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## Internal Funding Newsletter, Academic Year 2012-2013

UNO Office of Research and Creative Activity  
*University of Nebraska at Omaha*

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# OFFICE OF RESEARCH AND CREATIVE ACTIVITY INTERNAL FUNDING NEWSLETTER



ACADEMIC YEAR 2012-2013

UNIVERSITY OF  
**Nebraska**  
Omaha



December 9, 2013

Dear Colleagues and Friends,


UNO is committed to fostering an environment in which the scholarly activities of our students and faculty can thrive. Over the last three years, UNO has created and invested in an alphabet soup of new internal funding opportunities that include FIRE, FUSE, GRACA, FISS, and FRI. We also continue to support the long-standing UCRCA. During the last academic year, these programs provided \$774,273 of support for faculty and student research and creative activity. The projects are as diverse as the interests of the UNO community: the creation of a flute choir album, the organizational analysis of terrorist organizations, and the development of virtual retinas for restoring vision in the blind; these projects received internal funding this past year.

Students involved in these programs get a once-in-a-lifetime opportunity to engage with expert faculty mentors as they learn how to explore the world through research and create new knowledge, new art, and new music. Students will carry these experiences into their careers and throughout their lives.

Support for faculty provides opportunities to create new collaborations at home and abroad in a time when academic scholarship is more collaborative than ever before. The results of faculty projects are used to solve real-world problems and are presented in the peer reviewed literature and at conferences, exhibitions, and performances around the globe. Internal funding provides the opportunity to attract resources from outside the university to make scholarly activities sustainable over the long term.

We look forward to working with you over the next year as you explore your interests and contribute your talents to UNO.

Best regards,



Scott D. Snyder, Ph.D.  
Associate Vice Chancellor  
Chief Research Officer  
Office of Research and Creative Activity



## Faculty Research Corner: Meet Dr. Alan Kolok, Biology



To put it simply, Aquatic Toxicologist Dr. Alan Kolok wants to know what's in our water. He wants to know how land use affects water quality, how water quality relates to human health and how it all ties together to form a more complete picture of the environments in which we live.

Somewhere along the way, he learned that a commonly used herbicide is turning male frogs into females.

Wait, what?

That wasn't a misprint—a *commonly used herbicide is turning male frogs into females*.

"My lab is interested in using sentinel organisms to assess the health of aquatic environments," said Kolok, 57. "It's like the canary in the coal mine. You put the canary in the coal mine to assess the environment. If the canary dies, it's not safe."

Kolok, who was given the University's Award for Distinguished Research or Creative Activity (ADROCA) in March 2012 for this research, has traditionally used fish to assess the quality of water in the area at the Nebraska Watershed Project research station on the Elkhorn River. Kolok, a 15-year UNO veteran, is the director of the Nebraska Watershed Project.

"The way it works," he said, "is that minnows are put into cages and set into the waterways for a week. After that, we do a

biological assessment of the fish to evaluate the water quality." Wanting to expand his research beyond the Elkhorn River, Kolok set out to examine the environments in the ephemeral wetlands that alternate between wet and dry seasons. During the dry seasons, much of this land is used to grow row crops using agricultural chemicals.

Only one problem—you can't use fish on ephemeral wetlands. So Kolok went to Plan B.

"We looked for an alternative, and we discovered that we could use a frog," Kolok said. "So we're using a leopard frog. It's the classic leopard frog that every biology student in high school dissects. The idea was to see if we can use these frogs as sentinel organisms in these ephemeral wetlands."

Naturally, there aren't just leopard frogs. There are subspecies all across the country. In this region, there are two subspecies: the plains leopard frog, which is indigenous to the area south of the Platte River, and the northern leopard frog, indigenous to areas north of the Platte.

Kolok and his research partner Dr. Paul Davis received a \$27,000 grant from the Fund for Investing in the Research Enterprise (FIRE) to develop the northern leopard frog as a sentinel organism. Their findings, particularly on the effects of the herbicide Atrazine, create a paradox within toxicology.

"When you think of something that is toxic, most people think

## **Meet Dr. Kolok (continued)**

*Continued from page 2*

about whole cell disruptors, like poisons that can kill,” Kolok said, adding that this chemical in the environment is forcing a widespread biological shift. “It has become a very hot topic within physiology. It turns toxicology on its head.”

“This is not like ultraviolet rays that come in and beat your cells. This is more subtle. It’s hijacking the system. It’s an exogenous compound masquerading as a natural compound. It’s not toxicology that will kill the frog, but uses the frog’s system to do something completely inappropriate. It causes a completely wrong response.

What we’ve found is when animals in the lab are exposed to Atrazine we get this wrong response. That’s been done. That’s published. We can go to the research station on the Elkhorn River and expose frogs on site to the Elkhorn River water. Unintended femininity in male frogs is one of those ‘wrong responses’.”

The cells of frogs exposed to Atrazine send out different messenger RNA compounds than what’s natural. Davis’ research focuses on a new technique that allows researchers to freeze and amplify the transcriptome to identify specifically which messenger RNA has been affected by the chemical agent. The process captures all kinds of genetic information, ultimately allowing scientists like Kolok to use leopard frogs as sentinel organisms.

Davis believes his research colleague Kolok is well positioned going forward to use new methodologies to evaluate potentially harmful components in our water systems. “His recent work with the northern leopard frog demonstrates his 21<sup>st</sup> Century approach to toxicology and his concern for both the

environment and public health.”

So is there a human health risk related to all of this?

“Maybe,” Kolok says. “There may be more going on, though. These frogs are abundant. That’s why they’re used in high school biology classes all over. When we look at the broader picture, the state of many frogs isn’t as solid. Like in Iowa, leopard frogs aren’t doing so well. Frogs as a group are being hammered worldwide right now. We’re losing species of frogs rapidly. That’s not good.”

The use of sentinel animals to measure environments is centuries old, but now the world is learning that these organisms are dying worldwide.

“Are we not going to pay attention?” Kolok asked. “I don’t think that’s responsible. I don’t think we should panic, but we should pay attention.”

Kolok is far from finished with the leopard frog. Once he’s finished examining the northern leopard frog he plans to study the plains leopard frog to compare the sentinel natures of the subspecies.

“Is there different sensitivity between them? Then we can even go on to study other leopard frogs to test the differences and similarities in the potential as sentinel organisms. ‘A frog is a frog’ may not be true. As of right now, we don’t know the differences between these two—or three or four or five—across the country. We also don’t know if a difference between them exists. This answer can have broad implications.”

*Dr. Kolok was also a recipient of a 2012-2013 Faculty Research International (FRI) grant.*



*Pictured: The Elkhorn River Research Station*

## AWARD FOR DISTINGUISHED RESEARCH OR CREATIVE ACTIVITY 2013 WINNER:

# Anna Monardo, WRITER'S WORKSHOP

Family matters to Anna Monardo.

But that's not news to anyone familiar with her writing.

Monardo has found a similar sense of family at her current home at University of Nebraska at Omaha (UNO), where she is a professor in the Writer's Workshop department.

In 2013, Anna was selected for the University's Award for Distinguished Research or Creative Activity (ADROCA). She also received the 2013 Alumni Teaching Award, and in 2012, she was awarded the Nebraska Arts Council Individual Artist Fellowship in creative nonfiction.

Monardo, a graduate of St. Mary's College in Notre Dame, Indiana and Columbia University in New York City, joined the UNO faculty in 1997, four years after her first novel *Courtyard of Dreams* was released.

"*Courtyard of Dreams* is a coming-of-age story of an American girl with an Italian father trying to decide if she's American or Italian," Monardo said.

The story, she points out, represents a battle she wrestled with in her own life. She is the first member of her family born in the United States. She also developed a strong relationship with her father.

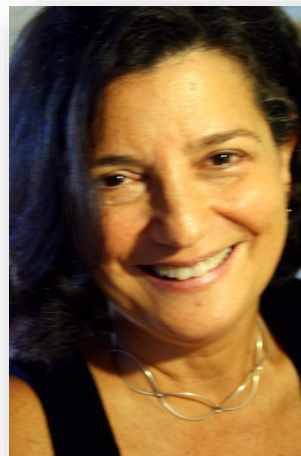
"It's somewhat autobiographical. The trials of the girl were similar to my own, but it's fictionalized in that it's very different than my own family."

The Pittsburgh, Pennsylvania native was just a young girl when she first realized she wanted to be a writer. Even then, familial themes played a part—albeit less evolved than her most recent works—in her writing. "The first thing I remember writing was in the fourth grade," Monardo said by the light of a single table lamp in her office in the Weber Fine Arts Building. "I wrote a novel about a girl who ran away from home to join the circus."

Monardo remembers spending math class that year—and next—writing poetry.

Monardo's second novel *Falling in Love with Natassia* (2006) is the story of a woman who asks her unmarried lover's parents to watch over their daughter (Natassia) while she pursues a modern dance career. Fifteen years later, she and the other adults in the story re-enter Natassia's life to try and save her after a mysterious romance ends.

It's a story that Monardo identifies with in her own life. "In my early 30s I wanted to become a mother," she said. "I was aware that having a child is a 100 percent commitment, but I had a writing life, which is to some degree a 100 percent commitment. The story in this novel is far from me, but it deals with issues of motherhood vs. career, as well as with cultural identity."



Her most recent writing effort is a memoir, and an excerpt was published in the October 2012 issue of *More* magazine, with another excerpt scheduled for release in 2014.

As personal as her two novels became, Monardo said the memoir hits home even more. "In the memoirs, I am challenging myself to revisit the family issues, the family story without the screen of fiction," she said.

An internal funding grant from the University Committee on Research and Creative Activity (UCRCA) has played an important role in Monardo gaining a greater sense of her own family tapestry.

"I'm working on a creative-nonfiction project that looks into my family's immigration story. The UCRCA funding helped me travel to Florida to my parents' home, where I went through files of family documents, mostly papers related to education and military service, as well as old letters, journals and calendars. These documents have provided invaluable scaffolding for the family story I am building.

"I'm grateful for the support I've found in the College of Communication, Fine Arts and Media, especially with my Writer's Workshop colleagues and students. When I moved here from New York, I knew nothing about Omaha. UNO is a fabulous environment to teach students and watch student writers grow.

"When I came here, Writer's Workshop was the only undergraduate program of its type. It was ahead of its time. I feel really privileged to have been able to come here, to be able to write and to teach in this studio environment. It's work that feels meaningful."

Work that feels meaningful around people who feel a lot like family—right where Anna Monardo belongs.

For more information about Anna Monardo and her writing, visit her website: [annamonardo.com](http://annamonardo.com).

## Graduate Research Corner: Taking Aim at Terrorism

UNO graduate students Mackenzie Harms and JoDee Friedly are taking aim at terrorist groups around the world through their joint projects, which examine different extremist groups—past and present—through the lens of key performance indicators found in business models.

These violent extremist groups are traditionally gauged only by the lethal aspect of their attacks, but Harms said they wanted to look at them through a different lens. The projects examine various elements, including the impact of attacks to create fear, potential for recruitment from those attacks, and how far out of their specific home regions different groups attack.

“The 9/11 attacks were highly lethal, but there were other aspects of the attacks that were important to examine,” Harms said. “These attacks were original and unique. There are additional elements we looked at. One reason the attacks were so successful was that no one expected the terrorists to use planes as weapons.”

Harms and Friedly coded about 1,400 attacks by 45 different organizations. Such a feat took several months to complete and was aided by their receiving the Graduate Research and Creative Activity (GRACA) grants from the Office of Research and Creative Activity (ORCA) that helped them work on the project through the summer months.

Friedly said this project has had “real world” applications.

“The research helps us rate extremist organizations as to their potential for lethal and innovative attacks based on different key performance indicators. It’s a new way to look at this.”



JoDee Friedly (left) and Mackenzie Harms

## Undergraduate Research Corner: Creative Solutions

A recent UNO graduate was able to use her Fund for Undergraduate Scholarly Experiences (FUSE) grant from the Office of Research and Creative Activity (ORCA) to make a kind of academic stew by pulling together elements that already existed to blend them into a different flavor.

“I did a project on the creative differences of coming up with one (converging) or multiple (diverging) solutions to a problem,” said Taylor Pizinger, who graduated from UNO’s Department of Psychology. “The solutions themselves had already been collected during a previous study. So, I did not have to recruit people for the study. I took the solutions provided: Sorted, rated and analyzed the data with the help of a few graduate students working under Dr. Roni Reiter-Palmon (Psychology).”

Pizinger said at the time she applied for the FUSE grant with this research project, she was working as part of Dr. Reiter-Palmon’s creative research team, adding that this experience kept her continuing research focused.

“In referencing a project I had previously rated data on, we had discussed how it is truly hard to compare convergent and divergent answers to one another because of the manner that they are generally asked in,” Taylor continued. “So we wanted to use a general problem/solution question that would allow us to ask for either one or multiple answers and then compare how creative the solutions were and whether or not it made a difference.”

Pizinger said that her FUSE research experience, as an undergraduate student, was more educational than she’d anticipated.

“It was very rewarding, satisfying, and informational to be able to complete my own research project while still attaining my undergraduate degree,” she said. “The thing I loved the most about the project was that the end result was something I had produced. It was a very educational experience. It gave me a small insight into what graduate school would entail and what it might feel like to work on a dissertation.”

She said that since the data had already been collected, she was able to use the \$1,500 FUSE grant as a stipend so that she could complete the research project.

“Without the extra funding I would have never had the time needed to invest in this project,” she said. “So, receiving the FUSE grant allowed me to focus on the research and cut back at work. I did not need hard materials to complete my research, just time.”

# 2012-2013 Internal Funding Awardees

## *Faculty Awards*

### FUND FOR THE INVESTMENT IN THE RESEARCH ENTERPRISE (FIRE)

FIRE grants will support the collection of preliminary data/proof of concept for faculty projects that demonstrate a high potential for attracting substantial extramural funding (>\$250,000 in direct costs over the term of the grant). Awards of \$20,000 are available to single investigator FIRE proposals, and multi-investigator, collaborative proposals may request up to \$35,000.

College/Dept.	PI Last	Co-PI(s)	Project Title	Award
AS/PSYC/BIO	Davis	French	Behavioral Effects of Toxoplasma Infection in New World Primates	\$35,000
CPACS/CJUS	Savolainen		Genes, Mind, and Social Behavior: An Interdisciplinary Study	\$35,000
ED/HPER	Slivka		Myogenic and Proteolytic Gene Response to Exercise and Temperature	\$19,940
IST/CS	Lierler		Semantic-based Natural Language Processing	\$20,000
IST/ISQA	Germonprez		Social Activism in the 21st Century: People, Communities, and Agency	\$20,000
			<b>Total FIRE Awards:</b>	<b>\$129,940</b>

### FACULTY INTERNATIONAL SEMINAR SERIES (FISS)

The Faculty International Scholarship Seminar Series is intended to support faculty wishing to add an international component to their research and creative activity. Full participation is limited to faculty without substantial previous international research/creative activity experience. Funding from the seminar series will support seminar materials and international travel.

College/Dept.	PI Last	Co-PI(s)	Project Title (NA)	Award
AS/BIOL	Kellar		Faculty International Scholarship Seminar Series	\$5,000
CPACS/SOWK	Bai		Faculty International Scholarship Seminar Series	\$5,000
ED/TED	Franks		Faculty International Scholarship Seminar Series	\$4,944
ED/TED	Wisneski		Faculty International Scholarship Seminar Series	\$5,000
			<b>Total FISS Awards:</b>	<b>\$19,944</b>



## FACULTY RESEARCH INTERNATIONAL (FRI)

The Office of Academic and Student Affairs (OASA) sponsors the Faculty Research International (FRI) grant. FRI grants will support the establishment of new research and creative activity partnerships among UNO faculty and international collaborators. Awards of up to \$5,000 are available to individual UNO faculty members to support travel-related expenses for UNO faculty, affiliated UNO graduate students, and/or their international partners.

College/Dept.	PI Last	Co-PI(s)	Project Title	Award
AS/BIOL	Lu		Establish International Partnerships Tackling Asian Carp Biological Invasion	\$5,000
AS/BIOL	Kolok		Water Quality Issues in Chile: Expanding the Nebraska Watershed Network	\$3,500
AS/PSCI	Neathery-Castro	Kilinc	Gender Inequality in Education: The Case of Turkey	\$10,000
CBA/ECON	Ni		Finance, R&D and Economic Growth	\$4,972
CBA/MKTG	Adidam		A Conceptual Research on the Association between Celebrity Endorsement, Brand Image and Brand Equity	\$4,300
CFAM/COMM	Chao		Conflicts over the Pinnacle Islands: Collective Identities Under Negotiation	\$5,000
CPACS/SOWK	Coyne	Bratiotis; D'Souza; Harder	Researching Techniques for Capacity Building of Social Work Professors in Nicaragua	\$15,000
ED/HPER	Stergiou		A USA-Greece Partnership to Promote Research in Biomechanics and Motor Control	\$5,000
ED/SPED	Nordness		Education/Special Education and Communication Disorders	\$3,679
IST/CS	Lierler		Advances in Declarative Programming	\$4,225
IST/ISQA	Germonprez		Organizational Participation in Open Source Communities: A Focus on India	\$5,000
			<b>Total FRI Awards:</b>	<b>\$65,676</b>



**COMING SOON:**  
**MavGrants**

[unomaha.edu/orca/mavgrants.php](http://unomaha.edu/orca/mavgrants.php)

# UNIVERSITY COMMITTEE ON RESEARCH AND CREATIVE ACTIVITY (UCRCA)

## Faculty Awards

The purpose of UCRCA is to expand the capacity for research and creative activity at UNO. The UCRCA supports all areas, types and disciplines of research and creative activity by pre- and post-tenured faculty at UNO. The committee places special emphasis on seed grant funding for projects potentially leading to external funding and on grants to new faculty to help them establish programs of research/creative activity.

College/Dept.	PI Last	Co-PI(s)	Project Title	Award
AS/BIOL	Boucher		Using High Resolution X-ray Computed Tomography for 3-D Modeling of Modern and Fossil Termite Burrows in Wood	\$972
AS/BIOL	Cutucache		Effectiveness of nascent methods in science pedagogy in the undergraduate classroom	\$4,250
AS/BIOL	Rauter		Trade-off Between Reproduction and Immunity: Importance of Microbes	\$5,000
AS/CHEM	Conrad		Kinetic Characterization of 4-Hydroxyphenylacetate 1-Hydroxylase	\$5,000
AS/CHEM	Kreiling		Characterization of Protein Association Domains of the Man6p/IGF2 Receptor	\$5,000
AS/ENGL	Buchelt		Memory, Speech and Silence in Early Irish Literature	\$2,500
AS/ENGL	Johanningsmeier		New Voices of American Realism and Naturalism	\$4,500
AS/FL	Bloom		Intercultural Sensitivity and the Short-term Sojourn	\$5,000
AS/FL	Carballal		Representation of the Galician Subject in the Works of Alfonso Rodriguez Castelao	\$4,500
AS/GEO	Bereitschaft		A return to the center: Who is reviving America's downtowns and why? A representative case study of Omaha, NE	\$5,000
AS/MATH	Helikar	Cutucache	The role of CAV1 in T cell development and signaling	\$5,000
AS/MATH	Todd	Brittenham	Easy to state, hard to solve: 4-move invariants of Knots and links	\$5,000
AS/PSCI	Kilinc		State Policies toward Non-Muslim Minorities in Muslim-Majority Countries: Turkey, Egypt, Jordan, and Indonesia	\$5,000
AS/SOC	Irwin		Seeing One's Self Through Others: The Role of Social Passing in the Narratives of Transgender Persons	\$5,000
CBA/MKTG	Huq		A better mousetrap for six-sigma implementation: Empirical evidence in support of Competency Based Perspective (CBP)	\$5,000
CCFAM/ART	Mazor		Imagination 2013	\$1,000
CCFAM/MUS	Snyder		Untitled	\$947
CCFAM/WKSP	Waggener		The Translation of Los sonetos del diente de oro	\$4,845
CPACS/CCJS	Savolainen		Causes and Consequences of Sexual Contact between Youth and Older People	\$5,000
CPACS/PA	Eikenberry		A study of Giving Collaboratives in the U.K.	\$4,950
ED/HPER	Jawed-Wessel		Postpartum Sexual Health	\$5,000

# UNIVERSITY COMMITTEE ON RESEARCH AND CREATIVE ACTIVITY (UCRCA)

## *Faculty Awards (continued)*

College/Dept.	PI Last	Co-PI(s)	Project Title	Award
ED/HPER	Slivka		Effect of local muscle temperature on muscle growth and breakdown	\$5,000
ED/SPED	DeVeney		Expressive language skills of late talking children using picture symbols: Contrast between children with production only versus children with production and comprehension delays	\$5,000
IST/ISQA	Petter		Examining Influences on Team Silence and Voice in Online Ad Hoc Teams	\$5,000
IST/SI2	Mahoney	Parakh	A Hardware Implementation of Quasigroup Encryption	\$7,000
			<b>Total Faculty UCRCA Awards:</b>	<b>\$110,464</b>

## **2012-2013 Internal Funding Awardees**

### ***Student Awards***

#### FUND FOR UNDERGRADUATE SCHOLARLY EXPERIENCES (FUSE)

College/Dept.	Student Last	Faculty Mentor	Project Title	Award
AS/ANTH	Ausdemore	Barone	Birth Expectations in Military versus Civilian Hospitals	\$2,275
AS/BIOL	Chlopek	Blankenship	Investigation of the Role of Septins in Candida Albicans	\$2,500
AS/BIOL	Hutfless	Blankenship	Septin Associating Proteins in Candida Albicans	\$2,500
AS/BIOL	Johnson	Blankenship	The Role of Septin CDC3 in Cell-Wall Integrity in Candida Albicans	\$2,500
AS/BIOL	Medegan Fagla	Blankenship	Using Fluorogen Activating Proteins for Protein Colocalization Studies in Candida Albicans	\$2,500
AS/BIOL	Ranjit	Chase	Localization of ADAM proteins expressed by the mmd gene in neuronal cells of Drosophila.	\$2,500
AS/BIOL	Conroy	Cutucache	A mechanistic model of CAV1 in T cells	\$2,500
AS/BIOL	Wyble	Cutucache	Analysis of CAV1 Signaling: Understanding the Conversation Between Cancerous and Healthy Cells	\$2,500
AS/BIOL	Carlson	Davis	Mutagenesis as an Approach to Detail the Target of an Anti-Parasitic Compound KG2	\$2,500

## FUND FOR UNDERGRADUATE SCHOLARLY EXPERIENCES (FUSE)

College/ Dept.	Student Last	Faculty Mentor	Project Title	Award
AS/BIOL	Cavanagh	Davis	Abnormal Growth of <i>Toxoplasma gondii</i> in COPS7B Over-expressing Cell Lines	\$2,500
AS/BIOL	Stack	Davis	Development of KG-4 Drug Resistant <i>Toxoplasma Gondii</i> via Chemical Mutagenesis	\$2,500
AS/BIOL	Benner	Kolok	Effects of Elkhorn River Agriculture Contaminants on Adult Female Fathead Minnows, <i>Pimephales Promelas</i>	\$2,500
AS/BIOL	Slobotski	Kolok	Effects of Androgenic Compounds in Aquatic Sediment on Endocrine Function in Female Fathead Minnows ( <i>Pimephales Promelas</i> )	\$2,500
AS/BIOL	Hulsebusch	Murch-Shafer	Determination of the Dissimilarity of a Highly Conserved Gene in a Hive of <i>Apis Mellifera</i> (The Common Honey Bee)	\$2,500
AS/BIOL	Wroblewski	Murch-Shafer	Outliers: Success in Rural Healthcare	\$2,500
AS/BIOL	Fan	Rauter	Do Larvae Contribute to Social Immunity in a Subsocial Beetle?	\$2,500
AS/BIOL	Cratsenberg	Rowen	Interaction of SpcU with Type III Secretion System Loading Platform	\$2,500
AS/BIOL	Lingel	Rowen	Testing the Association of SpcU with the Loading Platform via Two Hybrid Analysis	\$2,500
AS/BIOL	LeFrois	Schoenbeck	Determining Morphological and Physiological Plasticity in Local Populations of <i>Glechoma Hederacea</i> . Comparison of "Virescent-Like" Mutant with Occurring Range of Morphologies and Physiologies.	\$2,500
AS/BIOL	Andersen	White	Timing of migration of tree bats ( <i>Lasiurus</i> and <i>Lasionycteris</i> ) through southeastern Nebraska	\$2,500
AS/BIOL	Loguda	Wilson	Linking Physiology to Population Cycles in Norwegian Voles: Preliminary Data for a New Look at the Charnov-Finerty Hypothesis	\$2,500
AS/BIOL	Pate	Wilson	Metabolic Response of Nebraska Anurans to a Warming Climate	\$2,500
AS/CHEM	Pachunka	Conrad	Enzyme Kinetics of 4-Hydroxyphenylacetate-1-Hydroxylase	\$2,500
AS/CHEM	Johnson	Darr	Investigation of the Effects of Glycine on the Hygroscopic Properties of Sodium Sulfate Aerosols	\$2,500
AS/CHEM	Ewald	Gift	Effects of polymers on the hydrate transformation of theophylline	\$2,500
AS/CHEM	Neville	Lomneth	The Effects of Various Cell "Stressor" Conditions on Cell Protein Expression of GroEL/GroES and Superoxide Dismutase Enzymatic Proteins	\$2,500
AS/CHEM	Nguyen	Stack	Reduction and Oxidation Potentials of Genotoxic Estrogen Quinones and Catechols	\$2,500
AS/CHEM	Bergmann	Zhong	Studies of Amino Acid Mutations in Neuraminidase and Drug Resistance of Influenza Virus	\$1,800
AS/CHEM	Ngamelue	Zhong	Design and Synthesis of KIAA1199 Inhibitors as Potential Anticancer Agents	\$2,500
AS/ENGL	Collins	Darcy	Collapse: The Implications of Existential Crisis in Beckett's <i>Waiting for Godot</i>	\$2,500

## FUND FOR UNDERGRADUATE SCHOLARLY EXPERIENCES (FUSE)

College/	Student Last	Faculty	Project Title	Award
AS/FL	Cooper	Miranda	Methodology for Target Language Acquisition Regarding Spanish Speaking Families with Deaf Children	\$2,500
AS/GEOL	Maida	Maher	Fracture Study in the Pierre Shale near Chamberlin, South Dakota	\$2,500
AS/MATH	Allen	Helikar	Traffic Determination within Biochemical Signal Transduction Networks	\$2,500
AS/MATH	Madrahimov	Helikar	Targeting signaling cascades for antiviral therapy: novel treatment options against influenza	\$2,500
AS/MATH	Manzer	Helikar	Modeling the HIV-1 replication cycle and analysis of pharmaceutical targets	\$2,500
AS/MATH	Pulfer	Helikar	Search for novel drug targets using a computational model of HIV signaling during entry into T Cells	\$2,500
AS/MATH	Vance	Helikar	Modeling HIV Infection of Macrophages	\$2,000
AS/PHREL	Ryan	Williams	Midwestern Politeness Meets Religious Diversity: How Does Omaha Shape Up?	\$2,000
AS/PHYS	Knutson	Sabirianov	Relation of Shape Equations (ROSE) Analysis: A Potential Means to Three-Dimensional Shape Recognition for use in Weapon-Detection Systems	\$2,500
AS/PHYS	LeFrois	Sabirianov	Martensitic phase transition in NiMnIn thin-film alloys	\$2,300
AS/PSCI	Barnes	Kilinc	Untitled	\$2,500
AS/PSCI	Bayer	Petrow	White Identity	\$2,000
AS/PSYC	Hochfelder	French	Neuroendocrine Stress-Modulation as a Function of Predatory and Novel Stimuli in Marmosets ( <i>Callithrix penicillata</i> )	\$2,000
AS/PSYC	Barber	Reiter-Palmon	The Relationship between Problem Construction and Malevolent Creativity	\$2,000
AS/PSYC	Drelicharz	Reiter-Palmon	The Impact of Goals and Constraints in Problem Construction and Creative Problem Solving	\$2,000
AS/PSYC	Ohm	Reiter-Palmon	The Effect of Achievement Motivation Orientation on Creative Outcomes	\$2,000
AS/PSYC	Barnes	Scherer	Incivility as a function of sleep quality among working college students	\$2,000
AS/PSYC	Schleu	Scherer	Coping Skills as a Moderator of Work-School Conflict on the Effects of Sleep Duration, Mood State, and General Well-Being	\$2,500
AS/PSYC	Trent	Scherer	Resilience as a Moderator of Work-School Conflict on Excessive Daytime Sleepiness, Job Satisfaction, and General Well-Being	\$2,000
AS/PSYC	Anderson	Sollars	Orally Administered Capsaicin Effects on Rat Taste System Across Development (Behavioral Time Course)	\$2,500
AS/PSYC	Baker	Sollars	Orally Administered Capsaicin Effects on Rat Taste System Across Development (Ethanol Treatment of Neonatal Rats)	\$2,500
AS/PSYC	Ginsburg	Sollars	Orally Administered Capsaicin Effects on Rat Taste System Across Development (Ethanol, Adult Treatments)	\$2,500
AS/PSYC	Virus	Sollars	Orally Administered Capsaicin Effects on Rat Taste System Across Development (Taste Bud Histology)	\$2,500

## FUND FOR UNDERGRADUATE SCHOLARLY EXPERIENCES (FUSE)

College/Dept.	Student Last	Faculty Mentor	Project Title	Award
AS/PSYC	Woods	Sollars	Plasticity in the Developing Taste System (Effects of Early Challenge in Aged Rats)	\$2,500
AS/PSYC	Thompson	Strasser	The Influence of Social Interaction on Steroid Hormones Levels in Women after a Competition	\$2,500
AS/REL	Jackson	Hutt	The End of the World: Assessing Change in American Culture through Reviewing Apocalyptic Film from 1950-Present	\$2,500
AS/SOC	DeWitt	Sanchez	Toward Fair Representation of Students of Color in the Student Government of UNO	\$2,325
CBA/ACCT	Kwak	Cheng	Applying Ratio Analysis before and after the Dodd-Frank Act: Does This Act Lower Risk in the Financial Market?	\$2,500
CBA/MGMT	Woracek	Ligon	Notorious: A Case Study of Marketing and Management Practices in Two Terrorist Organizations	\$2,000
CCFAM/ART	Nord	Benjamin	Building a Wood Kiln	\$2,490
CCFAM/ART	Sullivan	Benjamin	Building a Salt Kiln	\$2,460
CCFAM/ART	Koleszar	Nordman	Creating a Video Game to Explore Values Conscious Design	\$2,500
CCFAM/ART	Johnson	O'Connell	Hands in Communication: The Artists' Book Serving American Sign Language	\$2,500
CCFAM/COMM	Kane	Cruz	Examining an Adult Adoptee's Family Identity, Communication, Cohesion, and Satisfaction through Family Stories	\$2,500
CCFAM/MUS	Keith	Beard	Journey to the East - An Exploration of Chinese Dizi Music through the Western Flute	\$2,350
CCFAM/MUS	St. Onge	Beard	Heartland Community Flute Choir 10th Anniversary Album	\$2,205
CCFAM/THTR	Royer	Glasser	Feature Film - Producer	\$2,500
CCFAM/THTR	Royer	Glasser	Feature Film - DP & Director	\$2,500
CCFAM/THTR	Holmes	Sobel	The Cranach Dress: History and Construction	\$2,500
CPACS/GDRH	Harlow	Richardson	Discovering Nebraska: A Pioneer's History of Western Expansion	\$1,650
CPACS/SOWK	Ohler	Harder	Increasing Numbers of Eating Disorders in College Students Creates a Need for Diverse Mental Health Services at UNO	\$2,100
CPACS/SOWK	Stoddard	Rolf	Housing for Adults with Disabilities in Nebraska	\$2,400
ED/HPER	Vargas	Coleman	The Impact of the Acculturation Process in Latino's Nutrition	\$2,000
ED/HPER	Zaner	Coleman	A Regional Examination of the Behaviors and Language of MSM Sex-Seeking Behaviors on Craigslist	\$2,000
ED/HPER	Holes	Jawed-Wessel	Body Mass Index, Body Image, Sexual Function and Sexual Behavior Among Young Women	\$2,500
ED/HPER	Goodman	Myers	Variability of Gait is dependent on direction of progression	\$2,500
ED/HPER	Laursen	Slivka	The Impact of Human Skeletal Muscle Heating and Cooling on Mitochondrial Related Gene Expression	\$2,500

## FUND FOR UNDERGRADUATE SCHOLARLY EXPERIENCES (FUSE)

College/Dept.	Student Last	Faculty Mentor	Project Title	Award
ED/HPER	Yost	Slivka	The ability to finely control muscle temperature and the relationship to body fat	\$2,500
ED/HPER	Korgan	Stergiou	Effects of Vertical Displacement on Energy Expenditure	\$2,500
ED/TED	Cisco	Schaffer	Gallery Exhibit to Showcase the College of Education's Culture Walk Series	\$2,500
IST/CS	Harris	Bhowmick	Effects of Developers' Networks on Software Evolution	\$2,000
IST/CS	Corbet	Chundi	Identifying Story Types from Sentiment in Street Harassment Stories	\$2,000
<b>Total FUSE Awards</b>				<b>\$194, 855</b>

## GRADUATE RESEARCH AND CREATIVE ACTIVITY (GRACA)

GRACA grants support faculty-mentored graduate student research and creative activity. Grants of up to \$5,000 per student are available to UNO graduate students who will be enrolled through fall semester 2014.

College/Dept.	Student Last	Faculty Mentor	Project Title	Award
AS/PSYC	Cavanaugh	French	The influence of a novel oxytocin amino-acid sequence on pair-bond maintenance	\$5,000
AS/BIOL	Grothen	Davis	Molecular Detection of Pathogens in Human Water Sources of Lima, Peru	\$5,000
AS/BIOL	Larson	Davis	Evaluating Toxicity and Efficacy of Novel Antiparasitic Compounds in Mice	\$5,000
AS/BIOL	Ahrendsen	Kellar	Phylogenetic diversity assessment of Fabaceae using next-generation sequencing	\$5,000
AS/BIOL	Wills	Wolfenbarger	Effects of an Established Wind Farm on Levels of Stress Response Hormones in Greater Prairie Chickens and Sharp-tailed Grouse	\$5,000
AS/ENGL	Chesters	Bacon	Sacrifice the Body: Teaching the Value of the Physical in a Composition Classroom	\$5,000
AS/ENGL	Ray	Girten	Implementing Embodied Learning Methods in the 21st Century Classroom	\$5,000
AS/ENGL	Jacobs	Kennedy	Travel and Archaeology: Antiochia ad Cragum and the Span of Imperial Roman Influence	\$5,000
AS/HIST	Huerter	Battisti	Cuban Asylum and the Formation of the United States' Cold War Refugee Policy	\$4,000
AS/MATH	Ludes	Matache	Boolean network modeling of edge-of-chaos in certain biochemical networks	\$5,000
AS/PSCI	Lazare	Benjamin-Alvarado	International Criminal Court (ICC) Backslide: The Toll on Domestic Affairs in Cape Town	\$5,000

## GRADUATE RESEARCH AND CREATIVE ACTIVITY (GRACA)

College/ Dept.	Student Last	Faculty Mentor	Project Title	Award
AS/PSYC	Huffman	French	Effect of Urocortin II on Alloparental Care in Mongolian Gerbils	\$5,000
AS/PSYC	Mustoe	French	Marmosets' response to inequity following manipulation of the oxytocin system	\$5,000
AS/PSYC	Taylor	French	The Effects Of Oxytocin And Vasopressin On Male Response To Infant Stimuli In The Marmoset	\$5,000
AS/PSYC	de Vreede	Reiter-Palmon	Factors Influencing Engagement in Community Crowdsourcing Websites	\$5,000
AS/PSYC	Wigert	Reiter-Palmon	Decision Processes and Creativity	\$4,500
AS/PSYC	Walzer	Ryan	Differential Goal-Setting: The Effect of Stereotypes	\$5,000
AS/PSYC	Mullen	Scherer	What Underlies the Pursuit of Missing Information in Negotiation? An Examination of Possible Mediating Processes	\$4,933
AS/PSYC	Davis	Sollars	Orally Administered Capsaicin Effects on Rat Taste System Across Development (Taste Receptor Cell Counts)	\$5,000
AS/PSYC	Martin	Sollars	Changes in Taste Nerve Functioning Following Neonatal Chorda Tympani Transection	\$5,000
AS/PSYC	Buttner	Strasser	Hormonal Changes That Underlie Human-Dog Interactions In a Potentially Stressful Situation	\$4,916
AS/PSYC	Graham	Wilson	MEG and MRI Studies of Normal and Abnormal Cognitive Processes	\$5,000
CBA/MGMT	Friedly	Ligon	Performance Measurement of Violent Extremist Organizations	\$5,000
CBA/MGMT	Harms	Ligon	Who is the "Other"? Organizational Differences in Terrorist Groups	\$4,830
CBA/MGMT	Lunca	Ligon	Organizational Culture Incentive Design	\$4,520
CPACS/CJUS	Lytle	Sample	Variation in the Content of Sex Offender Registration Laws: The Role of State-Level Context	\$5,000
CPACS/PA	Cho	Bartle	A Study on the Sustainability in the US City Government Budget: As a Budget Concept and a Performance Indicator	\$4,974
CPACS/PA	Janousek	Blair	Examining Differences in Local Government Management among U.S. States	\$4,500
CPACS/PA	Miller	Ebdon	Research and Policy Recommendation for Human Trafficking Victim Services in the State of Nebraska	\$4,985
CPACS/PA	Humphries-Brown	Eikenberry	The Purposes and Effects of Nonprofit Capacity Building Programs	\$5,000
ED/HPER	Hoeft	Jawed-Wessel	The Implications of Self-Perceived Body Image in Sports Performance of Elite Women Volleyball Players	\$2,385
ED/HPER	Marasco	Coleman	Facilitators and Barriers to Sexual Behaviors of Persons ages 65 and Older	\$5,000



## GRADUATE RESEARCH AND CREATIVE ACTIVITY (GRACA)

College/ Department	Student Last	Faculty Mentor	Project Title	Award
ED/HPER	Diffendaffer	Myers	A comparison of walking moments and powers overground vs. treadmill in peripheral arterial disease patients	\$5,000
ED/HPER	Hough	Myers	Improving elderly gait with a structured auditory stimulus	\$5,000
ED/SPED	Arrah	Leader-Janssen	The Impact of Reading Instruction Training for Secondary School Teachers in Cameroon.	\$5,000
ED/TED	Loewenstein	Pasco	Impact of Increasing Access to iPads in Graduate Literature Coursework	\$4,990
IST/CS	Cao	Germonprez	Organizational Participation with Open Source Communities	\$5,000
IST/ISQA	Arreola	deVreede	Transfer of Facilitation Best Practices: From Experts to Novices	\$5,000
IST/ISQA	Yu	Khazanchi	Understanding the adaptive use of IT capabilities and the development of shared mental models in virtual teams	\$5,000
IST/ISQA	Tahmasbi	Najjar	An Exploratory Analysis of Dynamic Evolution of Network Structure based on the Information Diffusion Pattern in Twitter Network—a Comparison of Two Twitter Cases: a Political Network and a Social Network	\$4,784
IST/ISQA	Xiong	Qureshi	Analysis of IT Adoption in Small Business in the United States and China: Adoption Decision, Human Capital, and Sustainable Development	\$5,000
IST/SI2	Nguyen	deVreede	Engaging Online Citizens In Civic Works—A Flow Theory Based Approach	\$5,000
			<b>Total GRACA Awards:</b>	<b>\$204,317</b>

SAVE THE DATE FOR THE 6TH ANNUAL

# Student Research & Creative Activity Fair



Friday, March 7, 2014  
University of Nebraska at Omaha  
Criss Library  
9:00 AM - 4:00 PM

Awards  
Monday, March 10, 2014  
W.H. Thompson Alumni Center  
5:00 PM

# UNIVERSITY COMMITTEE ON RESEARCH AND CREATIVE ACTIVITY (UCRCA)

## ***STUDENT AWARDS***

The purpose of UCRCA is to expand the capacity for research and creative activity at UNO. The UCRCA supports all areas, types and disciplines of research and creative activity by pre- and post- tenured faculty at UNO.

College/ Dept.	Student Last	Faculty Mentor	Graduate/ Undergraduate	Project Title	Award
AS/BIOL	Bristol	Bragg	Graduate	Impact of Deer Herbivory on Eastern Deciduous Forests of Nebraska	\$500
AS/BIOL	Penney-Hall	Bragg	Graduate	Composition of the Small Mammal Community at the Glacier Creek Preserve	\$500
AS/BIOL	Burns	Fawcett	Graduate	Histological Analysis of the Chronic Effects of Chlorpyrifos on <i>Rana pipiens</i> and <i>Ambystoma texanum</i>	\$423
AS/BIOL	Knight	Kolok	Graduate	Endocrine disruption in frogs exposed to the Elkhorn River: Is atrazine the cause?	\$500
AS/BIOL	Biodrowski	Wolfenbarger	Graduate	The effects of patch burn grazing on breeding grassland birds	\$500
AS/BIOL	Wills	Wolfenbarger	Graduate	Effects of an Established Wind Farm on Levels of Stress Response Hormones in Greater Prairie Chickens and Sharp-tailed Grouse	\$500
AS/HIST	Harris	Grigg	Graduate	The Native American Slave Trade of Massachusetts in the Seventeenth Century	\$500
AS/PSYC	Butler	Carey	Graduate	Expatriates' perceptions of their experiences	\$200
AS/PSYC	Johnson	Scherer	Graduate	Regret Experienced From Workplace Issues	\$400
AS/PSYC	Mullen	Scherer	Graduate	What Underlies the Pursuit of Missing Information in Negotiations? An Examination of Possible Mediating Processes	\$500
AS/PSYC	Martin	Sollars	Graduate	Changes in Taste Nerve Functioning Following Neonatal Chorda Tympani Transection	\$430
CCFAM/THTR	Shao	Glasser	Graduate	Stage Performance of Snow Flower and the Secret Fan	\$500
ED/HPER	Beethe	McGrath	Graduate	The Practical Effects of Glenohumeral Repositioning Tape in Division I Baseball Players	\$446
ED/HPER	Spenceri	McGrath	Graduate	The Neuromuscular Consequences of Knee Osteoarthritis	\$500
ED/HPER	Leib	Myers	Graduate	Changes in Elderly Walking while Listening to Chaotic Music	\$500
ED/HPER	Rand	Myers	Graduate	Nonlinear mathematics detect subtle changes in balance measures	\$495
ED/HPER	Goodenkauf	Slivka	Graduate	High intensity Anaerobic Training	\$500

# UNIVERSITY COMMITTEE ON RESEARCH AND CREATIVE ACTIVITY (UCRCA)

## ***STUDENT AWARDS (CONTINUED)***

College/Dept.	Student Last	Faculty Mentor	Graduate/ Undergraduate	Project Title	Award
ED/SPED	Van Wyngaarden	DeVeney	Graduate	Phonological profiles of 2-year-olds with expressive-only and expressive and receptive language delay	\$500
ED/SPED	Arrah	Swain	Graduate	Teachers' and Principals' Perception of Students with Special Education Needs in Cameroon Secondary Schools	\$500
AS/BIOL	Dahlquist	Cutucache	Undergraduate	Decade-long summary of PBLs in the classroom: what	\$500
AS/BIOL	Madrahimov	Helikar	Undergraduate	Targeting signaling cascades for antiviral therapy against Influenza infection	\$500
CCFAM/MUS	Booth	Beard	Undergraduate	Performance in the National Flute Association Collegiate Flute Choir 2013	\$500
CCFAM/MUS	Keith	Beard	Undergraduate	Canadian Flute Convention Presentation	\$500
CCFAM/MUS	Brown	Roland	Undergraduate	Performance of Ostinato Pianissimo at the Percussive Arts Society International Convention	\$447
CCFAM/MUS	Durham	Roland	Undergraduate	Performance of Ostinato Pianissimo at the Percussive Arts Society International Convention	\$447
CCFAM/MUS	Getzlaff	Roland	Undergraduate	Performance of Ostinato Pianissimo at the Percussive Arts Society International Convention	\$447
CCFAM/MUS	Morse	Roland	Undergraduate	Performance of Ostinato Pianissimo at the Percussive Arts Society International Convention	\$447
CCFAM/MUS	Schoening	Roland	Undergraduate	Performance of Ostinato Pianissimo at the Percussive Arts Society International Convention	\$447
CCFAM/MUS	Van Fleet	Roland	Undergraduate	Performance of Ostinato Pianissimo at the Percussive Arts Society International Convention	\$447
				<b>Total Student UCRCA Awards:</b>	<b>\$13,576</b>



# OFFICE OF RESEARCH & CREATIVE ACTIVITY

## INTERNAL FUNDING OPPORTUNITIES AND SUMMARY

Contact Us:  
 Phone: 402.554.2286  
 Email: [unoorca@unomaha.edu](mailto:unoorca@unomaha.edu)

### **Fund for Investing in the Research Enterprise (FIRE) - Deadline is 12/17/2013**

FIRE grants will support the collection of preliminary data/proof of concept for faculty projects that demonstrate a high potential for attracting substantial extramural funding (>\$250,000 in direct costs over the term of the grant). Awards of \$20,000 are available to single investigator FIRE proposals, and multi-investigator, collaborative proposals may request up to \$35,000.

### **Award for Distinguished Research or Creative Activity (ADROCA) - Deadline is 12/20/2013**

The award strives to recognize and honor preeminent achievement in research or creative activity by faculty members of UNO.

### **Graduate Research and Creative Activity (GRACA) - Deadline is 01/21/2014**

GRACA grants will support faculty-mentored, graduate student research and creative activity. Grants of up to \$5,000 per student are available to UNO graduate students who will be enrolled through fall semester 2014.

### **Faculty Research International (FRI) - Deadline is 01/31/2014**

The Office of Academic and Student Affairs (OASA) sponsors the FRI program. FRI grants will support the establishment of new research and creative activity partnerships among UNO faculty and international collaborators. Awards of up to \$5,000 are available to individual UNO faculty members to support travel-related expenses for UNO faculty, affiliated UNO graduate students, and/or their international partners.

### **University Committee on Research and Creative Activity (UCRCA) - Deadline is 02/01/2014**

The purpose of the UCRCA is to expand the capacity for research and creative activity at UNO. UCRCA supports all areas, types and disciplines of research and creative activity by pre- and post-tenured faculty and graduate and undergraduate students.

### **Fund for Undergraduate Scholarly Experiences (FUSE) - Deadline is 02/04/2014**

FUSE grants will support faculty-mentored, undergraduate student research and creative activity. Grants of up to \$2,500 per student are available to UNO undergraduate students who will be enrolled through fall semester 2014.

## **2012-2013 Internal Funding Program Totals**

<b>PROGRAM</b>	<b>TOTAL</b>	<b>Number of Awards</b>
FIRE Faculty	\$129,940	6
FISS Faculty	\$19,944	4
FRI Faculty	\$65,676	15
FUSE Faculty Mentor	\$35,500	82
FUSE Student	\$194,855	82
GRACA Student	\$204,317	42
UCRCA Faculty	\$110,464	26
UCRCA Student	\$13,576	29
<b>Grand Total</b>	<b>\$774,273</b>	<b>286</b>



**OFFICE OF RESEARCH AND CREATIVE ACTIVITY**  
**6001 Dodge Street EAB 203 | Omaha, NE 68182**  
**[www.unomaha.edu/orca](http://www.unomaha.edu/orca)**

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