

Office of Sponsored Projects & Research

Annual Report 2015-2016

July, 2016

**A public college
should serve the
public good.
We do.**

Inside

Research High-
lights 2

Faculty Fellow-
ships 12

Internal
Investment 13

External Funding
Activity 14

The mission of OSPR is to assist our campus constituents as they distinguish themselves through their scholarly efforts, and to contribute to the intellectual vibrancy of the campus and community.

RESEARCH SERVING THE PUBLIC GOOD

At Keene State, we believe **a public college should serve the public good**. Our faculty and students fulfill that commitment everyday in their classrooms, laboratories, studios, and beyond. The goal: preparing the next generation of problem-solvers, innovators, and engaged citizens.

Students enter our community through the iconic Appian Way arches (shown below), reminding them to Enter to Learn and Go Forth to Serve. While here, they are challenged to find the passions that drive them, learn the skills to engage with them, and to make a difference. Working alongside faculty mentors on research, creative, and scholarly projects propels them toward those goals in an accelerated fashion.

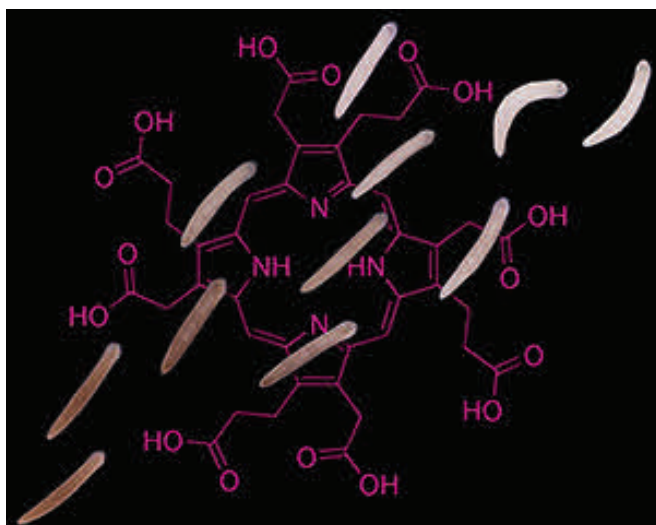
As you read the enclosed stories about the research and scholarly projects our faculty and students are pursuing in service of the public good, we hope you will be **inspired!**

Keene State College asks: *How will YOU serve?*



Enter to Learn. Go Forth to Serve.

Serving the Public Good: Developing New Ways to Screen for Novel Therapies



A type of flatworm could be a new weapon in the hunt for better ways to treat a group of diseases that can cause extreme sensitivity to light, facial hair growth, and hallucinations, according to [a study published in the journal eLife](#).

Porphyrias are a group of rare metabolic disorders characterized by red and purple pigments accumulating in the body. With the accidental discovery that the skin color of the flatworm *Schmidtea mediterranea* (*S. mediterranea*) changes under prolonged exposure to sunlight, these animals could provide a new model for studying the diseases.

Faculty and student researchers from [Keene State College](#), New Hampshire, show that the flatworm generates light-activated molecules called porphyrins in its skin pigment cells using the same biochemical pathway as that involved in human porphyrias. Their research developed from the unexpected observation by undergraduate students that the flatworms they were investigating changed color from brown to white when exposed to sunlight for several days. It could now lead to future drug development to meet patient demands for more effective treatments.

“Porphyrias are typically caused by inherited mutations that involve a buildup of porphyrins in various parts of the body. Although naturally created during the generation of heme, a substance required for oxygen transport in red blood cells, porphyrins can have toxic effects when their levels increase,” said [Jason Pellettieri](#), corresponding author and Associate Professor of Biology at Keene State College. “For example, porphyrins deposited in the skin cause swelling, blistering, and lesions upon exposure to bright light. Neurological issues can also arise, ranging

from anxiety and confusion to seizures or paralysis. These episodes, which can last for weeks, can be triggered by drugs, hormonal changes, and dieting or fasting.”

The porphyrins in *S. mediterranea* give rise to their normal skin pigmentation. When the animals are exposed to intense light for extended periods of time (a situation unlikely to occur in the wild), porphyrin production leads to pigment cell loss, changing the animals’ skin color to white. To investigate this photosensitivity, the researchers first tested infrared and ultraviolet lights on the flatworms, which had no effect on their skin. In contrast, intense visible light altered their coloring, with just over half of them developing one or more small tissue lesions.

“Our findings show that prolonged light exposure eliminates the flatworms’ pigment cells through a mechanism involving porphyrin-dependent photosensitization. The animals then repigment when they are no longer exposed to light,” explained lead author Bradford Stubenhaus.

During the course of the research, the team also noticed a positive relationship between how long the flatworms were fasted before light exposure and the extent of their photosensitivity.

To document this relationship, they starved the animals for one, seven, 14, or 30 days before exposing them to light. Depigmentation was strongly accelerated with starvation, and then reversed with a single feeding 24 hours before light exposure. These discoveries suggest that *S. mediterranea* could help identify new treatments for easing porphyrin-mediated photosensitivity or separating the relationship between dieting or fasting and the onset of disease symptoms.

“Although porphyrias are usually manageable diseases, reliance on the mainstay treatment, namely intravenous heme, or liver transplantation for more severe cases, can result in significant complications. There are also no approved preventative therapies for patients who suffer recurrent attacks,” says Pellettieri.

“Our studies show that flatworms such as *S. mediterranea* could potentially change this. They have recently emerged as a useful model for human disorders, including Usher syndrome – a genetic disorder that affects vision, hearing, and sometimes balance – and cystic kidney disease. We can now add porphyria to this growing list, with plans to use the animals to screen for novel therapies in the near future.”

~Courtesy of KSC Marketing & Communications and eLife.

Serving the Public Good: Developing New Ways to Screen for Novel Therapies



Dr. Pellettieri in his lab with research teammates Casey Kimball and JP Dustin. Photo by Will Wrobel

“My undergraduate research experience with Dr. Jason Pellettieri has sparked my interest in Biological research and challenged me to grow intellectually and socially. I have gained real world work experience and memories that I will carry with me to my next endeavors.”

~KSC Graduating Senior Survey, 2015

Funding

Dr. Pellettieri was supported by NSF Award #IOS-1445541, NIH Award #1R15GM107826-01, and NH-INBRE NIH Award #P20GM103506.

Reference

The paper ["Light-induced depigmentation in planarians models the pathophysiology of acute porphyrias"](#) can be freely accessed online. Contents, including text, figures, and data, are free to re-use under a CC BY 4.0 license.



About eLife

[eLife](#) is a unique collaboration between the funders and practitioners of research to improve the way important research is selected, presented, and shared. eLife publishes outstanding works across the life sciences and biomedicine — from basic biological research to applied, translational, and clinical studies. All papers are selected by active scientists in the research community. Decisions and responses are agreed to by the reviewers and consolidated by the reviewing editor into a single, clear set of instructions for authors, removing the need for laborious cycles of revision and allowing authors to publish their findings quickly. eLife is supported by the Howard Hughes Medical Institute, the Max Planck Society, and the Wellcome Trust.

Serving the Public Good: Preventing Genocide



Dr. Jim Waller

As many as 170 million civilians across the world were victims of genocide and mass atrocity in the 20th century. And as much as political leaders stand up and declare, “Never again!” citizens in many countries still find themselves and their families under brutal attack. Look at such places as South Sudan, Burma, Syria, the Central African Republic, Burundi, Iraq, and territory under ISIS control.

Determined to offer real solutions to this horrible problem, Keene State’s Cohen Professor of Holocaust and Genocide Studies [Dr. Jim Waller](#) has just published his fifth book, [Confronting Evil: Engaging Our Responsibility to Prevent Genocide](#) (released on May 24 by Oxford University Press).

Drawing on over two decades of primary research and scholarship from a wide range of disciplinary perspectives, *Confronting Evil: Engaging Our Responsibility to Prevent Genocide* is grounded in the belief that preventing mass atrocity is an achievable goal, but only if we have the collective will to do so.

“When people talk about genocide prevention, they tend to compartmentalize it as military intervention,” Dr. Waller explained. “In that line of thinking, genocide prevention means that if we have boots on the ground, it will stop people from killing other people. I wanted to say that genocide prevention is all through the conflict cycle. Before the conflict breaks out, we should be focusing on how we prevent genocide through such things as good governance, a resilient economy, and social cohesion. During genocide, there are lots of ways to keep it from getting worse. I discuss about 20 different tools—sanctions, diplomatic engagement, disengagement—that we have that can make a difference long before it should come to military intervention. There’s also a third phase: When genocide is over, we want to prevent it from happening again, so how do we rebuild societies in the aftermath of this violence? I wanted to conceptualize prevention at all phases of the conflict cycle rather than just waiting until the killing has started. With that in mind, I also wanted to be clear about the reality that early prevention is always the most effective, and least costly, means of building a resilient society and protecting civilians within that society.”

Dr. Waller offers concrete and proven steps that world leaders can take to stem a horrific and daunting problem. “The point of the book is to remind us that genocide prevention can occur at all phases of the conflict cycle—before, during and after crisis,” he said. And he’s already in discussion with Oxford University Press about his next book, *Legacies of Evil: Rebuilding Societies after Mass Atrocity*.

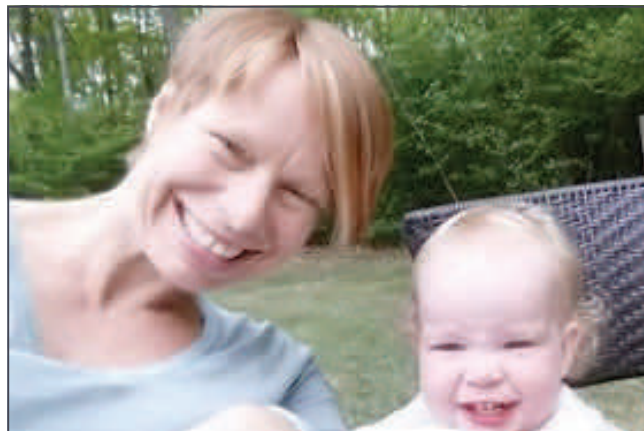
~Courtesy of KSC Marketing & Communications

In 2015, Dr. Waller traveled to Washington D.C. to lead training and educational seminars for government agencies such as Immigration and Customs Enforcement (ICE) and the FBI, which are charged to “identify, locate, investigate, and prosecute perpetrators of genocide, war crimes, and other related mass atrocities.”

Serving the Public Good: Understanding Food Disorders in Infants

Though it's considered a rare disease, Food Protein Induced Enterocolitis Syndrome, or FPIES, is extremely heartbreaking because it affects infants, causing them to have sometimes violent reactions to much of the food they eat. Not a lot is known about the condition, though doctors and allergists agree that it seems to be increasing. So it's good news that Assistant Professor of Health Science **Jeanelle Boyer** recently secured a grant from [The FPIES Foundation](#) to study the disease.

Her motivation is personal. "For her first 16 months, my daughter reacted to just about every food that she tried to eat," Dr. Boyer explained. "Currently at 22 months, she has about 10 foods that she now tolerates. ... Her reactions have ranged from acute vomit to shock-type reactions to milder reactions that involve skin rashes and frequent diarrhea with mucous/blood. The worst part, though, is that the reactions create so much discomfort. It broke my heart to see her squirming in pain all night because her belly hurt. The disease is strange in that some babies only have one or two triggers, while other babies are allergic to all foods—and no one really knows why." After a food reaction, many babies with FPIES end up in the hospital to manage the symptoms. There is no real cure or treatment.



Prof. Boyer and her daughter, Ella Frances—happy and healthy because her mom was so good at figuring out what foods she could and couldn't tolerate.

As a microbiologist, Dr. Boyer suspects that microbiomes in the baby's gut play a role in FPIES, so she will compare the microbiomes of FPIES babies with healthy babies, hoping for insight about what causes the disease. "If I find that the microbiome does play a role, then I think there is definitely an opportunity for prevention and treatment," she said. "Data may show that certain beneficial microbes are lacking or that certain 'bad' microbes are too abundant. If there are too many of the bad guys, something like antibiotics may even help. If certain microbes are missing, it could open up opportunities for designing new probiotics or for exploring the use of fecal transplants to help these babies."

Dr. Boyer will begin by asking parents to complete a short survey about their babies' allergies and about conditions that could possibly affect the babies' gut microbiomes. Parents will send a fecal sample straight from their baby's diaper to [UBiome](#) for sequencing. She'll analyze and compare the data next spring and early summer and have some results by the end of summer. Stay tuned. ...

~Courtesy of KSC Marketing & Communications

From the 2015 Graduating Senior Survey

Percentage of Keene State College graduating seniors who reported working with a faculty member on a research project beyond the classroom: 36%

Percentage who attended a scholarly or professional conference: 44%
These individuals were significantly more likely to agree that their major challenged them to do their best work.

Percentage who presented at a scholarly or professional conference: 15%
These individuals were significantly more likely to agree that they were satisfied with their KSC education.

Serving the Public Good: Helping Child Care Centers Eat Healthy



Health Science professors Karrie Kalich (l) and Becky Dunn

The [NH Department of Health & Human Services](#) awarded Health Science professors [Karrie Kalich](#) and [Becky Dunn](#) \$99,300 for their “Healthy Eating and Sodium Reduction Project.” The grant enabled them to recruit health consultants, child care centers, and school administrative units (SAUs) that agreed to participate in the project. Several Health Science graduates were hired as the consultants, who helped the schools complete the [Nutrition and Physical Activity Self Assessment for Child Care](#) (NAP SACC) with additional questions related to sodium reduction practices. Then the consultants and child care centers worked together to adopt nutrition policies and/or practices to reduce the amount of sodium the children were eating and improve their health.

Most adults realize that they should limit their sodium intake, but why should children care about it? “Sodium is of course connected to high blood pressure,” explained Dr. Kalich. “However, it also serves as a marker for the nutritional value of the food—higher sodium foods tend to be highly processed and therefore less nutritious/less nutrient dense. If schools/child care centers are focused on reducing sodium in their meals, it’s likely that they’ll move towards

more whole, cooked-from-scratch foods and away from the highly processed convenience foods that are almost always loaded with sodium.”

Child care centers received \$1,000 mini grants, and school districts received \$1,500. A 1.5-hour online sodium reduction training program called “Shake It Down” will be offered free-of-charge to school food service workers for continuing education credits.

“The initiative was successful in bringing greater attention to the importance of nutrition and awareness of current practices,” Dr. Kalich reported. “The work also resulted in the adoption of policies, practices, and procedures that resulted in healthier food choices for the children.”

The *Keene Sentinel* did an [article on the effect of the program at Antrim’s Blossoms Early Learning Center](#).

~Courtesy of KSC Marketing & Communications



Over the years, Drs. Kalich and Dunn have partnered with NH DHHS on initiatives ranging from nutrition to physical activity to breastfeeding. Together, they are making New Hampshire’s citizens healthier!

Serving the Public Good: Understanding Drivers of Entrepreneurship



Professors of Sociology, Anthropology and Criminology [Carolyn Keller](#) and [Saran Ghatak](#) have received a \$95,020 grant from **The Ewing Marion Kauffman Foundation** for their project “The Cultural and Political Contexts of Craft Beer Entrepreneurship.” They plan to examine the role of cultural, economic, locational, and political factors that explain entrepreneurial success as well as the local impact of the craft beer industry in the US, focusing on five cities: Portland, ME; Kalamazoo, MI; Asheville, NC; Cincinnati, OH; and Kansas City, MO.

“We will be studying a broad definition of craft beer including microbreweries, nano breweries, and brewpubs,” explained Dr. Keller. “We are interested in examining how very different political and cultural contexts have supported the recent exponential rise in brewing. ... We are studying small/medium sized cities to determine how brewers work together to generate a friendly beer culture. This is also interesting because for craft beer to be as successful as it’s been, it can’t just be a unique niche of people who imbibe. The breweries have been successful at extending their consumer base to incorporate a wide swath of different demographic groups. We expect that some of this is a function of buy-local movements but also a function of America’s broadening palate.

Dr. Carolyn Keller

“Craft beer is also interesting because of how cooperative the brewers are. Since they see themselves as largely competing against big beer (which is getting bigger every day) they co-brew and cooperate, which is a unique function. Since there are many interesting features of craft beer, we’ll be interviewing three groups—sellers and producers, consumers, and state and local politicians.”

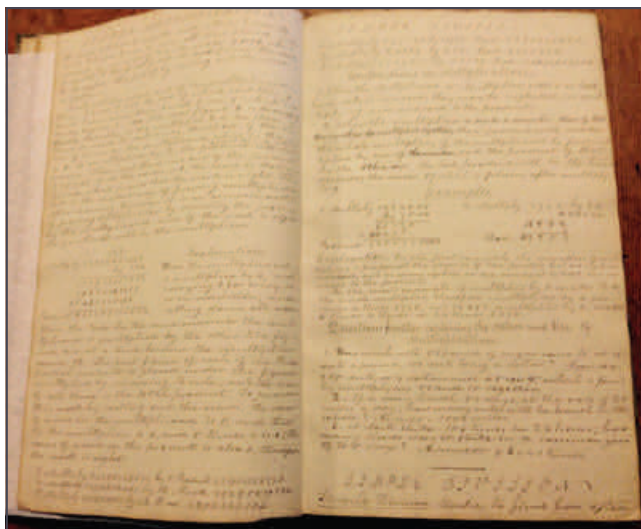
~Courtesy of KSC Marketing & Communications

“Our vision is to foster a society of economically independent individuals who are engaged citizens in their communities...Many young adults will work in businesses started by entrepreneurs. Some will become entrepreneurs themselves, providing jobs and wealth for society.”

~Ewing Marion Kauffman Foundation



Serving the Public Good: Preserving and Sharing Historical Treasures



There's a unique thrill from being among the few to delve into original historical documents and artifacts. You're not reading *about* history, you're reading *history*. A grant from the [National Archives](#) offers local middle and high school students, Keene State undergrads, and participants in the [Cheshire Academy for Lifelong Learning](#) (CALL) a chance to experience this thrill as they learn to transcribe some of New Hampshire's important historical documents.

The [National Historical Publications and Records Commission Grant](#) awarded the College \$44,601, under the Literacy and Engagement of Historical Records category, to fund a project in which Keene State, the Historical Society of Cheshire County (HSCC), Keene High School, the New Hampshire State Library (NHSL), and the NH State Archives (NHSA) will collaborate to create a curriculum that will allow effective training of "citizen archivists" who will understand how to interpret and transcribe archival materials. And as a result, these archivists will put several fragile, handwritten documents into a digital format so they can be available to a wide audience of researchers and interested parties via Keene State College's digital repository, [KSCommons](#).

Dr. [Margaret Orelup](#), Associate Professor of History, and Associate Professor [Rodney Obien](#), College archivist, will lead the project, with key assistance from Dr. [John Lund](#), Lecturer in History, and Jennifer Carroll, Director of Education for the Historical Society of Cheshire County. "The NHPRC grant is one of the most competitive and prestigious in the library and archive field," Prof. Obien explained.

The project team are developing a curriculum and lesson plans that emphasize the importance of primary sources, archives, and preservation and teach the citizen archivists the knowledge and skills to read, interpret, and transcribe 18th- and 19th-century handwriting. The students will also learn to put the documents in historical context; to read 18th- and 19th-century handwriting; to read common terms and abbreviations used in wills, deeds, military papers, and other historical documents; and what to do when you are not sure of your interpretation.

The collections selected include the papers of the New Hampshire civil war soldier Charles Wilcox (HSCC), a Union soldier from Keene who was captured and imprisoned in Andersonville, Georgia from 1864–1865; the Meshech Weare Papers (NHSA) of the prominent lawyer and farmer from Hampton Falls, NH, and first President of New Hampshire (1776–1785); and the Dudley Leavitt Papers (NHSL). Leavitt (1772–1851) was a mathematician, astronomer, farmer, and teacher who filled notebooks and papers with problems, examples, and drawings illustrating principles and axioms for his students and as a guide to his own further studies. He also published *Leavitt's Almanac*, which rivaled the *Farmers Almanac*. These collections are not currently easy for researchers and the public at large to access.

"We supported the project as there is no other way that the State Library could possibly make this collection accessible to the public other than the original documents because we don't have a digital platform like the KSCommons," said Janet Eklund, administrator of Library Operations for the State Library. "We participated because of the success of the [Templeton project](#). The State Library will be a direct beneficiary of the grant activities, of course. By all means, it will benefit the state of New Hampshire. Leavitt is a prominent figure in the state's history. Because KSC is the grantee, they have the capacity to make it available worldwide through their digital commons as they did with the Templeton letters. It is a very challenging collection as it is difficult to read and handle. Having it transcribed will provide more context to Leavitt's role in the scientific field in general."

~Courtesy of KSC Marketing & Communications



Serving the Public Good: Collecting NH Poets Laureate Papers



Keene State archivists Brantley Palmer and Hayley Lamberson with the NH Poets Laureate Collection

Rodney Obien, Keene State's Head of Special Collections and Archives, has secured a \$10,000 grant from the **NH State Library** to archive and preserve the papers of four New Hampshire Poet Laureates: [Marie Harris](#), [Patricia Fargnoli](#), [Walter E. Butts](#), and [Alice B. Fogel](#). The project will organize, describe, and rehouse unprocessed papers; digitize original manuscripts for preservation microfilming; create a set of preservation microfilm; and make a selection of digitized manuscripts available online.

"Why are we collecting NH Poet Laureate papers?" asked Prof. Obien. "Because no one else does, which surprises a lot of people. I want people to know that the Keene State archives welcomes artists'—and other people of note's—papers. My interest is that if there are papers of importance that they get preserved somewhere and are accessible."

Since the archives already houses the [Modern Poetry Collection](#), adding the papers from the state's poets laureate is a logical step. These collections also offer rich scholarship opportunities for Keene State's students. "In addition to wanting to preserve the literary history, we want our collections to be used for study," Prof. Obien

explained. "Being able to study these materials really adds a dimension to your education. It opens your eyes. By gathering these collections, we're helping to create a better, broader learning experience for our students."

"I love the diversity that Keene State has to offer and the unique way that students can use it to grow both personally and professionally."

~KSC Graduating Senior Survey, 2015

"Professors bring their students here to use the books and collections that we have," said Assistant Archivist [Brantley Palmer](#). "One of the advantages of digitizing this material is that it makes it so easily available to such a large audience. Even if the student or researcher doesn't come into the archives, they can still see the material on their computer."

"In studying a poet, you can read his/her poetry, but you can also read his/her papers and materials to learn about how one is a poet. What does it mean to be a poet?" said [Hayley Lamberson](#), project archivist. "We don't just have manuscripts, we have correspondence, journals, and notes, and you really get to know the artists—very intimately. They're already showing their heart through their poems, and we see the back story. It's a kind of emotional experience."

And there's always more to do: "We're also realizing that we need to record the poets reading their poetry," said Prof. Obien. "It's one thing to read the poems, but it's important to hear how the poet intended the meter and pauses and inflections." So look for audio recordings—or even video—of these accomplished artists in the not-too-distant future.

This preservation project has been made possible through funds received from the sale of the New Hampshire Moose Conservation License Plate and administered by the [New Hampshire State Library](#), a division of the [New Hampshire Department of Cultural Resources](#).

~Courtesy of KSC Marketing & Communications

Serving the Public Good: Protecting our Rivers when Dams are Removed



Lately, there's been pressure from environmental groups to remove some of the old mill dams that are common in many New England towns. Basically, the feeling is that the dams alter the river's habitat and create barriers to several important species of fish (salmon, smelt, shad, striped bass, sturgeon, and eels, for example) that

must travel up and down the rivers to and from the ocean to spawn.

But when a group decides to remove one of these old dams, what do they do with the sediment that has built up behind it over the past couple of hundred years? Conventional wisdom has held that allowing that sediment to flow downstream would create an ecological disaster, burying and wreaking havoc on the organisms and habitat below, so it must be dredged out before the dam can be breached. However, some scientists suggest that these sediments can play an important role in restoration. Keene State's Assistant Professor of Environmental Studies [Denise Burchsted](#), whose area of expertise focuses on natural and man-made barriers in waterways, has been involved in a couple of dam removal projects south of the border in Massachusetts where the sediment was allowed to wash downstream.

What happened? In the Millie Turner Dam on the Nissitissit River in Pepperell, Massachusetts, there was the fear that taking out the dam would change the water level and the released sediment would harm an endangered freshwater mussel much farther downstream. However, the Massachusetts Division of Ecological Restoration (MA DER), made the decision to remove the dam and let the sediment flow, supported by input from the endangered species and fisheries experts with the Massachusetts Division of Fisheries & Wildlife and with the experts in dam safety at the Office of Dam Safety, among others. They decided on that route because the Nissitissit is very productive for fish, including the fish that probably help maintain the endangered mussels, and the dam was a barrier to their movement.

Because the sediment had been impounded for years, the

stream bed for a mile downstream was impacted, and was often hard rock, a very unproductive environment for fish and other aquatic creatures, including the endangered mussel, to build nests and live. So Peter Hazelton with Mass Division of Fisheries & Wildlife, assisted by a team of volunteers relocated as many of the endangered mussels as they could find before the dam was taken out, and the sediment was allowed to move downstream in hopes of restoring the stream bed. **Helped by funding from the Squan-a-Tissit and the Boston chapters of Trout Unlimited**, some of Dr. Burchsted's students – primarily Andy Marion, with some assistance from Joshua Dallesander, [Charlie Stoll](#), and Hannah Beauchesne – were able to conduct research on the process.

"The broad collection of organizational and communication skills are probably the most important thing that I have gained from this experience, and those are vital to becoming a professional in any field. I also was trusted to supervise fellow students in the field, which gave me a great deal of leadership experience."

~Andy Marion, Environmental Studies student (pictured)

The students measured the sediment before the dam came out and are now conducting research on the downstream bed after the dam is gone. "So far, we're finding that the sediment is moving very slowly, much more slowly than expected, and it has only started to show up downstream of the dam," Dr. Burchsted explained. "It might take a year or so to really have a sense of the final impact."

The research opportunity has been invaluable for Marion, an environmental studies major with a minor in women's and gender studies. "I've been working with Dr. Burchsted since my first semester at Keene in fall 2014 and have been focusing mainly on this project, and I've learned so much from working with her, including developing my skills in field study, data management, communicating professionally about my work, and public speaking," Marion said.

~Courtesy of KSC Marketing & Communications

Dr. Burchsted receives support from Trout Unlimited and NH EPSCoR/National Science Foundation Award # EPS 1101245.

Serving the Public Good: Making the Shellfish Industry Safer



Biology professor Loren Launen and undergraduate biology student and researcher, Katie Kiley, are working together at Keene State College to develop a greater understanding of a growing problem in saltwater habitat where shellfish are farmed.

Kiley, of Scituate, Rhode Island is working with Dr. Launen to sequence and study the genome of the bacterium *Vibrio vulnificus*, which is found in the mussels, clams, oysters and seawater from the Atlantic seaboard to the Gulf of Mexico. When ingested or absorbed through a wound, the bacterium can cause severe health impacts, including vomiting, diarrhea and abdominal pain, a life threatening infection of the blood stream, as well as damage to skin and tissue. In 2015, 42 cases of *V. vulnificus* were found in Florida, which resulted in 13 deaths.

Dr. Launen and Kiley are working together to better understand why the pathogen is becoming a burgeoning issue in the U.S. shellfish industry, and what it means for keeping consumers safe. Samples that are studied are taken from New Hampshire's Great Bay.

"In our lab, Dr. Launen, fellow student **Sarah Sanders** and I are looking at *V. vulnificus* in a more in-depth manner than has been done before," said Kiley. "We're taking *V. vulnificus* and we're looking at the genome to see which strains have a chance of making someone sick."

Kiley spent the summer of 2015 working with University of New Hampshire (UNH) team members Steve Jones and Cheryl Whistler to gain field research experience isolating the bacterium from water and oysters in the Great Bay. Kiley is continuing to study the bacteria she obtained at Keene State, focusing on genomic analysis. Kiley said that she's grateful for the chance she's been

given to work in the lab at Keene State with Dr. Launen, and at UNH. She said she's well ahead of the curve in comparison to her classmates because she's getting to perform work that is applicable to the lessons she's learning in the classroom, which will in turn prepare her for the steps she intends to take after she graduates.

"Since I've made a connection with Dr. Launen, I feel like my world has opened up. I wouldn't have had any of the opportunities to conduct research at UNH and come back to continue with it here. It's been a wonderful experience and an incredible ride."

~Katie Kiley, Biology student (pictured)

Katie said that in addition to being ahead of the game academically, she's built a solid relationship with her faculty mentor, Dr. Launen. "I definitely feel like I have a close relationship with Dr. Launen. We go on trips to UNH and we go to American Society for Microbiology conferences to talk about our work," said Kiley. "I don't have a lot of free time but it's going to be worth it in the end. Every time I isolate that colony of vibrio or I confirm it's *V. vulnificus*, or we make a little bit of headway, or I get that exam back – it's so worth it."

~Courtesy of KSC Marketing & Communications

*Dr. Launen receives support from NH EPSCoR Program/
National Science Foundation Award # IIA 1539071.*



Faculty Fellowship Recipients



PI: Christopher Brehme

Sponsor: Council for International Exchange of Scholars; U.S. Fulbright Scholar Award, United Kingdom

Project Title: Value of the View: How human activity influences visitors' perceptions of National Park landscapes in Northern England

Project Overview: Associate Professor and Chair of Geography **Christopher Brehme** has been selected for a U.S. Fulbright Scholar award that will enable him to spend the Fall of 2016 conducting Participatory GIS research with colleagues at the University of York in the

U.K. The research uses a mixed-methods approach to collect data on visitors' location preferences within a nearby national park, and analyzes the influence of existing and proposed human activities on these preferences. The project provides a shared context for exchanging Participatory GIS research ideas, with a focus on identifying participants, choosing data collection techniques, and spatial analytical approaches. Results will inform park planning and resource conflict resolution. Returning home, Chris' Fulbright experience will provide the basis for growing Keene State's Community GIS center and will further the development of newer specializations relating to outdoor recreation, tourism, and sustainable planning while promoting future exchanges with York students and faculty.



PI: Matthew Odell

Sponsor: Marion and Jasper Whiting Foundation

Project Title: New Music Intensive: Encounters with Olivier Messiaen, Pierre Boulez, and Elliott Carter

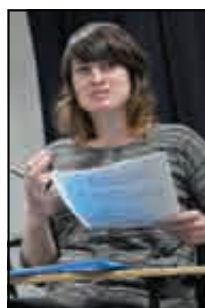
Project Overview: This award provides funds to support travel to Paris, France and Basel, Switzerland to explore three different archives related to the music of the 20th and 21st centuries; particularly the music of the French composer Olivier Messiaen, his student, Pierre Boulez, and American revolutionary composer, Elliott Carter.

PI: Thomas Durnford

Sponsor: Marion and Jasper Whiting Foundation

Project Title: CIEE Faculty Development Seminar

Project Overview: This award provides funds to support attendance at the Council on International Educational Exchange (CIEE) program which will be held in Senegal. The program will focus on Islam, politics and culture.



PI: Johanna Dery

Sponsor: Marion and Jasper Whiting Foundation

Project Title: Tove Jansson: Model for a Creative Life

Project Overview: This award provides funds to support travel to Finland to research the life and work of author and cartoonist Tove Jansson, to make connections in the contemporary Finnish comics community, and to learn more about the Finn's cultural relationship to the sea in preparation of adapting Jansson's *The True Deceiver* (published in 1982) into a feature film screenplay.



PI: Irina Leimbacher

Sponsor: Marion and Jasper Whiting Foundation

Project Title: Roots and Rifts - research for an essay film

Project Overview: This award provides funds to travel to Romania and the Ukraine to conduct research for an essay film that intertwines personal family history with major historical events of the 20th century affecting eastern/central Europe.

Internal Investments in Faculty Research and Creative Endeavors

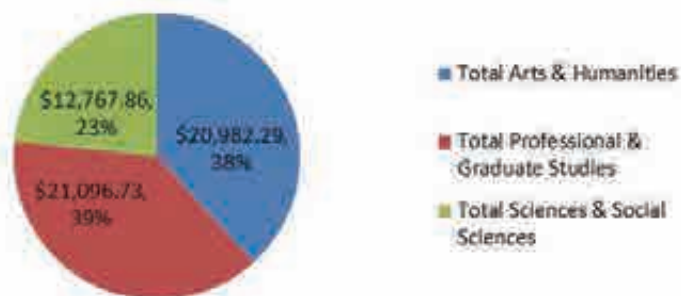
Early Career Summer Seed Grants: Each Year, Keene State College invests in its faculty pursuing research and scholarly endeavors. The Early Career Summer Seed Grant program is an initiative out of the Office of the Provost providing financial support to pre-tenure faculty to significantly advance a new or ongoing scholarly project, positioning them to seek external funding. The following faculty received funding for summer, 2016.

- Emily Robins Sharpe, Assistant Professor of English and Affiliate Faculty of Holocaust & Genocide Studies, Women's & Gender Studies, for her book project *Mosaic Fictions: Writing Diaspora in the Spanish Civil War*.
- Carolyn Keller, Assistant Professor of Sociology, Anthropology, and Criminal Justice/Sociology, Anthropology, and Criminal Justice, for an expansion of her project on the entrepreneurship of the craft brewing industry.
- Denise Burchsted, Assistant Professor of Environmental Studies, for data analysis and writing for upcoming grant proposal to the National Science Foundation.



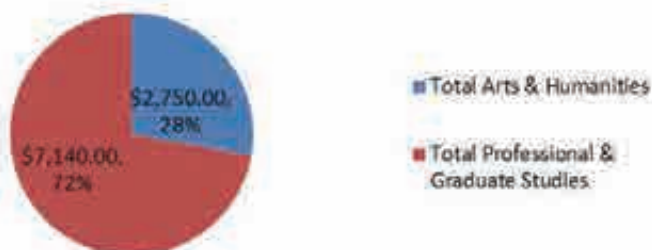
Faculty Development Grant Awards

22 proposals resulted in 21 awards



Indirect Cost Reinvestment Grant Awards

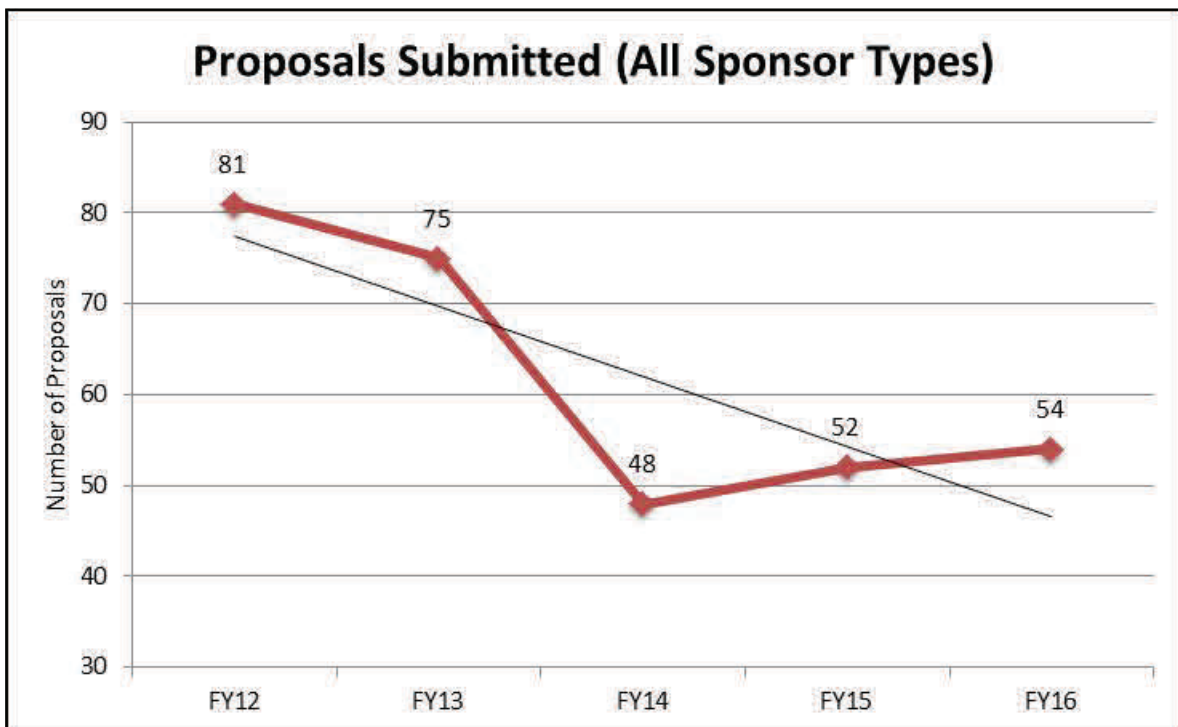
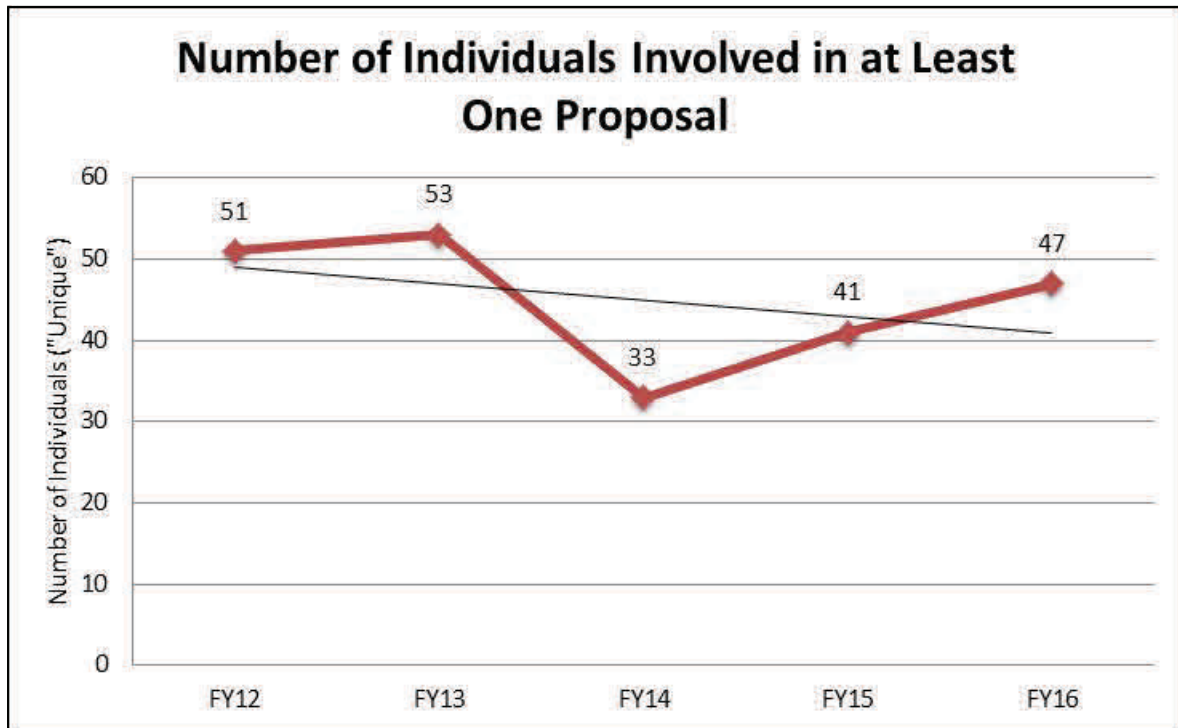
4 proposals resulted in 4 awards



"Since coming to Keene State, I have been continually impressed by the support for teacher-scholars, and especially all the feedback and encouragement I've received from OSPR and the Humanities Faculty Research Group. This award will have a huge impact on the development of my book manuscript--which is, I'm pleased to say, now under advanced contract with U of Toronto Press!"

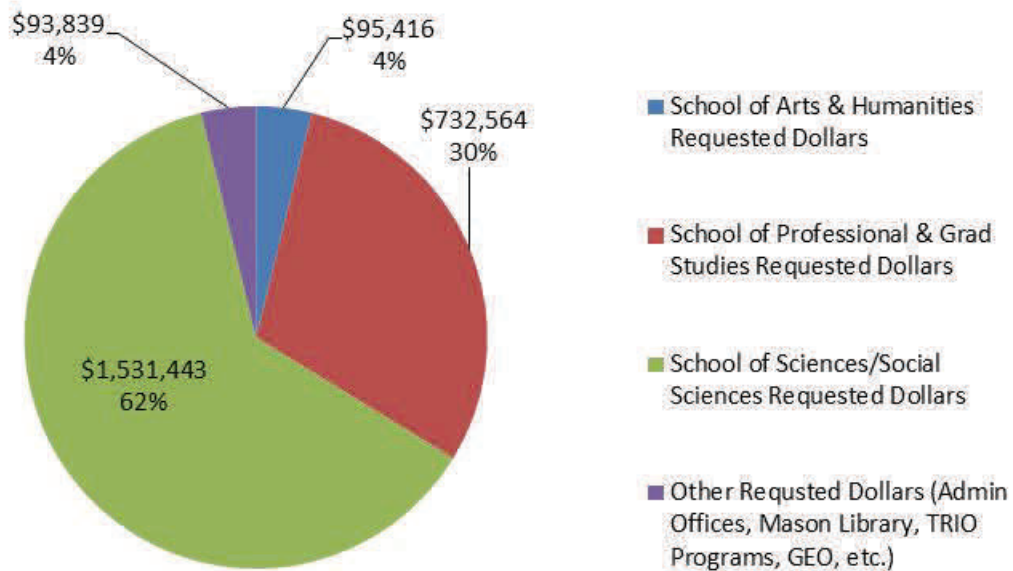
*~Emily Robins Sharpe,
2016 Early Career
Summer Seed Grant
Recipient*

External Proposals FY16

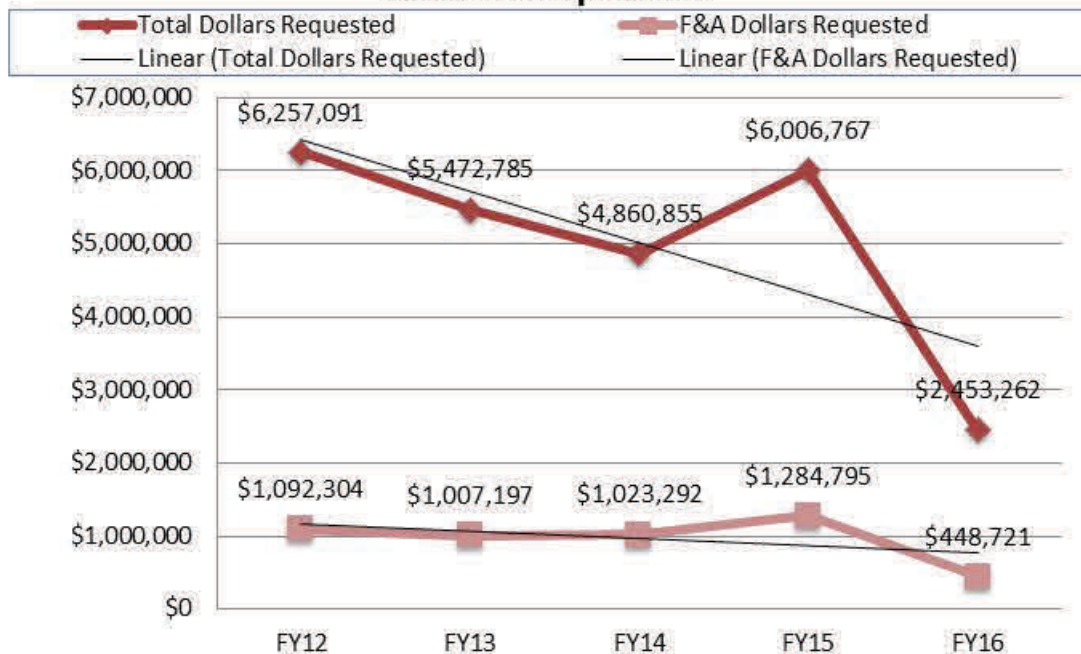


External Proposals FY16

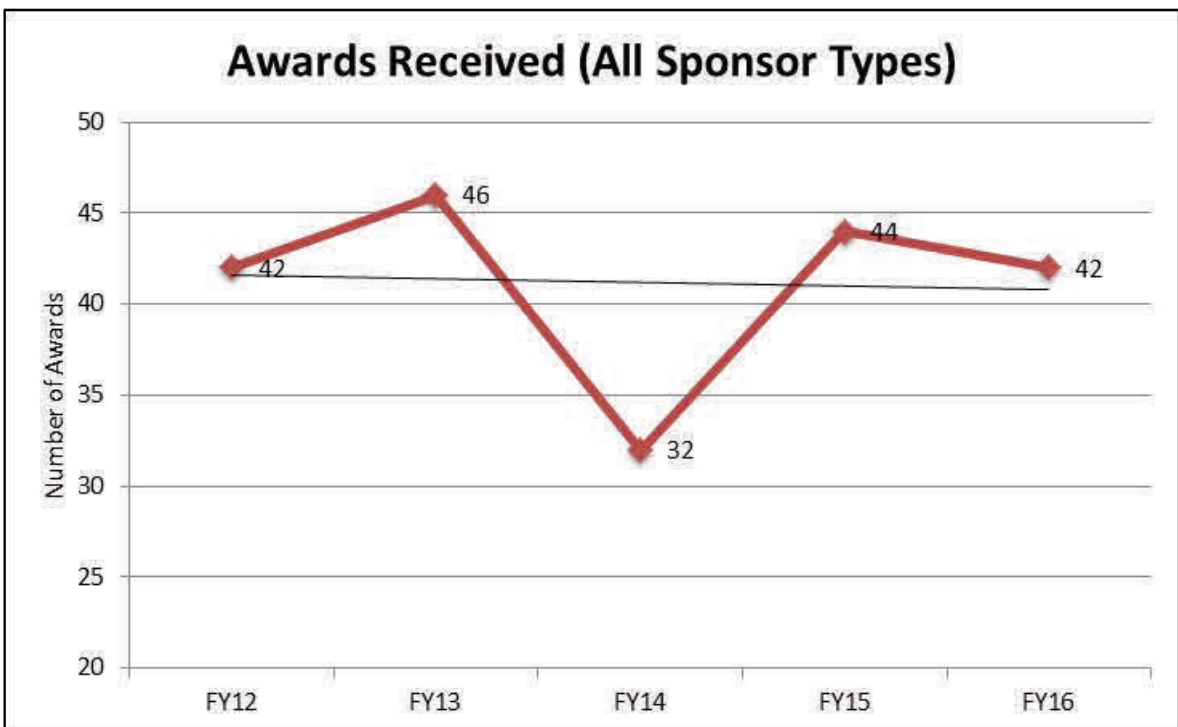
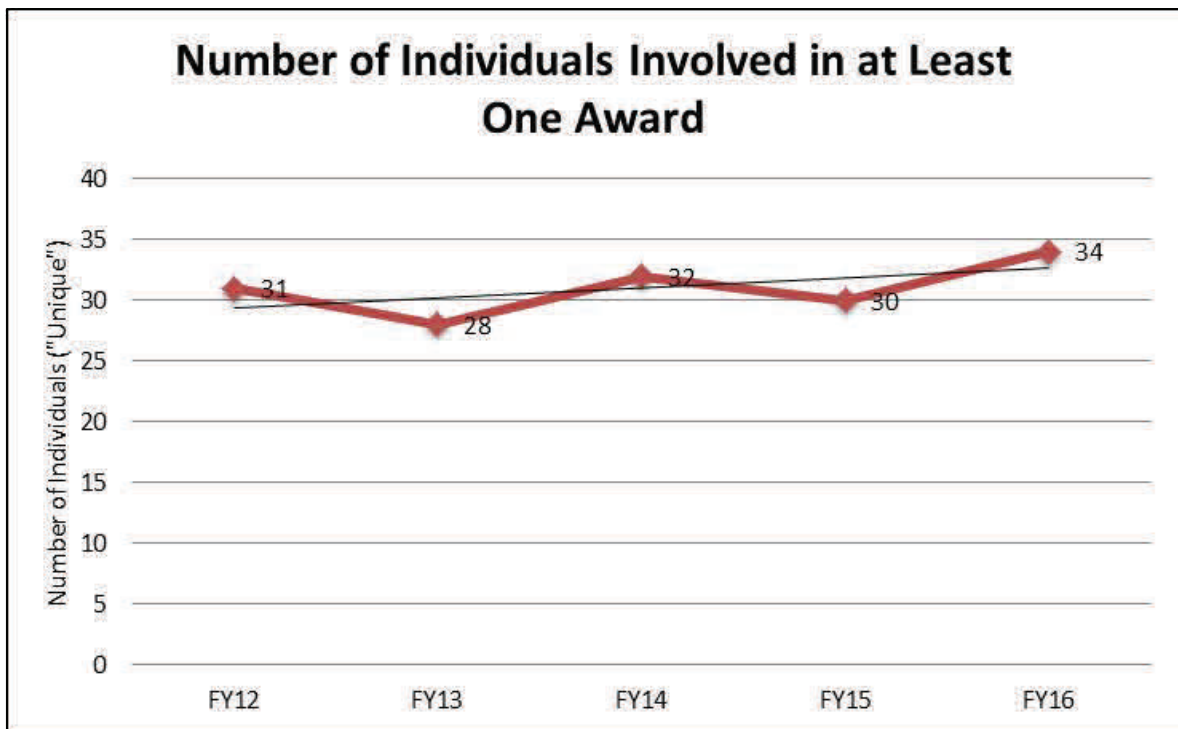
KSC Submitted 54 Proposals Requesting \$2,453,262



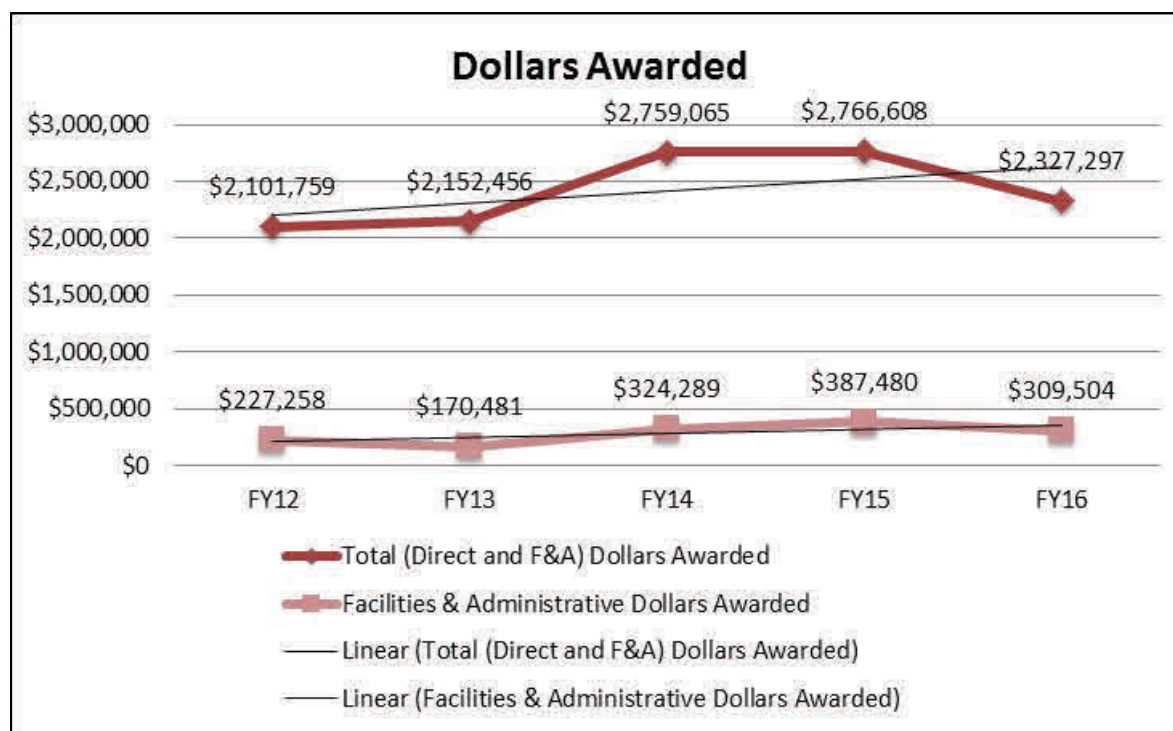
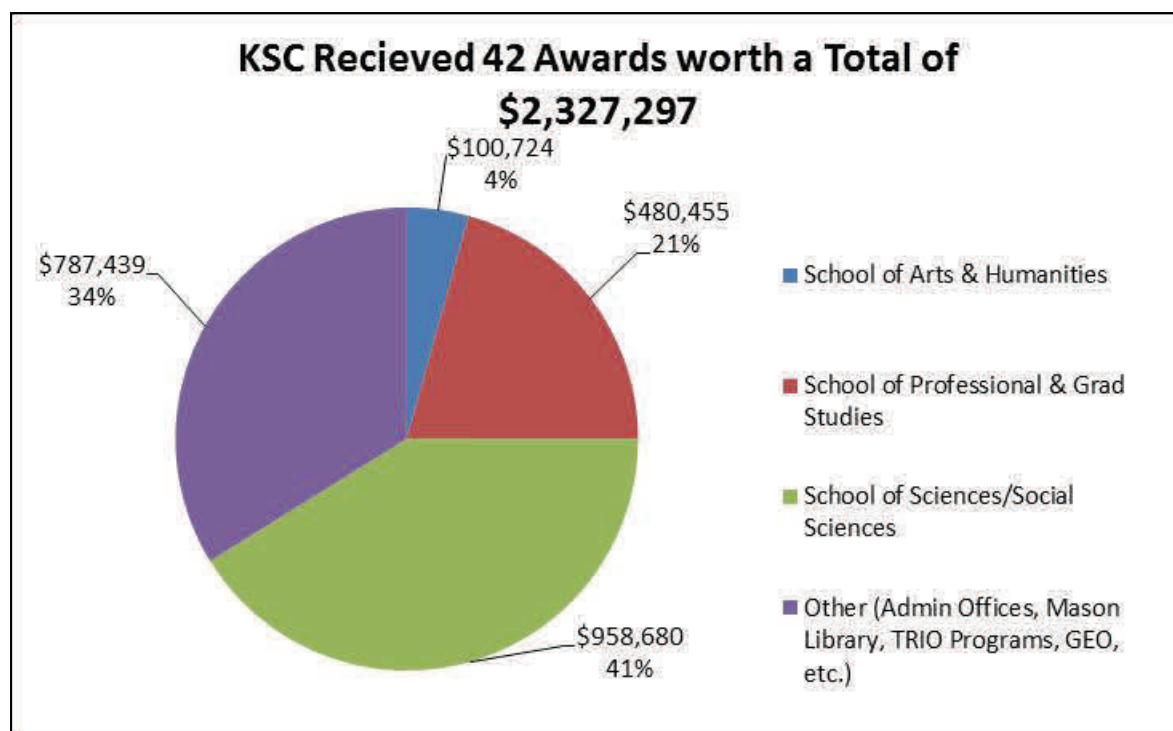
Dollars Requested



External Awards FY16



External Awards FY16



**OFFICE OF
SPONSORED
PROJECTS &
RESEARCH**

115 Winchester Street
Keene, NH 03435-3510

Phone: 603-358-2427
Fax: 603-358-2939
E-mail: pmiceli@keene.edu

Penny J. Miceli, PhD, CRA
Director

Janet Albarado, MA, CRA
Associate Director

Audrey Arsenaault, CRA
Lifecycle Grant Manager &
Research Integrity Specialist

Visit us on the web!
www.keene.edu/office/ospr



Thank you to our Partners!

It is OSPR's daily pleasure to support the scholarly and creative pursuits of the KSC community. We gratefully acknowledge our partners who play essential roles in supporting the research enterprise alongside us.

- ◆ **Research Advisory Council** (Dr. James Waller, Dr. Paul Baures, Dr. Karrie Kalich, & Dr. Nora Traviss)
- ◆ The **Center for Creative Inquiry** (Dr. Jason Pellettieri, Dr. Margaret Smith, Dr. Nick Germana)
- ◆ **Business Office** which houses the financial management and accounting side of our sponsored programs enterprise, and the **Purchasing Office**
- ◆ **Office of Institutional Research & Assessment** for their ongoing assistance in tracking the positive impact of research on our students and campus
- ◆ **Marketing & Communications** for highlighting research stories throughout the year, including many appearing here
- ◆ **Office of Development** and **Corporate Relations** for ongoing collaboration
- ◆ The **Environmental Health & Safety staff & Chemical Hygiene Officer**
- ◆ The KSC **Institutional Review Board** for the protection of human subjects
- ◆ The KSC **Institutional Animal Care and Use Committee**
- ◆ The faculty serving on the **Faculty Development Grant Committee**
- ◆ USNH **General Counsel**
- ◆ USNH **Internal Audit**
- ◆ **Our many state-wide research partners including NH-INBRE (Dartmouth College) & NH EPSCoR (University of New Hampshire)**