Spring 2012

GRADUATE EDUCATION at IOWA

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ON THE COVER

Learning, 1948, hand-colored lithograph, sheet: 15 x 19 inches. Printed at Taller de Gráfica Popular, Mexico City. University of Iowa Museum of Art Purchase, 2006.55.

Graduate Education at Iowa

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GRADUATE EDUCATION at

Spring 2012

IOWA

Innovative. Interdisciplinary. Impactful.

Cover—True to Self

Investing in our scholars

Features

OGEI delivers.

A COMMUNITY OF TOP SCHOLARS IN GRADUATE EDUCATION

OGEI is the Office of Graduate Ethnic Inclusion at Iowa. OGEI is an integral part of the Graduate College, aimed at increasing access to graduate education and committed to creating an inclusive and supportive community for minority and underrepresented graduate students. Our mission is to recruit and retain graduate students from all walks of life while encouraging academic curiosity and discovery. As a community, OGEI students share responsibility—individually and collectively—to achieve the goals of inclusiveness and academic success.

We are here for you.

For information about OGEI or to support graduate diversity efforts at Iowa, contact Dr. Tarrell Portman, tarrell-portman@uiowa.edu

Learning life's mission

SROP teaches students to forge opportunities

Students gain better career preparation through graduate education.

Shanique Powell has a dream of improving pharmaceutical availability in third world countries.

IMPACTFUL EXPERIENCE: Graduate student Shanique Powell (left) visits a rural India hospital.

After studying in India during winter break, this University of Iowa College of Pharmacy graduate student is inspired to pursue her life's ambition. Powell, 25, received scholarship assistance to take an international development class that focuses on women's health and financial independence in India.

"This trip has impacted my life greatly, and I will in turn use it to impact the lives of others all over the world," said Powell, a participant in the UI's SROP/McNair Scholars Program in 2010 and 2011.

While visiting hospitals in rural India, Powell observed some patients with rat poisoning and others on dialysis. She saw doctors practicing the procedures she learned in the classroom and gained practical experience identifying patients' conditions.

Powell, a native of Jamaica, chose to study abroad based on her experience working with an underprivileged community in Haiti in 2005. While there, she distributed medical supplies and food to local hospitals and clinics.

She wants to make this work her life's mission after graduating from the UI.

"I know one day my dream will be fulfilled and I will be able to have a self-sustaining center that will supply medication, food, and water to the less fortunate," Powell said. "Though I am not aware of when and exactly how this will take place, I already have my first two locations in place—Jamaica and Haiti— and now maybe even India.

"I really believe every experience in life is for a reason, and it is important that you take away something significant from every one of them."

Through her interactions with the UI's Office of Graduate Ethnic Inclusion (OGEI), she learned how to develop a family atmosphere among a group of strangers.

OGEI staff members Diana Bryant and Joe Henry administer the SROP/McNair Program, which gives underrepresented undergraduate students exposure to the graduate school experience through one-on-one study with a graduate faculty mentor in their field of study.

"Joe and Diana are so down to earth. If you want a family, the SROP Program at the University of Iowa is a lifetime connection," Powell said.

During her two summers in the SROP/McNair Program, Powell worked with Professor Barry Carter and Adjunct Professor Karen Farris in the College of Pharmacy. She quickly realized that graduate school was for her.

Before returning to her home institution at Florida A&M in 2010, Powell submitted her application at the UI's College of Pharmacy.

In fall 2011, Powell completed her undergraduate course work and became a UI graduate student.

During her first month as a graduate student, Powell had more questions than answers while adjusting to life 1,000 miles away from her Tallahassee, Fla., home. Did she make the right decision moving so far away? Was this really what she wanted to do?

Reflecting on her experiences at the UI so far, Powell feels confident in her decision. She says the SROP/McNair Scholars Program was instrumental in helping her along her career path.

"The program itself was an eye-opener. I had never done research before," Powell said. "That program prepared me for being here. If I did not have that program, [graduate school] would have been way harder. I wouldn't be on my feet right now.

"The opportunities here are great. I've been working toward this the last three years. I have to keep encouraging myself. I have to take it one day at a time."

Innovate at Iowa.

She'll be a modern-day Amelia...
He'll be the next Wright brother...
...or a graduate scholar at Iowa.

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www.givetoiowa.org/graduate

The human element

UI graduate faculty earn top mentoring honors

Mentoring is a lifelong commitment to the success of a scholar.

John F. Engelhardt and Adalaide "Dee" Morris each earned top recognition from the University of Iowa Graduate College for excellence in mentoring graduate students.

The 2011 Graduate College Outstanding Faculty Mentor Award in biological and life sciences was awarded to Engelhardt, professor of anatomy and cell biology in the Carver College of Medicine and faculty member in the Molecular and Cellular Biology Interdisciplinary Graduate Program. Morris received the outstanding mentor award in humanities and fine arts. She is professor of English in the College of Liberal Arts and Sciences.

The professors were nominated by their students and colleagues and honored during a ceremony Nov. 29, 2011, at the Levitt Center for University Advancement.

"This is lovely recognition of work that is often not visible to anybody other than the person who is mentored," Morris said. "This award is about making visible a commitment that is a huge pleasure but generally an invisible pleasure."

John Engelhardt

Engelhardt is head of the Department of Anatomy and Cell Biology, director of the Center for Gene Therapy, and the Roy J. Carver Chair of Molecular Medicine in the Carver College of Medicine. Despite his busy schedule, Engelhardt is always there for his graduate students.

Engelhardt summarizes his philosophy on mentoring with this list of positive traits he believes every good mentor should exhibit: Malleable, Enthusiastic, Nurturing, Teacher, Open-minded, Responsible.

"When you accept a graduate student as a mentee, it is a lifelong commitment to support them through the good and hard times and long after they fly from the nest, just like you would for your children or a family member. It's not a business transaction," said Engelhardt, who joined the UI faculty in 1997. "We are lucky to have outstanding graduate students at the UI; they are a large part of the research engine that makes this University an outstanding place to do science.

"Mentors can also benefit tremendously from the mentor-mentee relationship if they are receptive. This has been the case for me. Much of my professional and personal development stems from my mentoring relationships and the invisible reverse-mentorship that is associated with the process of mentoring."

Dongsheng Duan, professor of molecular microbiology and immunology at the University of Missouri, owes much of his professional success to Engelhardt. Duan, a native of China, was Engelhardt's first graduate student at the University of Pennsylvania and later followed him to the University of Iowa as a postdoctoral scholar and assistant research scientist from 1997 to 2002.

"If it were not for John's mentorship, I never would have been as successful as I am today," Duan wrote in his nomination letter on Engelhardt's behalf. "Besides teaching me to do great science, John taught me how to 'sell' my research in the form of presentations, manuscripts, and grants.

"John spent countless hours teaching me how to develop a central theme, how to make the science flow, and of course how to speak and write English in the academic world."

Engelhardt's laboratory at the UI researches genetic and metabolic diseases, such as cystic fibrosis and sepsis, and organ transplantation.

RECEIVING THE AWARD: John Engelhardt with Dean John Keller

Adalaide "Dee" Morris

Morris has been a UI faculty member in the English Department since 1974. Her research focuses on the intersection of poetry and technology; she also studies digital poetics. A current UI graduate student, mentored by Morris, is the first in the department to write a dissertation on new media poetics and theory.

A highlight of her 37-year tenure at the UI came in 2007, when one of her students, Mike Chasar, won the Council of Graduate Schools (CGS)/University Microfilms International Distinguished Dissertation Award in the arts and humanities category. This award is the nation's most prestigious honor for doctoral dissertations.

The UI, with five winners, has garnered more national awards than any other public institution.

"The triumph that students like Mike have is all his, but it's a privilege to be part of such an exhilarating trajectory," Morris said. "It's nothing you can pull out of a hat. It's a collaboration that is nurturing to both parties. And it is fun."

Chasar, assistant professor of English at Willamette University in Salem, Ore., credits Morris for providing valuable guidance during his academic career.

"What I and other students admire so much about Dee as a mentor is her commitment to the integrated scholar and person and not just to the single project or job," Chasar wrote in his nomination letter on Morris's behalf.

RECEIVING THE AWARD: Dee Morris with Dean John Keller

"She is committed to the graduate student who will become a peer in the field, who will become a teacher and departmental administrator, who will go on to do further work, who will participate in many communities in many ways, who will give back to the discipline as generously as she has given to it."

Morris feels she has as much to learn from her students as they do from her.

"No mentor has all the answers. If I thought I had all the answers, I would lead people down a dead end," Morris said. "If you teach people to ask questions to which you know the answers, you're teaching them half of the catechism. You're not doing much of anything if you don't ask questions that stretch both of you. You both learn together."

About mentoring

The Graduate College recognizes the importance of good mentoring, awarding a prize for exemplary mentoring each year. Read more about the selection criteria and process:

www.grad.uiowa.edu/graduate-college-outstanding-faculty-mentor-award

For more information about Prof. Engelhardt's work and that of his colleagues in molecular and cellular biology and anatomy:

http://molcellbio.grad.uiowa.edu
http://www.anatomy.uiowa.edu

For more information about Prof. Morris' work and that of her colleagues in English:

http://www.english.uiowa.edu/graduate

LEARNING

is a continual process for both mentor and student

"Mentors can also benefit tremendously from the mentor-mentee relationship if they are receptive. This has been the case for me. Much of my professional and personal development stems from my mentoring relationships and the invisible reverse-mentorship that is associated with the process of mentoring."

— John Engelhardt

"No mentor has all the answers. If I thought I had all the answers, I would lead people down a dead end. If you teach people to ask questions to which you know the answers, you're teaching them half of the catechism. You're not doing much of anything if you don't ask questions that stretch both of you. You both learn together."

— Dee Morris

Never too early

UI freshmen prepare for grad school

Many of today's undergrads expect to attend graduate school to attain their career goals.

As an incoming freshman at the University of Iowa, Kathryn Propstein wanted to take her education beyond the bachelor's degree, but she had no idea how to make it happen.

That all changed last fall when she enrolled in the first-year seminar, "Grad School: Is it for You?" This seminar—a course unique to the UI—is designed to help freshmen make informed decisions about planning for their graduate education. The students are encouraged to choose coursework and activities that will strengthen their graduate applications.

Across the nation, approximately four in ten college freshmen see a master's degree in their future plans; two in ten plan to pursue doctoral studies. Based on this, UI Graduate College Dean John Keller and Associate Dean Dan Berkowitz began co-teaching this seminar in the fall of 2009. Forty-five students, with interests ranging from medicine to journalism, have taken the seminar so far.

Undergrad is no longer enough

UI students in the seminar took the class because they were already thinking beyond a bachelor's degree. They say that for their generation, earning a bachelor's is the minimum required for most careers, just as getting a high school degree was considered a basic education for past generations.

Even as college freshmen in the early stages of their academic careers, students like Propstein ask insightful questions and look for career-boosting experiences and learning opportunities.

"It's not all about resume building. Admissions folks see through students who just try to beef up their transcript," Propstein said. "The way to really excel and make yourself stand apart is to engage in leadership and other research opportunities that really interest you. You need to show commitment and passion."

This student success program is modeled after a similar first-year seminar at the UI, "Research 101: Exploring STEM Research," which is offered by the Women in Science and Engineering (WISE) Program.

"First-year seminars are a fantastic opportunity for undergraduates to learn about the UI campus, and the tools, skills and experiences they will need to succeed in college and beyond," Dean Keller said. "Both seminars provide students with knowledge to develop personally, academically, and intellectually. I've enjoyed getting to know our undergraduates, who are our future graduate and professional students.

SEMINAR OPENS DOORS: Freshman Kathryn Propstein welcomes leadership opportunities.

"The goals of our seminars perfectly match the strategic goal of improving the likelihood of student success and accomplishment."

Teaching academic self-advocacy

WISE seeks to expand and improve educational and professional opportunities for women in all fields of science, technology, engineering, and math (STEM) by facilitating individual, institutional, and social change.

"WISE is a community of women who have similar majors and career goals, making it a naturally supportive environment for first-year students," said Chris Brus, WISE director. "We have found that if students are comfortable at 'home,' they are much more apt to get out there and excel.

"We are the foundation that helps boost retention of women in STEM majors, especially in the first two years. After that, many students become more identified with groups aligned with their majors, which is totally appropriate."

WISE women are encouraged to advocate for their own education. In keeping with this mission, "Research 101: Exploring STEM Research" teaches academic self-advocacy. This seminar, offered for the second time in fall 2011, focuses on the business of research, including a review of historical studies that impact the way research is done today.

"That lesson of being the administrator of your own education is difficult for the students to learn at first," said Kristin Wurster, a Ph.D. student in counseling psychology at the UI and coordinator for the WISE Living-Learning Community. "If you're the administrator of your own education, you have to advocate for yourself, you have to ask questions, you have to connect with people. That is what's going to control how much you get out of it."

Last fall, students visited several faculty-led research areas across campus to gain practical knowledge of how research works. Eleven female faculty members and seven graduate students gave a total of 19 lab tours in 12 different labs. Among those, Chemistry Professor Sarah Larsen's presentation made an impression on first-year student and Living-Learning Community member Claire North, inspiring her to begin working in Larsen's lab in spring 2012.

North was able to pursue studies in Larsen's lab because seminar students earn certification in an online Responsible Conduct in Research (RCR) course. Such certification is required for students to become actively involved in faculty-led research. Students, like North, who take the seminar in the fall of their freshman year, can purse research as early as the spring semester of their first year.

"No matter what you're interested in, the University has something to offer in that field. The biggest thing I took away from the seminar was the opportunities that the University has to offer," North said. "College is what you make of it. If you want to get involved and you want to be a part of a community, WISE makes that easier."

Four-year plan

Whiteboard notes from the seminar

Year 1	Year 2	Year 3	Year 4
Develop career prep plans A, B, and C	Reevaluate plan; if plan A isn't what you thought, go for plan B	Continue to evaluate career plans, adjusting as necessary	Re-evaluate your grad school plan. Is it still right for you?
Join organizations to enrich campus experiences	Find and pursue leadership opportunities	Work on collaborative projects	Request feedback, make notes about your experiences
Serve local community by volunteering time and talents	Match volunteer work with professional development	Find skills you need to develop; add them to volunteer work	
Establish a solid GPA	Work hard to keep up your grades	Maintain your grades	Last chance to boost that GPA!
Take challenging courses to show you're willing to work hard	Find and participate in a summer research program	Request feedback letters from summer research mentors	
Look ahead—take or plan to take pre-requisites	Learn about entrance exams for your field and begin preparing	Take entrance exams	
	Cultivate references by keeping in touch with professors	Ask professors in your field to help you make professional contacts	Request letters of recommendation from professors
Choices—make good ones	Sleep—take care of yourself		Chill—maintain balance in your life
Post carefully and tastefully on Facebook, Twitter, etc.		Gather information on application processes	Complete and send applications
Cultivate and enhance communication skills	Practice a "two-minute elevator speech" about your career interests	Develop your statement of purpose	Learn to ask good questions
		Visit prospective schools and prepare for interviews	Interview at prospective schools
		Look into financial aid options	Learn about FAFSA

They call it the "bible"

Tranel co-authors major neuroscience textbook

Textbook is a first-stop resource for those who study clinical neuro-psychology.

Neuropsychological Assessment has a permanent place on the book shelf in Dan Tranel's office at UI Hospitals and Clinics. Tranel, professor of neurology and psychology and director of the Neuroscience Interdisciplinary Graduate Program, references this text—known as "the bible" in its field—on a regular basis during his clinical work and research endeavors.

When Tranel flips through the pages of the fifth edition of Neuropsychological Assessment—published by Oxford University Press in February 2012—he will be reading his own words. Tranel wrote eight of the 20 chapters in the 1,328-page hardback book.

"This is as good as it gets," Tranel said. "This means that the Iowa lab and I are recognized as setting the standard of the field. This is the book you learn from if you're a graduate student or a clinician."

Neuropsychological Assessment provides comprehensive coverage of the field of adult clinical neuropsychology, addressing current neuroscience research and clinical neuropsychology practice.

"This is a first-stop resource for people who study clinical neuropsychology," said Justin Feinstein, who earned his Ph.D. in psychology at the University of Iowa in February and studied clinical neuropsychology.

Handpicked as co-author

Muriel Lezak, professor emerita of neurology, psychiatry, and neurosurgery at Oregon Health Sciences University in Portland, Ore., wrote the first edition of the book in 1976 and has been an author on all subsequent editions. Two years ago, she asked Tranel if he would be a co-author on the fifth edition.

Tranel wrote chapters on a variety of topics, including the behavioral geography of the brain, tests of personal adjustment and emotional functioning, and concept formation and reasoning.

"I knew Tranel by name because he's been doing absolutely gorgeous work," Lezak said. "He contributed a lot of work to the book, and this will make the work coming out of his lab available to the public. Some of the University of Iowa's tests will now be available to the world in a way they might not be if the information was coming out in an article in a scientific journal.

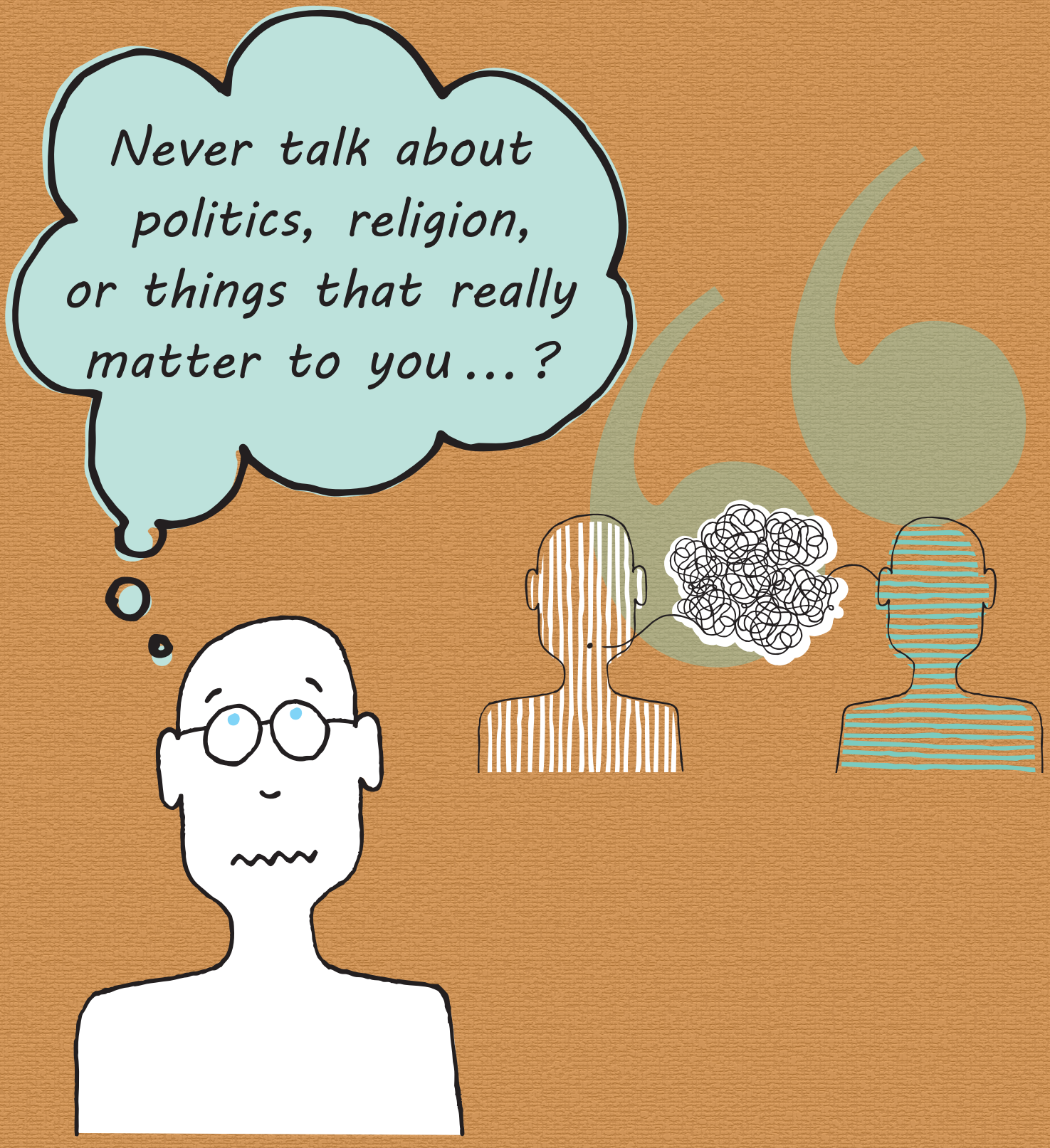
AS GOOD AS IT GETS: Dan Tranel and his fellow researchers at Iowa contribute to textbook.

"This is his book as much as mine."

Tranel has directed many groundbreaking discoveries at the University of Iowa. Recently, he and his research team showed that the amygdala is crucial for the triggering and experience of fear in the human brain — a finding that could improve treatment of Post-Traumatic Stress Disorder (PTSD) and other anxiety conditions through psychotherapy and medications.

> **"Tranel contributed a lot of work to the book, and this will make the work coming out of his lab available to the public."**

http://abcnews.go.com/Health/video/woman-rare-condition-feels-fear-12408436


Never talk about politics, religion, or things that really matter to you...?

The Ethics of Emotions

Diana Fritz Cates on coping with complex differences in more tolerant ways

It's natural for people to maneuver carefully through conversations about controversial issues. If you have ever found yourself in a heated exchange, with participants lobbing blistering verbal attacks, you may be tempted to avoid discussions about sensitive subjects.

However, living as an active, productive contributor to society often requires broaching delicate, even explosive, topics.

How, then, can we talk about what's most important to us without stomping on each other's hot buttons? How can we become more aware of our own emotional sensitivities? And if emotions start to erupt, how can we salvage the situation?

Diana Fritz Cates, professor of religion at the University of Iowa, studies the detailed "logic" of various emotions and the impact that emotions can have on people's perceptions, judgments, and interactions. Her research indicates that "if we gain a better understanding of how our emotions arise and how they unfold, most of us can learn to moderate our emotions in light of ethical values."

Difficult emotions?

In her most recent work, Cates focuses on hatred.

What is hatred? How does hatred work, and what function does it serve, if any? Does hatred of any kind have a place in a good human life?

Most of us think of hatred as a bad emotion to lug around. We have seen it unleash its destructive power. We know how self-destructive it can be. However, Cates says that hatred has many dimensions, and we may want to evaluate some of these dimensions differently.

She explains, "At its heart, hatred is a simple feeling of dissonance. It involves feeling uncomfortable in relation to something that we perceive to be harmful. Ordinary experience tells us that there are good things in life and there are bad things. Our typical response to what seems to be good is to love it and resonate with it. Our typical response to what seems to be bad is to hate it and be pained by it. To feel hatred is, in part, to sense that we are vulnerable to harm, and we need to protect ourselves.

"Sometimes our perceptions are off-target. What seems to be bad is not so bad at all. Or what we desperately want to protect does not deserve protection. For example, we may hate a group of people for undermining our unjust privilege. But there may be times when we are genuinely confronted by evil. It can be a good thing to register this with an emotion. Due to our evolutionary inheritance, we may not be able to help it. We are hard-wired to experience certain basic emotions in response to danger and harm."

Discomfort—a helpful signal

While hatred begins as a feeling of being disturbed, it often expands into something more. Rather than viewing hatred as operating with an "on-off" switch, Cates says that it is better to see hatred as initiating a series of related responses—responses for which we have some responsibility.

> **"In an emotionally-charged world, what's the best way to deal with feelings like hatred? What IS hatred? How does hatred work, and what function does it serve, if any? Does hatred of any kind have a place in a good human life?"**

"Feeling uncomfortable is an understandable reaction to a perceived threat or injury, but what we do with that initial response becomes an ethical question," she says.

Cates analyzes how hatred can develop inside a person. "When hatred first arises, it is a feeling of dissonance. But the minute we become aware of it, we have a choice to make: we can consent to our emotion and indulge it, or we can try to let go of it. How do we decide what to do? We ask ourselves some questions: Is my perception of this situation adequate? Am I really in danger? Is what I am at risk of losing really that important? Should I be holding on to this value so tightly? What impact will my continuing to feel this emotion have on me and on the other people in my life? If we decide that our perceptions and attachments are off-base, then there are things we can do to start changing course."

Cates notes that sometimes we indulge a feeling of hatred, and it gives rise to a strong impulse to do something. "A person's emotion may lead to a rejection of the other as evil, a strategy of avoidance, a desire to attack, and finally an action or policy aimed at the other's destruction."

Awareness is key

With a more thorough awareness of this emotional/behavioral pathway, people can prevent an initial feeling of hatred from progressing to an act of malice or violence.

Emphasizing the importance of such emotional awareness, Cates encourages us to examine our automatic responses to the world around us. Those of us who believe that we live a hatred-free life may need to think again. A feeling of hatred can arise spontaneously when we encounter people who seem to have a way of life that is contrary to our own:

- Social liberals
- Tea Party members and other opponents of "big government"
- Atheists
- Christian conservatives
- People of non-Christian religions, such as Muslims
- Immigrants

What do we do when faced with significant differences of lifestyle and opinion? If hatred is a response to what we regard as hurtful, then people on both sides of a cultural divide may be inclined to view each other as hateful.

"We live in a world where there are complex dynamics of opposing hatreds. If we think about it, we realize that we can't live together in peace while indulging much of our hatred, however justified that hatred might seem to us. The way forward is through a slow process of self-cultivation—one that we must encourage others to undertake as well. The ethical task is to become aware of our hatred and, at the same time, to seek a fuller view of a given situation, to reconsider the goods and harms at stake, and to ponder the likely consequences of responding in one way or another," Cates says.

Awareness, then, allows us to cope with differences in more tolerant ways. "Awareness helps us to slow down. It allows us to interrupt automatic reactions, so that we can make more intentional, better choices. The better we understand ourselves, our inner landscapes, the more prepared we are to make decisions about the kinds of persons we want to be and what we must do to get along with others who will probably never share our values," says Cates.

Hatred becomes most problematic when it gives rise to a motivation to commit acts of violence. "If you think to yourself, 'That person has to be stopped,' and you act on that thought, you might feel righteous in hurting the other, but you almost always make the

situation worse. One offense gives rise to another, reciprocal offense, and the cycle continues. The conflict escalates."

Cates notes that "emotions are not in themselves a problem. Many of them are key aspects of a good and satisfying life. But when we choose to indulge or over-indulge certain of our negative emotions, this choice has an impact on the quality of our experience, and it influences how we behave.

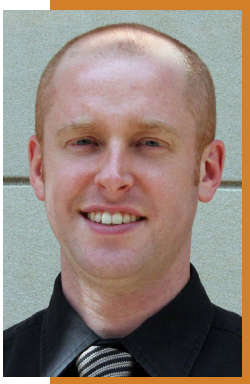
What helps us to experience our emotions well? Cates answers, "Emotional virtue. We need to form good habits of emotion that make it easier for us to react appropriately toward each other."

Make it a daily practice

Finally, Cates encourages us to increase our awareness, our emotional virtue by:

- Wondering about the truth of life.
- Noting that people often disagree, with good reason, about the truth of life.
- Letting go of things to which we may be falsely attached.
- Finding a way to hold on to what is worthy of our attachment, while expecting others to do the same.
- Exploring our hatred and learning from it, but being prepared to correct it and also being slow to act on it.
- Gaining a better understanding of others' views in order to negotiate conflicts.
- Taking time to re-assess the nature of perceived threats or harms.
- Helping people imagine other ways of thinking and other ways of living that might be *even better* than the status quo.

Diana Fritz Cates is professor of religious ethics in the Department of Religious Studies, College of Liberal Arts and Sciences at the University of Iowa, where she teaches a range of undergraduate and graduate courses and serves as a mentor for graduate scholars.



Daniel Morris, Ph.D.

2011-2012 Ballard Seashore Dissertation Year Fellow

Daniel Morris, under the direction of faculty advisor Diana Fritz Cates, completed his dissertation and earned a doctoral degree in religious studies this spring.

Morris won a Graduate College Ballard Seashore Dissertation Year Fellowship to complete his doctoral research in religion, ethics, and politics. His dissertation, "Dewey, Niebuhr, and Democratic Virtue," analyzes the political and ethical thought of two intellectual giants—John Dewey and Reinhold Niebuhr.

Cates notes that Morris is an original thinker whose research has much relevance to current debates. His dissertation "is written at a time that is marked by extreme polarization and incivility in American politics. Dan takes two well-known public intellectuals who could not see past their ideological differences, and places them in productive conversation with each other. He makes them 'speak' to each other on matters that were of profound political and ethical significance during their lifetimes and remain significant today."

Morris' work encourages Americans to think more critically and creatively about what it takes for their country to succeed, over the long haul, in its experiment with democracy.

Showing what can happen when those who hold opposing views enter into fruitful dialogue, Cates says that Morris' work "encourages Americans to think more critically and creatively about what it takes for their country to succeed, over the long haul, in its experiment with democracy."

Morris' dissertation "demonstrates that a degree of cooperation can be acheived when political thinkers dare to de-emphasize evident differences in their 'comprehensive doctrines' and focus instead on solving particular problems in their communities," says Cates.

Catlett inspires today's UI art students to be true to themselves through their artwork.

A six-foot-high bronze sculpture of an elegant woman in high heels graces the entrance lobby of the Iowa Memorial Union. Since 2007, the sculpture has dignified this space, exuding confidence among University of Iowa students who study there.

"I suspect that people walk by and don't realize what they're seeing," said Susan Boyd, Iowa City art supporter and wife of former University of Iowa President Willard "Sandy" Boyd.

This sculpture—titled Stepping Out—was created by University of Iowa distinguished alumna Elizabeth Catlett, who was among three UI students to earn the first Master of Fine Arts (MFA) degrees in the United States in 1940. She also was the first African-American woman to receive an MFA.

Catlett died April 2, 2012 at her home in Cuernavaca, Mexico. She was 96.

Catlett's legacy

"She was a huge proponent of building self-esteem, especially during the black feminist movement," said Kathleen Edwards, chief curator of the University of Iowa's Museum of Art. "As a sculptor and printmaker, she was probably the most important female African-American artist in the United States."

Catlett discovered her artistic passion as a graduate student at the University of Iowa. She studied drawing and painting with Grant Wood—painter of the iconic American Gothic—and sculpture with Henry Stinson during an era that saw new racial openness, even while aspects of segregation continued.

While at Iowa, Catlett received advice from Wood that influenced her entire artistic career.

"Grant Wood was a very generous teacher, and he influenced all my work," Catlett said in a story published in the College of Liberal Arts and Sciences' Arts & Sciences magazine in 2003. "He would tell his students, 'Paint what you know.'"

Taking her teacher's advice to heart, Catlett depicted black women as strong, maternal figures. Catlett's graduate thesis project, a stone carving of a black mother and child, earned first prize in Chicago's 1940 American Negro Exposition.

"She's one artist we should be really proud of; the University should be proud of its connection to her," said Claire Fox, a UI associate professor of English who co-teaches a Latin American Studies course that includes a section on Catlett's work. "She has had a profound influence on a generation of artists."

Scholarships for UI students

In 2006, UI curator Edwards visited Catlett in Mexico, where she lived since 1976 after being barred from her home country of the United States for political activism. Edwards purchased 28 Catlett prints for addition to the UI Museum of Art's permanent collection.

Catlett, in turn, donated the purchase price of the prints to the University of Iowa Foundation to create the Elizabeth Catlett Mora Scholarship Fund.

"She was an example to students, in terms of her life and the choices she made, to stick to your own ideas about what you want to pursue," Edwards said.

Joshua Dailey, an MFA candidate in the UI School of Art and Art History's printmaking program, is a proud recipient of an Elizabeth Catlett Mora Scholarship, which is awarded to an undergraduate or graduate student in printmaking who is African-American or Latino.

"It's really inspiring to look at someone who was so whole-heartedly devoted to activism, using her work as a vehicle to promote social change," Dailey said. "The thing that immediately strikes me about her work is its accessibility. Her work served the African-American community, and conveys the human message as well."

True to Se

Walking Blindly

Elizabeth Catlett, Walking Blindly, from the portfolio "For My People," inspired by the poem "For My People" by Margaret Walker, 1992, lithograph, sheet: 22 ¾ x 18 ¾ inches. University of Iowa Museum of Art, 2006.74F.

Malcom X

Elizabeth Catlett, Malcolm X Speaks for Us, 1969/2004, screenprint, sheet: 41 ¼ x 32 ¼ inches, University of Iowa Museum of Art Purchase, 2006.75. © Estate of Elizabeth Catlett.

Jaime Knight—an MFA candidate in art and a Catlett Mora Scholarship winner—expresses an appreciation for Catlett and her ties to the UI.

"I really love her dedication to the program here," said Knight, also a Dean's Graduate Research Fellow. "It is evident she found printmaking to be an integral part of her practice despite being mostly recognized as a sculptor."

Art reflects experience

Confident that her art could influence social change, Catlett, the granddaughter of freed slaves, focused on her own ethnic identity and its association with slavery and class struggles.

At Iowa, Catlett faced segregation first hand when she was forced to rent a room in a local home since African-American students were not allowed to live in University residence halls at the time. The UI, however, allowed her to attend school, while the Carnegie Institute of Technology earlier had denied her undergraduate admittance because she was "colored."

"During her time, it was not easy for an African-American woman to attain a quality arts education," Fox said. "She faced obstacles on campus, but on the other hand, she had a productive relationship with Grant Wood."

In 2002, Iowa purchased Catlett's first major print, "Sharecropper," which shows a white-haired black woman with sharp features and a serene gaze. Susan Boyd helped raise money to purchase the painting.

"There was something so dignified and so hard-working about that woman in 'Sharecropper,'" said Boyd, who never met Catlett, but spoke with her on the phone after the UI purchased the print. "This woman has this safety pin on her clothes, but there is an elegant look about it. There was something that spoke to me in that painting."

Catlett's artwork spoke to many people over the last half-century.

"I thought she was very good with what she did. There was form to it, there was passion to it," said Wallace Tomasini, UI professor of art history. "She did what she loved."

In 1996, the UI Alumni Association awarded Catlett a Distinguished Alumni Award, which recognizes significant accomplishments in business or professional life or for distinguished human service.

"She was always so anxious to help young people be encouraged. That was terrific," Boyd said. "Now that there is increased interest in her at the time of her death, I hope we realize that we have a really significant sculpture in the Iowa Memorial Union."

ABOVE: UIMA Chief Curator Kathleen Edwards with Elizabeth Catlett in Cuernavaca, Mexico, August, 2006. Photo: Emma Amos.

BELOW: Elizabeth Catlett (American, 1915-2012) Stepping Out, 2000, bronze.
First floor Hubbard Commons, IMU UI Art in State Buildings. Photo: courtesy Kathleen Edwards.

He

Decreasing

Since the mid-1980s, researchers in the Industrial Hygiene Graduate Program at the University of Iowa have known that concentrated animal feeding operations (CAFOs) can be hazardous environments for workers. The literature shows that if a worker spends four hours on a given day in these CAFO barns without wearing protective gear, he/she will leave work with cold and flu symptoms among other respiratory problems.

Kelsie Reeve, a second-year Master's student in industrial hygiene, is part of a UI team investigating how to create a ventilation system inside swine farrowing barns, which will reduce the workers' exposure to contaminates generated by these operations, while positively affecting production.

Reeve is examining the efficiency of underground pit fans inside CAFO barns during cold winter months. She also is mapping the distribution of air contaminants—such as ammonia, dust and hydrogen sulfide—inside a test center barn at Kirkwood Community College. Reeve installed a dust tracking monitor and a multi-gas meter at breathing zone height to measure concentrations of ammonia and hydrogen sulfide.

"You would expect there to be a lot more air flow in these barns than what there really is," Reeve said. "The pit fans are located at one end of the room and are expected to pull barn air down into the pits before exhausting it to the outside. The direction of the air flow in the barn is intended to "push" contaminants down to the end of the room to allow for their exhaustion by these fans. However, I noticed that there is no air flow in these rooms."

In CAFO barns, pigs are housed in crates, which are positioned over pits that collect sewage. As sewage accumulates, workers in these barns are exposed to dust, ammonia, and other chemicals that are associated with bronchial inflammation, bronchitis, and other respiratory problems.

UI researchers are currently analyzing data collected by the dust track monitor and multi-gas meter.

Rather than move the air in just one direction through an exhaust system to the outside, they propose using fans to treat and recycle the air. This would improve air quality for humans and young piglets alike, while also reducing heating costs.

"If our solution improves air quality inside the barn by treating the air and recycling it, then we also eliminate emissions into the neighboring communities," said UI Assistant Professor Renée Anthony, Reeve's mentor and faculty member

althier pigs, less $

air pollution while increasing heating efficiency

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in industrial hygiene. "Our primary drive is to reduce the concentration of contaminates for the workers."

According to the United States Department of Agriculture's National Agricultural Statistics Service (NASS), Iowa is the top pork producing state in the United States and the top state for pork exports. At the end of 2008, Iowa had 8,300 hog operations, and approximately 30 million hogs are raised in Iowa each year.

Despite the size of this industry, producers report small per-pig profit margins. That low number forces UI researchers to design a cost-effective air ventilation system.

"The bottom line is that ventilation costs money," Anthony said. "Farmers won't voluntarily install and operate a system to reduce concentrations unless it has a positive impact on the bottom line."

Anthony cites recent United States Department of Agriculture stats showing that over 20 percent of nursery pig deaths result from respiratory distress, so improvements in air quality to protect workers could also improve production.

UI Associate Professor Tom Peters, a faculty member in industrial hygiene, is researching scrubbers and filters that could be used to remove the hydrogen sulfide, dust and ammonia particles from the air, so the air can be cleaned and brought back into the building.

But not just any air can return to the building.

In the winter, warm air leaves the building and cold air returns. This is a problem for the young pigs, who need temperatures in the 70s to thrive.

"Can we pull air out of the room, clean it, and reintroduce the warm air back in?" Anthony asks.

That is a big challenge.

This five-year project began in October 2011 and is funded by a grant from the National Institute of Occupational Health and Safety.

INDUSTRIAL HYGIENE MASTER'S STUDENT: Kelsie Reeve helps create a ventilator system inside CAFO barns.

Target: ca

DNA methyltransferase 1 (Dnmt1) is a protein that plays an essential role in cellular transitions to malignancy. Dnmt1 is overexpressed in many cancers, silencing genes needed to maintain normal cellular functions.

Rebecca Fagan, a postdoctoral research fellow in biochemistry at the University of Iowa, seeks to identify chemicals that inhibit the activity of Dnmt1 and to determine what happens to cells when this enzyme is suppressed. Fagan, who earned her Ph.D. in biological chemistry at the University of Michigan, began screening a 50,000-compound library of diverse chemicals—housed at the UI—last fall in an attempt to discover Dnmt1 inhibitors.

"One of the nice things about having Dnmt1 as a target is that it sits in a position, where if you can inhibit it, you have the potential to turn on or re-express a multitude of tumor-suppressor genes that can have positive effects," Fagan says. "We are gaining an understanding about how the enzyme works and how we can stop it from working. This research is sitting at a nice intersection between basic science and research that could be translated into actual treatments for cancer in humans."

Fagan has worked in Charles Brenner's laboratory at the UI for the last year. Brenner is the head of the Department of Biochemistry and Fagan's mentor. Fagan, a native of Newton, Ill., was awarded a three-year American Cancer Society Postdoctoral Fellowship, which she is using to characterize and identify Dnmt1 inhibitors.

"Becky is an ideal postdoc for my lab, because she has a very strong enzymology background, so we have a common vocabulary," Brenner says. "She can work quite independently. At the same time, I don't want her to work in a vacuum. I like her to interact with other people in the laboratory, which she does, and I like to talk with her every day about research developments and challenges."

Having a position in Brenner's lab has allowed Fagan to continue working on her passion—enzymes. Fagan is motivated to gain an understanding of the minute details of how Dnmt1 works in the context of its cellular and organismal climate.

Other researchers working with Dnmt1 recently identified and clarified the role of Dnmt1 in certain tumor-specific genetic and epigenetic changes. Brenner says, "In mouse models, the development of both environmentally-induced cancers as well as certain types of hereditary cancer syndromes depends on overexpression of Dnmt1. This appears to be true in human cancers as well."

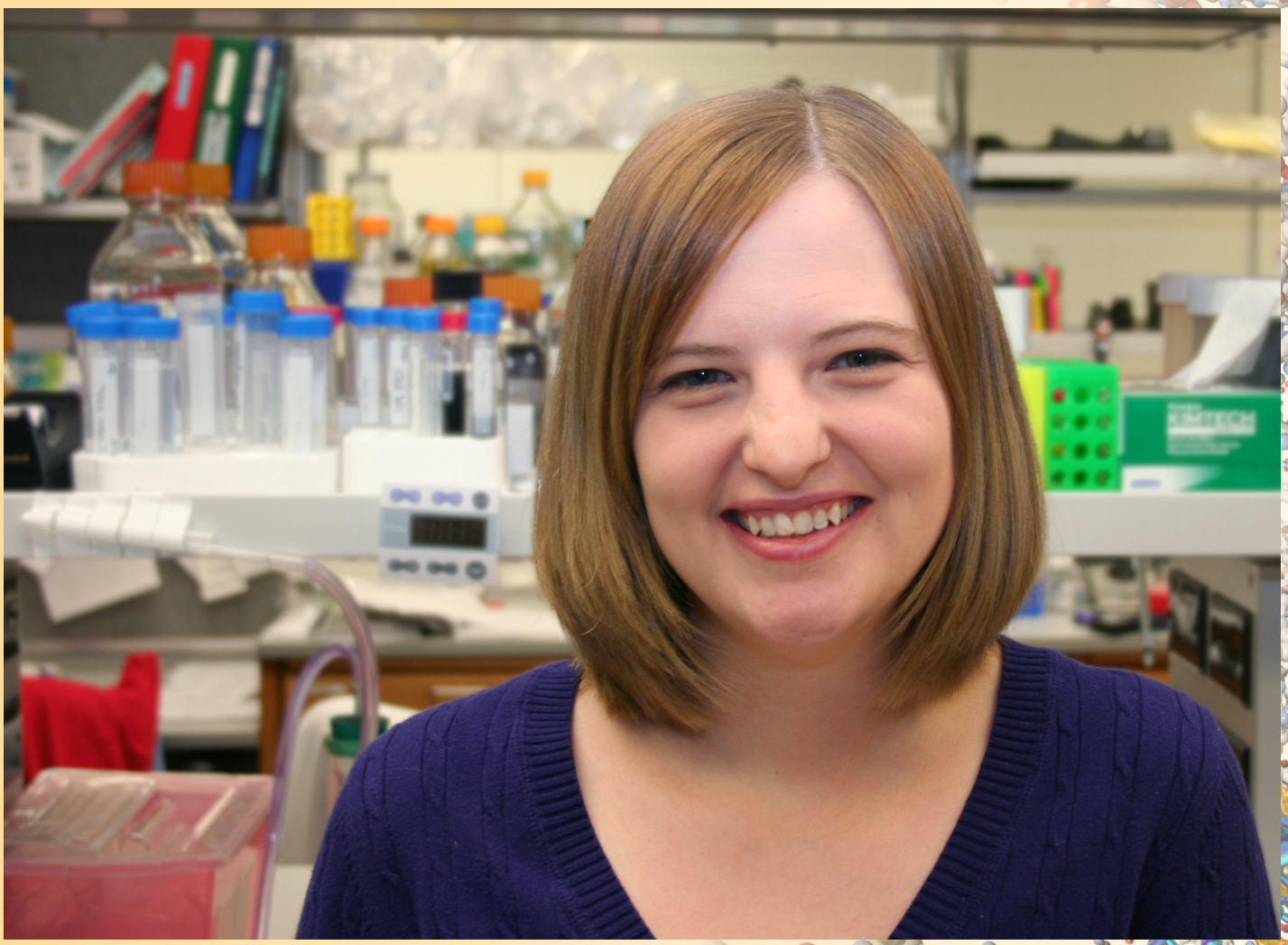
Enter Fagan and her research.

"If you can isolate a protein and truly understand it in a purified and reconstituted system, you can gain invaluable information to better understand disease pathways," Fagan said. "I'm a firm believer that you need this basic knowledge before you can understand it in the context of a very complicated animal system."

Fagan indicated that her research could lead to new drug discoveries and therapeutics to treat a variety of cancers.

"There are compounds in the clinic now, which result in degradation of Dnmt1, that are being used for myelodysplastic syndromes (formerly known as pre-leukemia)," Brenner said. "But these compounds are limited by toxicity and are not particularly specific for the target that we're working on."

Thus, a goal of this research is to identify compounds with less toxicity and better target specificity for Dnmt1.



POSTDOCTORAL FELLOW: Biochemist Rebecca Fagan seeks to identify chemicals that inhibit a protein implicated in many types of cancer.

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"The most important benefit of receiving this fellowship was the flexibility it afforded me in my summer teaching schedule. Without the fellowship, it would have been necessary for me to continue this time-consuming teaching commitment in order to meet my financial obligations. The generous stipend allowed me to reduce my teaching load to six hours and spend the rest of my summer working on my dissertation project."

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