FLANNERY
Political Science
Business Administration, Legal Studies

Bourne, MA
Bourne High School

A Study of the University of Maine's Use of Local Food

Advisor: Mark Haggerty, Stephanie Welcomer

Thesis description: My thesis examined the use of local food by the University of Maine. Motives for use of local food were determined by studying the stated University mission, and through interviews with university officials. Student perspectives on local food were studied through surveys. To determine what effect the Farm-to-University program at the University of Maine is having, purchasing records dating back to 2008 were examined. Survey results, purchasing records, and a comparison to standards set forth by the Healthy Food in Healthcare pledge, were used to determine the effectiveness of the program. After this analysis, recommendations for a more effective Farm-to-University program at the University of Maine are made.

Future plans: I will enter the Management Program at Hannaford, and ultimately I plan to earn my law degree or MBA.



KELSEY KRISTINE FLYNN
Secondary Education
(Social Studies)

Mansfield, MA
Mansfield High School

Guardians of Alyataus

Advisor: Tina Passman

Thesis description: My thesis is a young adult novel for those 12-16 years old. It follows a boy through a wormhole, not unlike *Alice in Wonderland*, and into a new world. In this new world he faces many difficulties and challenges, however through all of this he comes to realize more and more about his moral self. This thesis follows Joseph Campbell's theory of a literary hero. It was also supplemented by around 40 art pieces, including two sculptures.

Future plans: After graduation I am going back to Massachusetts. I am planning on attending Northeastern University for graduate school at the Bouve School of Health and Medicine. It is my hope that I will achieve a Masters of Science in Collegiate Student Development and Counseling.



KATIE RENEE FOSTER
Business Administration
(Management)

Hampden, ME
Hampden Academy

A Study of the Coping Mechanisms Adopted by Work Groups to Deal with Project Structure

Advisor: Niclas Erhardt

Thesis description: I conducted a case study involving a local company and two of their project-based initiative teams. I interviewed team members to explore how their team work was impacted by their project structure. One of the teams had a very unclear project structure and relied heavily on creativity. The other team was extremely structured and relied on routines and efficiency. The object of the study was to identify ways that the team members adapted their behavior in order to still remain successful on the team, given the challenges that were presented by the project structure. I originally assumed that the teams would each adopt different adaptive behaviors or coping mechanisms, but I found that each team gravitated towards a middle of the road approach, rather than favoring more or less structure.

Future plans: I will travel and study for the LSAT and the GMAT and plan to pursue a dual MBA/JD beginning in 2013.



BENJAMIN ALLEN FOX
French,
International Affairs (Political Science)

Blue Hill, ME
George Stevens Academy

***The Role of Leadership in Averting Armageddon:
A Comparative Analysis of U.S.-Russia
START Treaty Negotiations 1981-2010***

Advisor: James Warhola

Thesis description: My thesis uses the four Strategic Arms Reduction Treaties (START) negotiated between the US and the Soviet Union/Russia between 1981-2010 to explore the role of “leadership” in national security and foreign policy. I show that success or failure hinged on the ability of leaders to demonstrate determination, willingness to compromise, and a clear vision for the future. By placing leadership within the historical context of nuclear arms control, the enduring superiority of cooperation over competition and the pivotal role of personal character in leadership are made clear. This thesis illustrates how and why it is essential to take the role of leadership into consideration when studying foreign policy and national security.

Future plans: I plan to study international security in graduate school and to work for a think tank, university, or the US military.



ALISHA GAGNON
Psychology (Abnormal/Social)
German

Conway, NH
Kennett High School

***Coping and Gender Differences in Seasonality
and Seasonal Affective Disorder***

Advisor: Sandra Sigmon

Thesis description: I researched gender differences in prevalence rates of Seasonal Affective Disorder (SAD), by studying coping strategies. Using archival data, the differences in how men and women cope with life stressors were compared. Specific coping strategies were examined to see if they were predictors of seasonality. Statistically significant differences between coping strategies used by men and women were found. In addition, predictors of seasonality were not consistent across gender. In one example, it was found that rumination, or dwelling on thoughts and feelings, was a significant predictor of seasonality for women alone, and not men. With further research, these results could aid in identifying the cause for the staggering difference in prevalence rates of SAD between men and women.

Future plans: I will attend UMaine for graduate school in Communication Sciences and Disorders.



BENJAMIN DAVID GOODMAN
Political Science

Kennebunk, ME
Kennebunk High School

***The Democratization of the Democratic Party:
An Analysis of Democratic Party Reform, 1972-2008***

Advisor: Mark Brewer

Thesis description: My thesis is an analysis of the McGovern-Fraser commission reforms which “opened” the Democratic Party’s presidential nominating process to the general public and the party’s subsequent reform commissions (Mikulski, Winograd, Hunt) and how they served to further open or close the nominating process.

Future plans: Interning in the office of Maine’s 2nd Congressional District Congressman Michael H. Michaud through the UMaine Congressional Internship program led me to move at the end of the Fall 2011 semester to Washington, DC where I serve as Staff Assistant in the office of Congressman Michaud. I worked to finish an online class, my thesis, and my Maine Policy Scholars presentation as I began full-time employment, which continues today.



STEPHANIE MARIE GUILLEMETTE
Psychology
French

Sanford, ME
Sanford High School

***A Study of Childhood and Late Adolescent Fear:
The Rose of Fear in Socioemotional Functioning***

Advisor: Cynthia Erdley

Thesis description: My hypothesis is that children (ages 5-13) with low social support and higher levels of fear were worse off socially and emotionally than children with high levels of social support, low levels of fear, or both. This hypothesis was named the “Fear-Support Complex” and was supported by my results. Children with low levels of social support and higher levels of fear possessed decreased mood and self-esteem. I also found that fear and depression have no direct correlation. Every childhood fear researched in this study was significantly correlated to fears found in late adolescence (ages 18-25). This correlation proves linkage between the two age groups and fear. For future research, I propose a longitudinal study of children, their fears, and socioemotional functioning from ages 5-25.

Future plans: I will attend Simmons College to earn my master’s degree in behavior analysis.



CHRISTOPHER CAULFIELD HAMLIN
Mechanical Engineering
Robotics

Presque Isle, ME
 Maine School of Science & Math

Design of an Advanced Propulsion System for Underwater Remotely Operated Vehicles

Advisor: Michael Peterson

Thesis description: I conducted a literature review and assessed the suitability of a wide number of propulsion technologies as low-cost alternatives to the dominant technology (ducted fan thrusters) for a student-built ROV. Design parameters were the rules and guidelines of MATE international ROV competition (www.materover.org) as well as the practical considerations of operating in an underwater environment. I chose to focus on a new type of thruster called the bubble jet engine. I constructed a series of prototypes and performed tests using computerized data acquisition to assess the affect of varying nozzle geometries on thrust performance.

Future plans: I plan to work in robotics or industrial automation, and will likely attend graduate school.



RYAN J. HANUSEK
Biology
*Chemistry,
 Molecular & Cellular Biology*

Dayton, ME
 Thornton Academy

Effect of Combined Drug Therapy and Genetic Modifiers on Hepatosteatosis and Fibrosis in a Mouse Model for Alström Syndrome

Advisor: Sharon Ashworth, Jürgen Naggert

Thesis description: Alström Syndrome (ALMS) is a rare genetic disorder and variability of additional phenotypes in patients can complicate diagnosis. I examined the effects of losartan, an antifibrotic drug, on fibrogenesis and identified genomic loci that modify ALMS phenotypes in a mouse model. This work took place at The Jackson Laboratory in Bar Harbor, ME. Histological and chemical analyses of mutant and control mice treated with losartan were initiated and losartan was observed to have altered some blood parameters. A genome wide screening identified two genetic modifiers in the ALMS mouse model. The results may help future therapeutic strategies, early detection, and elucidation of disease progression in human ALMS patients.

Future plans: I have been awarded a 1-year post-baccalaureate position at the National Institute of Diabetes and Digestive and Kidney Diseases in Phoenix, AZ, a branch of the National Institutes of Health.



KALIE AUSTIN HESS
Anthropology
French, Spanish

Orono, ME
 Orono High School

Motherhood as a Unifying Theme in Social Movements: Symbolic Essentialism, Environmental Justice, and the Movement Against Bisphenol A in Maine

Advisor: Darren Ranco

Thesis description: I wrote my thesis on the movement against BPA in Maine, focusing on how people organized to get laws such as the Kid Safe Products Act passed. By using maternal imagery, the movement was highly effective and resulted in the implementation of one of the most comprehensive chemical safety policies in the country made by a state. I looked at the movement against BPA as being part of a continual effort towards environmental justice in all types of environments and examined it in terms of historical environmental justice movements by analyzing how social organizing has changed and remained the same over time.

Future plans: I will earn my graduate degree in Public Health at the University at Albany and I plan to work on issues of health equity.



JENNA LYNNE HOOPS
Mass Communication

Scarborough, ME
 Scarborough High School

Skins: A Contemporary Moral Panic

Advisor: Eric Peterson

Thesis description: My thesis was an analysis on the media commentary regarding the controversial MTV show, 'Skins,' and why it can be considered a contemporary moral panic based on my research.

Future plans: After graduation I plan on pursuing a career in the mass communication field.



HANNAH HORECKA
Marine Science (Marine Biology)
Spanish

Benson, MN
 Benson Senior High School

Environmental Factors Linked to Harmful Algal Bloom Induced Shellfish Toxicity in Cobscook Bay, Maine

Advisor: Andrew Thomas

Thesis description: The Gulf of Maine experiences annual closures of shellfish harvesting due to toxins accumulated from harmful algal blooms, but the cause is poorly understood. Using 21 years (1985-2005) of Maine Department of Marine Resources shellfish toxicity data, inter-annual variability in two metrics of annual toxicity, maximum magnitude and integrated total annual toxicity are examined for relationships to a suite of environmental variables. Correlations between toxicity and two variables indicative of local weather, dew point and atmospheric pressure both suggest a link between increased toxicity and clearer skies/ drier air. As no correlation was evident between toxicity and local precipitation, we hypothesize that the link is through light availability in this historically foggy patch of coast.

Future plans: I will pursue a career in marine sciences education and plan to reach SCUBA dive master and dive instructor levels.



CAITLIN HOWLAND
Economics, Spanish

Falmouth, ME
 Falmouth High School

The Costs of Offshore Wind Energy

Advisor: Gary Hunt

Thesis description: I focused on the costs associated with deepwater offshore wind energy development in the Gulf of Maine, where it is being looked into as a solution to emissions problems. I reviewed research by economists, developers, and university researchers. I applied my own calculations on the cost of development and found that it is important to consider social and private costs. I found deepwater offshore wind energy will not be viable in coming years without a carbon tax and a government subsidy. If no developers invest in a farm, learning curve effects will be stunted. This is key because the effect of learning-by-doing over time is crucial to decreasing costs. A carbon tax is also a critical aspect to make deepwater offshore wind competitive. With an aggressive pricing scheme, it is possible deepwater offshore wind energy will become competitive in less than two decades.

Future plans: I plan to move west to work at a ski mountain before attending law school and having a legal career in renewable energy.



HANNAH MARIE HUDSON
International Affairs (Spanish)

Columbia Falls, ME
 Washington Academy

University Student Affairs: A Transnational Comparative Perspective Using Two Case Studies

Advisor: Elizabeth Allan

Thesis description: This thesis presents a comparison of the student affairs programs at the Universidad de las Americas Puebla and the University of Maine. The comparison will show how the two programs exist within their separate higher education models by looking at the structure, functions, partnerships, and performance of the departments. My research includes a review of the history of the universities and an in-depth look at how residence life, advising, and student organizations are addressed within each program. By examining these areas I strive to show what the effects are on the students in the program. Though some practices are different, the results demonstrate the main missions of programs strive to accomplish the same goals of creating a community of support for the students.

Future plans: I will earn my master's degree in Student Development in Higher Education at UMaine and work in the Career Center.



JOANNA ELSBETH HYND
English

Thomaston, ME
 Georges Valley High School

Poetry Manuscript

Advisor: Jennifer Moxley

Thesis description: My thesis is a compilation of poems, the majority of which were written during 2010 and 2011. The thesis is split into four sections based on theme: "The Meta" consists of poems influenced by an interest I developed in meta-poetry and meta-fiction during my Contemporary Fiction class. "The Cousins" is taken from a line from Jack Spicers *After Lorca* where he discusses poems that attempt to seduce the audience. "Anti-Vatic" are poems that attempt to be the opposite of grandiose in theme and content. "Collaborations and Conversations" is a combination of collage poems, co-written poems, and poems written in dialogue with other poets.

Future plans: I plan to earn my teaching degree after taking time off to work and travel.



ABIGAIL L. JONES
Communications
Political Science, Theater

Owls Head, ME
Rockland District High School

Comedy as a Social Criticism

Advisor: Nathan Stormer

Thesis description: This thesis explores the theory of comedy as social criticism through an interpretive investigation. For comedy to be a potent criticism it is important for the audience to understand the context surrounding the sketch. Without understanding the context, the sketch still has the ability to be humorous, but the critique is harder to acknowledge. *White Like Me* as performed by Eddie Murphy on *Saturday Night Live* is used as an example for understanding the social criticisms presented in the sketch. It is descriptively analyzed by dissecting the three major jokes shown and then, to conclude the thesis, there is a discussion of the dangers of not understanding context in comedy.

Future plans: I will attend graduate school at UMaine and hope to eventually move to Chicago to audition for *Second City*.



REDYN KELLER
Anthropology
Political Science

Plainfield, MA
Mohawk Trail Regional High School

The Worst Angels of Our Nature: Has Violence Declined?

Advisor: Paul Roscoe

Thesis description: In 1996 the book *War Before Civilization* by anthropologist Lawrence Keeley was published and intended to debunk the myth that small-scale tribes and villages across the world were peaceful in the past. Keeley presented the idea that warfare in these societies was more lethal and had greater consequences than war in larger, modern states. Keeley believed that even if only one or two people were killed in a small tribe, this had a greater impact on their society because they had small populations. My thesis focused on the accuracy of the tables created by Keeley to show casualty rates. I determined that for fifteen of the total twenty societies Keeley used, his calculations, citations, and the sources were not reliable or accurate. There are several components that need to be reworked or removed from the tables in Keeley's text and my thesis presents this data.

Future plans: I plan to do some traveling and take some time off before attending graduate school in anthropology or political science.



ELIZABETH ROSE KEVIT
Journalism
French

Eddington, ME
John Bapst Memorial High School

Objecting to Objectivity

Advisor: Justin Martin, Jim Gallagher

Thesis description: I argued that the idea of objectivity in journalism has come to mean balancing one opinion with its opposite. That idea of balance has led to a reliance on he said/she said reporting that can misinform the public in its unwillingness to pursue the truth if it lies too far in one direction. I suggested that a greater emphasis on transparency in journalism and showing the origins of information could do a better job of informing the public. I suggested that hyperlinks can be used in online journalism to show the full text of documents or the full audio of an interview, for example, to provide a reader with the building blocks of an article and that doing so could help to discredit any accusations of bias that may be sparked by a finished article.

Future plans: I'm working at *The Daily Reporter* in Milwaukee, WI, covering county government, commercial real estate and the construction industry.



CHRISTINE THERESA KISSINGER
Animal & Veterinary Sciences
Chemistry

West Greenwich, RI
Exeter-West Greenwich Senior High School

Endoscopic Evaluation of the Response to Intrauterine Irrigation with 3.3% N-acetylcysteine in Mares

Advisor: Robert Causey

Thesis description: The goal of this study was to observe whether N-acetylcysteine (NAC) irritates mucosal tissue with the interest of determining if NAC could treat the carrier state of Strangles, a highly contagious, upper respiratory disease of horses. NAC has the ability to break down mucus and could be a valuable cleanser for the guttural pouch, where bacteria are harbored. NAC was tested using uterine tissues and compared to non-infused and saline-infused horses. Pictures of the tissues were recorded using endoscopy and were evaluated for signs of inflammation. Results show that saline and NAC infusions caused mild inflammation compared to non-infused horses. These results indicate that NAC could be a low-risk treatment for horses after a Strangles outbreak, but future research is still needed.

Future plans: I will marry my long-time fiancé and attend Tufts University Cummings School of Medicine to earn my DVM.



CHRISTOPHER HARRIS KNOBLOCK
Communication
History

Belmont, MA
 Belmont High School

*Stories as Managers of Culture
 in an American Summer Camp*

Advisor: John Sherblom

Thesis description: My thesis is a case study of a closed organization and how the culture operates within it. Stories work as managers of the culture, reinforcing the organization's values, identity and vision—something that applies to many major companies and corporations.

Future plans: I'm looking to move down to the Portland area and possibly break into broadcasting. I'm also looking for marketing and public relations work, but hoping to stay in New England.



COLIN SNYDER KOLMAR
International Affairs

Saco, ME
 Thornton Academy

A Cultural Exploration via the Mediums of Song and Poetry

Advisor: Laura Artesani

Thesis description: As a firm believer in extra-institutional educational expeditions, I wanted to prove the effectiveness of a self-directed educational experience in an environment that was the polar opposite of my scholastic surroundings. To do this, I traveled to New York City to immerse myself in the culture of hip hop and jazz. I visited various clubs and museums dedicated to the art forms, and reported on my experiences by keeping a travel log in poetry form. I then used my newly acquired knowledge to compose original music in jazz and hip hop styles.

Future plans: I will earn my Master of Arts in Teaching from UMaine in Secondary Education (Social Studies) and hope to teach high school history. I am considering a degree in international law as well and hope to travel extensively, no matter what my profession.



SARAH KATHERINE LINGO
English
Ecology & Environmental Science

Youngstown, OH
 Greenbrier East High School

*Nameless, Inscutable, Uearthly:
 An Examination of Obsession in Moby Dick*

Advisor: Steve Evans

Thesis description: In this project, I examine the operation of the sublime and the unconscious in *Moby Dick*. Through sublime experiences, Ahab and Ishmael confront the limits of human understanding. Employing Lacanian psychoanalytic theory, I compare the reactions of Ahab and Ishmael to the sublime, and how these reactions ultimately determine their fates.

Future plans: I intend to take a year off to write, travel, and play music before attending graduate school to further my studies in literary criticism. I would love to eventually travel abroad and earn my PhD.



STEPHANIE A. LITTLEHALE
**International Affairs
 (Political Science)**
Legal Studies

Rockport, ME
 Georges Valley High School

Corruption in the Bulgarian Legal System

Advisor: James Warhola

Thesis description: This thesis is a thorough investigation of corruption as it is manifested in the court, prosecutorial and investigatory services in Bulgaria. I was able to travel to Bulgaria during the course of my undergrad experience and this thesis is a result of my interest in the nation itself.

Future plans: I am taking a year off to save some money and do some traveling. I will hopefully be headed to Law School in the Fall of 2013! Eventually, I hope to be practicing law in the Portland area.



SARAH KATHARINE LOCKHART
Athletic Training

Cumberland, ME
Greely High School

Concussion Management, Education and Diagnosis in Eastern Maine High School Football

Advisor: Chris Nightingale

Thesis description: It is important for high schools to educate, diagnose and manage concussions correctly to prevent the occurrence of catastrophic events. Through interviews and observations of practices and games, three Eastern Maine high schools were assessed to evaluate their concussion policies. Administrators, coaches and medical personnel were interviewed for concussion awareness. Themes included: honesty; misconceptions; testing and assessment; knowledge of players; personal connection; education; communication; changes in perspective over time; and Maine Principals' Association oversight. Based on the themes, recommendations and a conceptual framework for concussion management were developed to unify policies throughout Eastern Maine high schools.

Future plans: I plan to become a physician assistant and hope to expand on my research in proper concussion management.



RICHARD H. LUC
Biology, Microbiology
Political Science

Bangor, ME
Bangor High School

The Role of Caveolin in the Toll-Like Receptor Signaling Pathway

Advisor: Carol Kim

Thesis description: Two key pathways of the immune system that play an integral role in establishing the antiviral state are the Toll-like receptor (TLR) and interferon receptor (IFNR). Viruses have evolved to evade this antiviral state. We found that one viral evasion mechanism is disruption of cell membrane domains known as caveolae, which are implicated in disease processes like cancer and diabetes. Caveolae are vital in maintaining a structure from which molecules can signal. Previous studies show that viral infection depletes caveolin, leading to the dispersal of IFNR clusters and an impaired antiviral response. Through imaging we show colocalization of TLR9 and caveolin. By depleting caveolin, we get a dampened IFN induction via TLR9 upon exposure to ligand.

Future plans: I will earn my master's degree in Microbiology at UMaine before attending medical school. I hope to ultimately run my own medical practice in Maine and continue performing research.



KAITLYN MACISAAC
Biology
Neuroscience

Bedford, NS, Canada
Charles P. Allen High School

A Pilot Study on Differential Chromatic Contrast Discrimination Between Human Male and Female

Advisor: Leonard Kass

Thesis description: The purpose of this study was to quantitatively analyze the degree to which men and women discriminate contrasting colors. I posed the following questions: do women discriminate chromatic (red/green) color contrasts differently than men?; at which color intensities is it most difficult for women or men to discriminate colors?; and in what ways do background colors influence the difficulty for discriminating a foreground colored shape? For the female subjects, a general trend was consistent throughout both experiments. Women had more difficulty determining which side the open door was on at low SPIN values than men. Overall, women also showed that their response time in experiment one was slower than men.

Future plans: I plan to work in scientific research in Nova Scotia before attending medical school to earn my MD/PhD to practice medicine and clinical research.



CALVIN ANDREW MAKO
Earth Science

South Deerfield, MA
Frontier Regional High School

Heterogeneous Deformation of Gabbroic Rocks in the Grenville Province of Southern Ontario

Advisor: Christopher Gerbi

Thesis description: The mechanisms by which the deformation of rocks is localized are significant for the development of many landforms and structures that occur on Earth. I have performed microstructural analysis on an outcrop of rock from the Grenville province of southern Ontario which exhibits meter-scale strain localization and heterogeneous deformation. Given my results I have proposed mechanisms by which these rocks have become locally weak allowing strain to localize.

Future plans: I plan to pursue a master's degree in structural geology at the University of Massachusetts following graduation. Beyond that I will undertake further studies in geology depending on what career path I am interested in.



BRADIE NELSON MANION
Biochemistry
Chemistry

Old Town, ME
 Old Town High School

The Role of Traf2 in Zebrafish

Advisor: Carol Kim

Thesis description: I studied the innate immune system in zebrafish, a model organism for both human disease and fish disease. I looked at the signaling protein Traf2 and the potential role it plays during a viral infection in the zebrafish. We found that eliminating Traf2 in the zebrafish decreased the survival of the zebrafish. We were not able to definitively determine the causative agent for the increase in mortality in the Traf2 knockdown zebrafish. I also explored the potential function of Traf2 in zebrafish as a ubiquitin ligase. The principals of signaling elucidated in this research has ramifications in protecting farm fish from viral infections.

Future plans: I am attending Tufts University School of Medicine to study for my MD. After residency I will practice medicine with the United States Air Force with the goal of eventually coming back to practice in the state of Maine.



ALYSSA MARIE MCCCLUSKEY
English
Education

Hope, ME
 Camden Hills Regional High School

Transformation of Realism: Narrator's Function and the Blending of Dialogue and Stream of Consciousness in To the Lighthouse and Between the Acts

Advisor: Carla Billitteri

Thesis description: This thesis analyzes two narrative works by Virginia Woolf: her seventh novel, *To the Lighthouse*, and her final novel, *Between the Acts*. My analysis consists of two major components: I look at Woolf's post-impressionist poetics and examine, by way of a critical approach based on narrative theory, the construction of these poetics. Throughout, my interest is that of showing the transformation of classic realist representation of reality in these two novels. This transformation, I argue, is very subtly constructed through the narrator's function, and the blending of dialogue and stream of consciousness.

Future plans: I plan to take time off from school and work.



CHRISTOPHER MCGARY
Biology

Virginia Beach, VA
 Ocean Lakes High School

The Ashley Treatment: A Bioethical Analysis

Advisor: Jessica Miller

Thesis description: This thesis focuses on the analysis of a set of procedures coined "The Ashley Treatment." Ashley was a 6-year-old girl diagnosed with static encephalopathy and severe developmental disabilities. Her parents opted for a set of procedures, justified by her physicians and the hospital ethics committee, which enabled easier at-home care. The thesis presents a scientific case study and an explanation of the treatments, and applies accepted bioethical principles to analyze the treatments and motives. I conclude that "The Ashley Treatment" was unethical as Ashley's parents used medicine to solve a social problem and her physicians behaved immorally and should not have been allowed to conduct their treatments. This case points out a glaring disparity in resources for those with disabilities and their families. Hopefully, this recognition will bring advocacy and better care for those with cognitive disabilities.

Future plans: I will attend medical school.



LYDIA MCOSCAR
English
Psychology

Bangor, ME
 Bangor High School

Back When We Spoke in Cursive

Advisor: Gregory Howard

Thesis description: My thesis is a collection of short fiction interested primarily in the formation and function of nostalgia. Its nine vignettes make an archaeological investigation of several fantastical settings (a town veined with waterslides, a nocturnal orchestra, a labyrinthine subway station, etc.) to examine the roles of kinetic perception, synesthesia and language with regards to memory.

Future plans: I plan to spend a year writing and working before proceeding to graduate school.



MIRIAM ALISON CONNERS
MORGAN
Economics
Spanish

Old Town, ME
Mt. Ararat High School

Flat Tax Reform for the State of Maine

Advisor: Phillip Trostel

Thesis description: Flat tax theory has been explored and modeled at the federal level, but it has significant application at the state level as well. This paper investigates the feasibility of replacing Maine's current income and sales taxes with a single, flat rate income tax. Analysis of 2008 U.S. Census data on state and local government finances and Maine state tax policy indicate that a flat tax rate with a generous personal allowance offers a revenue-neutral tax system that meets principles of optimal taxation. It also may increase social welfare and promote economic activity in Maine. The effect of this tax reform on tax burden distribution, tax compliance, Maine's economic performance, and various equity-related issues is also explored.

Future plans: I will research the economic impacts of early childhood education investment in Maine with Philip Trostel at the Margaret Chase Smith Policy Center, and plan to raise a family and spend a long and happy life with my husband Andrew.



ZAKKARY A. MORIN
New Media
Film & Video, Studio Art

Brunswick, ME
Brunswick High School

Reality³

Advisor: Michael Grillo

Thesis description: The suspense genre has the power to control people. This thesis explored the genre by viewing films. I then made a short film with the formula.

Future plans: I plan to live in the real world for a year and then head back to graduate school for film.



DUSTIN NIEDT
Chemistry

Waterville, ME
South Portland High School

Optimization of Microwave Assisted Extraction of Resveratrol from Tree Bark

Advisor: Barbara Cole, Raymond Fort

Thesis description: My thesis studied whether a microwave-based extraction process could be improved for the extraction of resveratrol from tree bark so that it would be more efficient than traditional methods of extraction. Resveratrol is a compound found in grapes, in the bark of some tree species and among other sources that has implications in human health. Using a specially designed microwave reactor, I extracted various bark samples under different temperatures, in different solvents, and for different periods of time. Currently tree bark is an unused product of the tree in the pulp and paper industry. If, given further studies, enough resveratrol could be extracted from that bark efficiently, it could become another source of revenue for the industry.

Future plans: My post graduation plan is to begin the job search.



NICHOLAS C. NOBLE
Mechanical Engineering
Education, Mathematics

Richmond, ME
Richmond High School

Analysis Modeling and Optimization of a Smart Sulky

Advisor: Michael Peterson

Thesis description: My thesis centered around deriving the equations of motion for a Smart Sulky which was being developed as a Mechanical Engineering capstone project. The Smart Sulky is designed to reduce the side to side movements of a Standardbred harness racing sulky as it moves on the track. Reducing these movements will allow the sulky to track straighter behind the horse and shorten race times. Knowing the equations of motion for the Smart Sulky, as well as the inputs to these equations, allowed the capstone team to refine the development of the Smart Sulky and adjust specific parts needed to ensure its future success.

Future plans: I plan to work on my family's dairy farm in Richmond, as well as work part time for the horse racing surfaces testing company Biologically Applied Engineering. My goal is to work towards becoming a Professional Engineer in the future.



ASHLEY ELIZABETH NORUM
Biology
Chemistry, Microbiology

Fairbanks, AK
West Valley High School

The Role of Reactive Oxygen Species in Autophagy Activation During Candida albicans Infection

Advisor: Robert Wheeler

Thesis description: The immune system protects us against disease by direct destruction of pathogens. Host cells can control infections by activating an enzyme called NADPH oxidase, which generates reactive oxygen species (ROS) to kill pathogens directly. Autophagy, a recycling pathway within the cell, can also target pathogens for destruction by activation through ROS in vitro. We are using transparent zebrafish to characterize the role of autophagy during a fungal infection. By treating the organism with various chemicals that inhibit different stages of the pathway, we can gain a clearer understanding of the roles of NADPH oxidase, ROS, and autophagy during a live, in vivo, infection.

Future plans: Over the summer I am traveling to Europe for 3 weeks to sight-see and explore. In the fall, I will be attending Pacific University College of Optometry, located in Forest Grove, OR.



CAMERON CURTIS O'BRIEN
Political Science

Augusta, ME
Cony High School

Electioneering Across the Ages: Examining the Application and Implication of Media-based Mobilization in Presidential Campaigns Post-Radio

Advisor: Mark Brewer

Thesis description: This thesis traces the evolution of mobilization (also known as get-out-the-vote) strategies across the entire history of American presidential campaigning. More specifically, the piece analyzes campaign teams' use of assorted media in attempting to get citizens to the polls. The complex campaigning progression from radio to social networking is explored and explained with the help of archived newspaper articles and insider accounts.

Future plans: I plan to work for Senator Susan Collins in her Bangor, ME office.



JACK J. OBERY
Psychology

Topsham, ME
Mt. Ararat High School

The Effects of Suggestion on Dream Recall Frequency

Advisor: K. Lira Yoon

Thesis description: My research was designed to examine the role of suggestion in dream recall frequency (DRF). Participants were given the suggestion of either a high dream capacity or an average dream capacity (a falsified measure of how often they dream) and asked to record the frequency of their dreams for seven consecutive mornings. Results of my study, while not significant due to lack of participants, indicated that those given the suggestion of a high dream capacity reported a higher DRF than those given the suggestion of an average dream capacity.

Future plans: I plan to remain in the Orono area for a few years before pursuing a career in finance elsewhere. I also have the tentative plan of returning to psychology at some point farther down the road.



SARAH HUTCHINS PACHECO
Financial Economics
Business Administration

Winthrop, ME
Winthrop High School

***Affecting the Gold Standard:
A Monetary Structure for Yesterday and Today***

Advisor: Michael Montgomery

Thesis description: This thesis was an exploration of use of the Gold Standard as a fixed-rate monetary structure, chiefly within the United States. The thesis is broken into three chapters which describe fixed-rate monetary standards and money, key historical applications of the Gold Standard both domestically and abroad, and adoption of the Gold Standard, respectively.

Future plans: I plan to find a position within the finance department of a Maine-based company with international ties. I hope to hold this position for several years before attending graduate school. Travel, too, will be in my life as much as possible.



SAMANTHA LYNN PARADIS
History, Theater

Skowhegan, ME
Skowhegan Area High School

Prolific Playwrights:

Clifford Odets and Lillian Hellman Expose the Thirties

Advisor: Nathan Godfried

Thesis description: Clifford Odets and Lillian Hellman were two of the most influential playwrights of the 1930s, a decade of economic instability and political unrest in the United States. Both playwrights generated controversy with their plays through emphasis of Popular Front values. They were influenced by the political, social, and economic conditions in the 1930s. An in-depth analysis of their plays reveals how the interrelationship between playwright and society is best understood through an examination of the role of class and the role of male and female characters. With a look at two plays each by both Odets and Hellman, the works offer insight into the changes in society as well as the development of the cultural history of the 1930s.

Future plans: I will work as a stage manager over the summer in VT and Maine, and then take a year to work while I research graduate school programs in both history and theatre.



KAYLA MARIE PEARD
Music Education (Instrumental)

York, ME
York High School

The Case for Instrumental Music Education:

The Academic, Physical, and Social Benefits for Students

Advisor: Jack Burt

Thesis description: Through instrumental music education, students simultaneously develop cognitive and physical ability, and social skills. It has been proven that student math and science test scores improve through reading music and participation in an instrumental program. Students learn a new language that is more complex than any other written language and they improve their physical motor skills by studying piano or other instruments. Students learn leadership, organization, dedication, and teamwork, and develop an interactive awareness through ensemble playing. All objective evidence indicates the importance of instrumental music education schools.

Future plans: I plan to teach instrumental music to secondary students in the New England, and to earn a master's degree in instrumental conducting to help me better serve my students.



ERIC MICHAEL PETERMAN
**Biochemistry
(Molecular & Cellular Biology)**

Mendon, MA
Nipmuc Regional High School

***Characterization of Genes
in the CFTR-mediated Innate Immune Response***

Advisor: Carol Kim

Thesis description: Cystic fibrosis is among the most common genetically inherited diseases in the world, and is a result of a mutation in the CFTR gene. A primary cause for mortality in cystic fibrosis patients is respiratory failure due to the accumulation of pathogens in the lungs, combined with an overzealous immune response. The innate immune system, the body's first response to fighting an infection, is also affected by the CFTR mutation. Identification and characterization of other genes affected by the CFTR mutation and bacterial infection is a crucial part to understanding the abnormal immune response in cystic fibrosis patients. I demonstrated that Smad3, a transcription factor responsible for the regulation of certain immune-related targets, could help play a defensive role against infection.

Future plans: I am returning to UMaine for a master's degree in Microbiology and plan to pursue a PhD, or work in medical research.



BRIAN ANDREW PHILBROOK
**Political Science
Legal Studies, Professional Writing**

Belfast, ME
Belfast Area High School

***At What Cost?: A Study of the American Highway System
and the Maine East-West Highway Proposal***

Advisor: Mimi Killinger, Robert Glover

Thesis description: Highway construction has been a staple of American development since the early twentieth century, drastically changing the American landscape. As we continue our quest for increased connectivity and infrastructure, we must do so with a balanced look at the costs and benefits associated with highway construction, across a wide spectrum of political, sociological, economic, and environmental concerns. Are we considering all options, or are we simply trying to hastily solve twenty-first century problems with twentieth century solutions? Do the potential benefits associated with additional highway construction projects outweigh the costs? My thesis addresses these questions and raises new ones as we discuss the prospects of an East-West Highway in Maine.

Future plans: I will attend the University of Maine Law School after taking a year off to work full-time.



RACHEL MARIE PORTER
Management

Buxton, ME
Bonny Eagle High School

Business Meetings: A Look at how the Physical Environment Effects Overall Efficiency of Meetings

Advisor: Stephanie Welcomer

Thesis description: Increasing effectiveness of meetings for dispersed teams is crucial to success in businesses today. Virtual aspect of meetings held by teams of people who are not in the same geographical space can create communication barriers. Little research has been done to compare effectiveness of audio and video conferencing. Effectiveness of meetings was determined by four mediating constructs: level of multitasking, time management, participation and accomplishment. Ten employees from a Maine semiconductor company who regularly communicate with team members in Singapore participated. A survey of twenty questions was created and completed by employees. Although the sample size was too small to run statistical data, observations were made about trends for further research. Based on data collected, it can be assumed that video conferencing is the more effective form of communication for dispersed teams, but requires more preparation and practice than audio conferences.



ALEXIS PRIESTLEY
English
Psychology

Jonesport, ME
Jonesport-Beals High School

Occupy Horror: An Analysis of Gothic Motifs and Malefic Technological Prostheses in Contemporary Horror Films

Advisor: Steve Evans

Thesis description: My thesis explores the genre of Western contemporary horror films, with a focus on the way technological communication devices (the telephone, the internet-connected computer, and the television) are given a life of their own and rendered maleficent. By staging the anxieties and ambivalences we as a society feel towards our technological prostheses alongside classic Victorian Gothic motifs, the films I analyze force us to confront age-old tensions through a 21st century lens.

Future plans: I'm taking some time off to figure out what graduate path I want to pursue, but eventually I'll get my PhD in the literary or social justice realm.



RAFAEL MICHAEL RAMOS IV
Psychology (Abnormal/Social),
Philosophy

Panama City, FL

Improving Assistive Technology Through Phenomenology: A Comparative Analysis of Research Methods

Advisor: Nicholas Giudice

Thesis description: Developing successful assistive technology relies on successful communication between the developer and the end user. Through comparative analysis, my thesis examined focus groups and phenomenology as approaches for developing assistive technology. I proposed that the methodology offered by phenomenology gives a more complete and rich account of potential experience than traditional focus groups, due to its ability to get at the essence of an individual's experience. I concluded that the dialogic nature of interviewing in phenomenology, as well as the rigorous and thorough methods by which the data is analyzed would maximize communication between the designer and user, and reform the way that designers see the process of development.

Future plans: I plan to pursue a PhD in clinical psychology and continue to work on new strategies for treating anxiety disorders.



JOSEPH RECORD
Electrical Engineering

Augusta, ME
Cony High School

Data Logging Radiation Detector

Advisor: Rick Eason

Thesis description: This thesis presents background information on the theory and importance of radiation detection, specifically focusing on the design and test of a radiation detection device called the Data Logging Radiation Detector. This device is a consumer level Geiger counter that is capable of measuring ionizing radiation which can be harmful to human health. A switched mode power supply generates the necessary high voltage to bias a Geiger tube, which then senses three types of ionizing radiation: alpha particles, beta particles, and gamma rays. Output from the Geiger tube is processed by a microcontroller and written to an SD card. Data can then be read and plotted on a personal computer.

Future plans: I plan either to attend graduate school in Electrical Engineering at UMaine or pursue a career in industry.



PETER GUY ROYAL
Biology,
English (Literary Critical Writing)

Ellsworth, ME
Ellsworth High School

***Sex-related Differences in Color Contrast Discrimination:
A Pilot Study***

Advisor: Leonard Kass

Thesis description: The purpose of this pilot study was to investigate differences between males and females in color contrast discrimination. I conducted experiments using a newly developed VISION software which examined the differential performance of male and female human subjects in discerning stimuli of various colors against backgrounds of various colors displayed on an LED computer screen. These stimuli consisted of hollow, colored squares, each containing a single aperture on its left or right side. Subjects were required to select on which side they perceived the aperture. Previous studies have indicated that both physiological and behavioral-psychological differences exist between males and females which affect color perception. This study revealed that females exhibited significantly longer response times and more failures to respond than males in all of the experimental protocols. I have recommended several alterations to the software which will be conducive to better results in future studies by reducing the influence of behavioral-psychological differences.



LUKE CLOVIS SAINDON
Mechanical Engineering
Mathematics

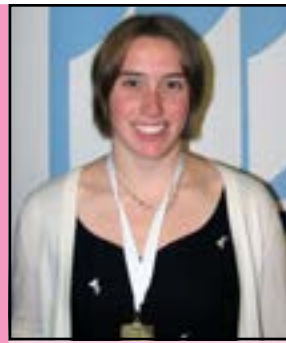
Deer Isle, ME
Deer Isle Stonington High School

***Development of Oxidizer Flow Control for Use in Hybrid
Rocket Motors of the Scientific Sounding Rocket Scale***

Advisor: Senthil Vel

Thesis description: Sounding rockets are a common way of transporting instruments higher than 100,000ft, but they are expensive, often inefficient and can damage payloads on takeoff. A hybrid rocket engine would be an excellent propulsion option because a throttled motor would allow the vehicle to leave the pad more gently and increase the efficiency by achieving greater altitude and using less fuel. Developing the oxidizer flow control system is necessary for a throttled hybrid propulsion system. If the oxidizer control method investigated in this thesis was implemented on a real motor, it would be possible for researchers to determine an optimized thrust profile that could be loaded into computers before flight.

Future plans: I will take a year off to sea kayak, explore the connection between art and WWOOF in Europe before moving west to pursue a career working in aerospace propulsion systems.



HELAINA SACCO
Sociology
Political Science

Marion, MA
Old Rochester Regional High School

***Between "Student" and "Athlete": The Academic Institution's
Role in the Self Identification of Division I Student-Athletes***

Advisor: Amy Blackstone

Thesis description: This study focused on the importance of the academic institution as an external force on the student-athlete experience. A voluntary online survey, powered by Qualtrics, was administered to all 410 student-athletes at the University of Maine. A basic analysis of the survey results revealed that particular conduits of the academic institution may be important in the balance between student and athlete, specifically professor expectations, school sanctioned organizations, and Honors College enrollment. Also, future plans to attend graduate school were highly correlated with student-athlete self identification. The use of this information has the potential to enhance balance between the dual roles of student and athlete so as to best achieve the athletic and academic goals of the Athletic Department.

Future plans: I plan to attend graduate school in the fall in the UK at Loughborough University to earn an MSc. in the sociology of sport.



ALEXANDRA MARIE SETTELE
Animal & Veterinary Sciences
(Pre-Veterinary)

Coronado, CA
John Bapst Memorial High School

***Resistance of Abomasal Parasites to Common Anthelmintics
in Small Ruminants in the Northeast***

Advisor: James Weber

Thesis description: The abomasal worm of ruminants, *Haemonchus contortus*, is detrimental to Northeast sheep and goats. It is also often resistant to anthelmintics commonly used by sheep producers in Maine. We developed methods to assess the response of these parasites to anthelmintics. Fecal samples from experimentally infected sheep in West Virginia and from two farms in Maine were used as sources of parasite ova and larvae in these experiments. Parasites were grown to the L3 stage, examined, and then studied using motility tests, Methylthiazol Tetrazolium assays and spectrophotometry. Due to selection for resistance over time in Maine parasites, we expect anthelmintics to have a higher kill rate on parasites obtained from West Virginia than on parasites collected from Maine.

Future plans: I will work as an apprentice doing physical therapy on racehorses before pursuing my goal of becoming a veterinarian.



JAIME E. R. SHORTER
Mass Communication
Psychology

Hastings-on-Hudson, NY
 Hastings High School

The Use of Mass Media in Animal Rights Fundraising Campaigns

Advisor: Eric Peterson

Thesis description: Animal welfare organizations were created to address the problem of abuse and harm. But, as not-for-profit organizations, they rely heavily on donations and voluntary support from the public. In order to achieve their mission, the ASPCA (American Society for the Prevention of Cruelty to Animals) and PETA (People for the Ethical Treatment of Animals), two of the most popular animal welfare organizations, rely heavily on mass communication fundraising campaigns. My research study examines four mass communication campaigns from the ASPCA and PETA. The campaigns involve the use of mass communication through print, television/video broadcasting, mail, and the Internet. I describe how each organization uses these forms of mass communication to successfully accomplish their fundraising goals.

Future plans: I plan to earn my law degree and become an animal welfare attorney.



ERIN LEIGH SNAPE
Anthropology
Earth Sciences

Enfield, ME
 Penobscot Valley High School

Health Impacts at the Advent of Agriculture

Advisor: Kristin Sobolik

Thesis description: The transition from hunting and gathering to an agricultural way of life may have been the key development made by past peoples, transforming diet, social structure, mobility, and resource use. I present human skeletal evidence illustrating the consequences of agriculture on human health using case studies from pre-historic Mesoamerica, the American southwest, and regions in Asia. Such evidence has indicated that intensification of maize agriculture in the New World correlates with increased infant mortality rate, dental caries, iron-deficiency anemia, and an overall decline in general health, while these health problems have little to no correlation to early intensification of rice agriculture in Asia. This is likely due to the decreased cariogenic nature of rice and its greater nutritional value, processing differences, or greater dietary variety in Asia.

Future plans: I would like to find a job in archaeological field work, or work with AmeriCorps before attending graduate school.



CLINT SNYDER
Theater, Mass Communication

Crete, IL
 Crete-Monee High School

An Introduction to Nine Original Plays: A Creative Thesis

Advisor: Sandra Hardy

Thesis description: I wrote, edited, produced and analyzed nine absurdist plays. My analysis consisted of an examination of comic types and some gender theories.

Future plans: I will be attending the Actor's Studio for their MFA program in the fall. I recently had several plays published, including some that I wrote as part of my thesis, and I plan on writing more.



EMMA TAYLOR STRUBELL
Computer Science
Mathematics

Cape Elizabeth, ME
 The Taft School

Modeling the Spread of Biologically-Inspired Internet Worms

Advisor: Sudarshan Chawathe, David Hiebeler

Thesis description: Infections by malicious software, such as Internet worms, spreading on computer networks can have devastating consequences, resulting in loss of information, time, and money. To better understand how these worms spread, and thus how to more effectively limit future infections, we apply epidemiological models to simulate the proliferation of certain types of Internet worms that use biologically-inspired strategies. From complete scans of the Internet, we find that vulnerable machines do seem to be highly clustered on the Internet. In addition, our simulations of worms spreading on the Internet suggest that this emergent organization likely fosters the quick and comprehensive proliferation of these types of worms.

Future plans: In the fall, I will start the MS/PhD program in computer science at the University of Massachusetts, Amherst.



JESSICA R. TALBOT
Psychology (Abnormal/Social)
*Child Development
 & Family Relations*

Pittsfield, ME
 Maine Central Institute

***Sentencing and Treatment of Juvenile Offenders:
 A Review and Critique***

Advisor: Doug Nangle, Geoffrey Thorpe

Thesis description: Adolescents account for a large percentage of crime. Given this, it is vital that we are constantly examining and critiquing the juvenile justice system to ensure positive outcomes such as low recidivism. My thesis takes an in-depth look at the ways in which the United States responds to this unique class of offenders and which treatment options are most effective. Several factors play a role in the selection of a program for individuals in the juvenile justice system, including definitions of violence, assessment, and availability of the treatment desired.

Future plans: I plan on taking time off before applying to Clinical Forensic Psychology graduate programs.



OLIVIA ANNA TEER
Psychology
Anthropology

Ferrisburgh, VT
 Vergennes Union High School

***Gender Differences and Cognitive Constructs
 in Generalized Anxiety Disorder***

Advisor: Sandra Sigmon

Thesis description: Generalized anxiety disorder (GAD) is associated with distorted cognitions. Researchers have tried to better understand factors to predict symptoms consistent with GAD diagnosis. Tull and colleagues (2009) found that some cognitive factors may serve as predisposing factors to GAD. My thesis continues this research by assessing the predictive nature of cognitive constructs (worry, rumination, coping styles, and anxiety sensitivity) with GAD symptoms. Undergraduate students (N =285) completed anxiety-related measures in an online anxiety prediction study. Results show that women reported more symptoms than men. In addition, regression analyses indicated gender differences in predictors of GAD. Coping strategies and rumination proved to add to the prediction of GAD.

Future plans: I plan on working in Portland, ME for a year and applying to PhD programs in Clinical Psychology.



AUKUN TUNGATAROVA
International Affairs (Political Science)

Almaty, Kazakhstan
 Conserve School

Kazakhstan: A Hearth For Another "Arab Spring"?

Advisor: James Warhola

Thesis description: My thesis focused on the issues that gave rise to the Arab Spring movement in 2010 that brought about many reactions around the world. The socio-economic and political conditions present in the Arab countries have led to much of the political change in that respective region. My research was to analyze those conditions, compare them to those present in Kazakhstan, define their precipitating causes, and point to their consequences in the future of the country.

Future plans: I'm starting my master's program at University of Pennsylvania for a graduate degree in International Educational Development.



ARIEL STERLING TWOMEY
Biology

Hamilton, MA
 Hamilton-Wenham Regional High School

***The Role of Cofilin 1 like in the
 Development of Pectoral Fins in Danio Rerio***

Advisor: Sharon Ashworth

Thesis description: Actin is a crucial protein for cellular structures and movement. Cofilin 1 like is a protein that can bind to actin and affect its organization. I studied the development of zebrafish with normal and significantly decreased levels of cofilin 1 like protein. A morpholino can be injected at the one to two cell stage of the embryo. It partially binds to the mRNA coding for cofilin 1 like protein inhibiting the protein's synthesis by ribosomal translation. The idea is that cofilin 1 like is required for normal development of pectoral fins. I documented delay in the fin development of fish with close to 80% less cofilin 1 like protein. The overall abnormal phenotype and its implications are being explored, but results could apply to cell migration issues and its role in the metastasis and development of cancers.

Future plans: I plan to join the Peace Corps, and pursue art and language before attending graduate school in a medical field.



GREGORY PAUL VIENS
Ecology & Environmental Science
(Land Use Planning)

Attleboro, MA
Bishop Feehan High School

A Growing Town:

Developing a Local Food System in Orono, Maine

Advisor: Kathleen P. Bell

Thesis description: In the discussion about the origins of our food, there are many concerns being expressed with current agricultural practices. A growing number of people think that maybe local food systems are the solution. But what exactly is a local food system and what elements make one successful but another fail? The goal of my thesis was to identify the factors that are essential to a local food system and then apply these aspects to develop models of an expanded local food system in Orono. Through research and the utilization of computer geographic information systems, we can better understand our communities and how they can be supplied with food in a more sustainable, healthful, and interactive way.

Future plans: In the short term, I will return home and hopefully find a job. In the long term, I hope to be able to pursue some hobbies, and most importantly stay balanced.



HEATHER MARIE WHITE
Anthropology, Psychology

Litchfield, ME
Oak Hill High School

Hybrid Healing: Reiki and the Integration of Complementary and Alternative Medicine (CAM) into Biomedicine

Advisor: Ann Acheson

Thesis description: My thesis explores complementary and alternative medicine (CAM) through research on the modality of Reiki. Reiki is an energetic practice that uses the 'laying on of hands' to facilitate healing. The aim of my thesis is to give insight both on a specific mind-body-spiritual practice and on how Reiki and similar modalities might be accepted as treatments and integrated into biomedicine. Research was completed through standard anthropological methods: interviews, participant observation, and field notes. Twenty-seven Reiki practitioners were interviewed to learn about their perspectives on Reiki and the progression towards integration.

Future plans: I will attend Boston University for a masters in medical anthropology.



MEGHAN DOROTHY WHITE
Political Science
Legal Studies, Philosophy

Upton, MA
Nipmuc Regional High School

The Implications of Snyder v. Phelps

Advisor: Solomon Goldman

Thesis description: This thesis was an in-depth exploration of *Snyder v. Phelps*, a case recently decided by the Supreme Court. I argued that the decision was not a narrow one and that it posed great risk for both the target of hurtful speech and the speaker. While the court claimed to have narrowly tailored their decision to the facts of the case, the ambiguity present within their decision created something much more ominous. This case allows speakers to say what they will about individuals as long as their speech is part of a larger conversation on a matter of public concern. Under *Snyder v. Phelps*, any individual could become the target of intentional infliction of emotional distress with no legal recourse.

Future plans: I am heading to the Sandra Day O'Connor College of Law in Arizona to pursue my competing interests in criminal and constitutional law.



NATHANIEL S. B. WILDES
Political Science
Innovation Engineering

Cumberland, ME
Greely High School

A Case Study of How Innovation Can Impact Local Economic Development in a Town/Gown Environment

Advisor: Jake Ward

Thesis description: My thesis focussed on finding a better way for towns to "do" economic development. Currently, there's no reproducible system for economic development that towns can adopt and manage on their own. My thesis focussed on finding one, by using Orono, ME as a case study and 'test bed' for implementing Innovation Engineering — a systematic approach to innovation — in a municipal governance model. Orono was able to expedite work on a number of projects, including bringing the highest speed internet available in the world to businesses and residents, by using Innovation Engineering.

Future plans: I enjoy long walks on the beach. No, really.



CARY WILLIAMS
Sociology

Greenwich, CT
Greenwich High School

The Framing of Animal Cruelty by Animal Advocacy Organizations

Advisor: Amy Blackstone

Thesis description: I studied how People for the Ethical Treatment of Animals (PETA), the Humane Society of the United States (HSUS), and the American Society for the Prevention of Cruelty to Animals (ASPCA) define animal cruelty. The sociological concept of framing refers to how social movement organizations understand and present a concept or event they view as a problem. Using content analysis on the respective websites and pamphlets, my findings show that all three organizations have a common master frame of animal cruelty and sub-frames of suffering and sentience, necessity, exploitation, and harm to humans. The difference in the content of the sub-frames indicates differential views of PETA, HSUS, and ASPCA regarding animal cruelty. My findings provide a foundation of the differential definitions of animal cruelty by animal advocacy organizations.

Future plans: I plan to attend Tuft's University graduate school for Animal and Public Policy and have a career in animal advocacy.



SARAH ELIZABETH WILLIAMS
Civil Engineering

Richmond, ME
Richmond High School

An Adaptive Reuse & Restoration of a Maine Barn

Advisor: Edwin Nagy

Thesis description: This is a study of the post and beam barn in Orono, ME that examines the changes necessary to use the barn as an event center. Included is a structural analysis of the current barn structure to determine its adequacy for the new use under current design standards, such as IBC 2009. The architectural portion of this study examines the capacity of the building and the egress and restroom facilities requirements for that capacity, as well as the ADA requirements. Provided is a final design that incorporates the architectural aspects and the structural changes necessary to meet modern standards.

Future plans: I plan to pursue an advanced master's degree in Structural Analysis of Monuments and Historical Constructions. This program is a cooperative effort between Universities in Spain, Italy, Portugal, and the Czech Republic.



JACKSON ROBERT WITHERILL
Political Science
International Affairs

Readfield, ME
Maranacook Community High School

War of the Words

Advisor: Mark Brewer, Richard Powell

Thesis description: My thesis looks at the way the repeal of the Fairness Doctrine, an FCC regulation on opinionated and biased radio broadcasting, affected the rise of political talk radio. It went on to examine the possible effects the repeal of the Doctrine have had on political polarization in the United States. I found that following the removal of the Fairness Doctrine, talk radio, and specifically Conservative political talk radio, rapidly increased in both the number of stations and number of listeners and that listening to conservative talk radio, and openly biased news sources in general, can be correlated with more polarized partisan attitudes.

Future plans: I plan to teach English abroad in China for a year before returning to the US to attend law school.



KAITLIN MAY WORTELBOER
Psychology
Spanish

Portland, ME
Deering High School

Oedipus & Electra Revisited: A Study of Human Mate Selection

Advisor: Cynthia Erdley

Thesis description: I conducted a psychological study of human mate selection in a sample of college students using theories of template matching (individuals select mates based on a template of their opposite-sex parent), assortative mating (we choose partners similar to ourselves) and other relevant trends. I predicted that more evidence would be obtained to support template matching and that the overall affect of mothers on the male participants would be greater than the effect of fathers on the female participants. Participants were in a heterosexual relationship for at least three consecutive months and had both a same-sex and opposite-sex parent figure present in their lives. Participants completed online assessments of physical appearance, personality and sex/gender roles for themselves, their parents and their partner. Overall, the results of my study support its hypotheses.

Future plans: I will earn my master's in Clinical Psychology - Practitioners Track at Loyola University in Baltimore, MD.



MATTHEW W. WRIGHT
 Physics
 Mathematics

Newport Center, VT
 North Country Union High School

Growth and Structure of Thin Film Silver Oxide Materials

Advisor: Robert J. Lad

Thesis description: I deposited silver and oxidized it in a vacuum chamber to create silver oxide thin films. These films were characterized by our research group, and I specifically characterized them via x-ray diffraction. We determined the structure of the films, the composition and many other properties. Using this information we adjusted the deposition parameters to produce silver oxide closer to the desired composition. I also performed experiments in the vacuum chamber to determine the oxidation rate of the silver in order to further adjust the deposition parameters.

Future plans: I hope to find employment in the semiconductor industry, assisting in research or the optimization of manufacturing semiconductors. Long term I plan on continuing my education by earning a master's degree and PhD to advance in the industry.

Honors Celebration 2012



The Honors Celebration was, once again, the highlight of commencement weekend at UMaine. More than 600 students, faculty, parents, family and friends gathered to recognize the Honors College Class of 2012. President Ferguson and Provost Hunter joined us and offered congratulatory remarks and reflections on the remarkable year the Honors College community has had. As always, Dean Charlie Slavin personally read the name and thesis title of every graduate before they received their medallion and stein. ■ ■ ■



A VISIT WITH RACHEL BINDER-HATHAWAY

Please tell us a little bit about yourself and what you studied at UMaine.

I'm a non-traditional student and proud single mom. My 13 year old son, Jacob, is the center of my universe. I have always prized education, but I took an unorthodox approach to my degree. At the age of 18 I left home for college, but it wasn't the right time for me to pursue my collegiate dreams. I moved to the Boston area and enjoyed a gig singing and dancing on a cruise ship that circled the harbor. Then I moved to New York City in pursuit of grander performance venues. Although my lifestyle was anything but traditional, I wouldn't have changed a moment of it. When my son was born in 1999, the artistic lifestyle I had grown accustomed to was no longer a viable career option. I obtained my Real Estate license and earned my Brokers license. I continued this line of work for nearly a decade. When my mother suggested moving back to Maine to pursue my academic dreams, I took her advice. It was terrifying to leave our life in NYC behind. At the age of 32 I took a deep breath and started down a life-changing new path. As a student at UMaine, I had the opportunity to take my passion for civic contributions to a whole new level. This was my chance to develop skills – maybe even a career – focused on social equity for underrepresented members of our global society. This desire has since led me to India, Bangladesh, Malaysia, Thailand and Indonesia where I have sought practical methods for incorporating social equity at the grassroots level. It's been an incredible journey so far!

What was your thesis topic and how did you come to choose it?

My Honors Thesis, entitled *Meaningful Contributions to Poverty Alleviation through Microfinance*, was designed as a comparative cross-case study analysis of two leading Microfinance Institutions: Grameen Bank and BRAC. It focused upon microfinance best practices intent on expanding microfinance outreach to targeted borrower groups, especially those in abject poverty. I believe strongly in the power of microfinance. It's an excellent model for reducing social inequities and for creating economic growth opportunities at the grassroots level.

Can you tell us about your Fulbright Fellowship and how it impacted your UMaine experience?

I'd assert that my UMaine education strongly impacted the Fulbright experience! At UMaine I gathered and sharpened the business and economic tools necessary for real-world success. UMaine offers its students wonderful mentors and an incredible support network, especially in the professors and administrators of the Business School and Honors College. Charlie Slavin was always championing my requests for international internships and research projects. I first learned about microfinance at UMaine—a chapter in my BUA 201 textbook ended with a little vignette about Grameen Bank. The name sounded familiar, so I Googled it, and by semester's end, I had secured an internship and was off to Bangladesh! That's how my journey began. I've returned to Bangladesh four times for microfinance research and to advance the efforts of my NPO, Seeds of Change Consulting. My current Fulbright Fellowship is really just part of a larger ongoing effort. All roads lead to my end goal: contributions to closing gender and income disparities, and economic development. It's been an incredible, exciting adventure so far and I can't imagine doing anything else.

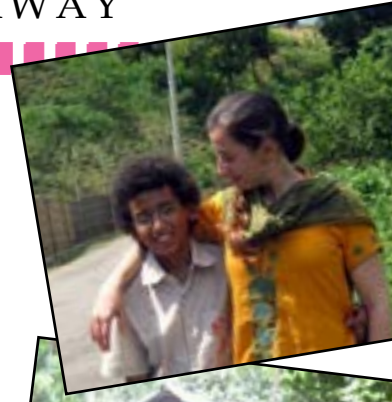
Why was Honors important to you?

Honors is such a special part of the UMaine experience. As a member of the HC, I was able to gain new perspectives and explore worthwhile academic pursuits. Honors really allows us to move beyond our comfort zone and embrace a more holistic approach to academia.

What advice can you give to future Honors students?

I can't overstate how special the Honors College is. I would strongly encourage students invited into the program to stay the course. Being an Honors student is a unique opportunity. Like anything, you get out of the program what you put into it. So, those students looking for academic challenges and new perspectives should keep on keepin' on. I'm certainly glad that I did.

My only other advice is this: pursue your passions. It seems an obvious statement, but in reality it's easy to let those flames fade into embers. Make the conscious choice to take a chance, to try something off-the-wall. Whatever moves you, just be fearless and go for it! ■■■





The
Honors
College
AT THE UNIVERSITY OF MAINE

ROBERT B. THOMSON HONORS CENTER
UNIVERSITY OF MAINE
ORONO, ME 04469-5716

NONPROFIT ORG.
U.S POSTAGE
PAID
ORONO, MAINE
PERMIT NO. 8

