



Undergraduate Biology Program University of Kansas

January 2016

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Dear Alumni and Friends of the Undergraduate Biology Program,

Wishing you all the best in 2016 from Haworth Hall! I am excited to share our department news, as well as the many student accomplishments this past fall semester.

KU Biology students continue to be recognized with awards and scholarships in our program, across campus, and even nationally. You can read about the many accomplished students in this edition, and check out our [Awards & Scholarship](#) website for future notifications of awards, many of which are funded by alumni.

We are pleased that this spring semester we will be offering a Bachelor of Applied Science in Biotechnology at the KU Edwards Campus in Overland Park, Kansas. It is the first applied science degree at KU, and the only program in Kansas that is preparing students for careers in the fast-growing biotechnology field.

Two outstanding staff members are highlighted in this issue. Angela Gere, senior administrative assistant, has been with the department for three years and she was recently recognized as KU's Employee of the Month. Gil Ortiz has been a graphic designer for the department for nearly 15 years and provides design and production services the three biology units.

We thank our alumni and friends who continue to support KU Biology. Recently, donors supported our efforts to purchase a glassware washer that will allow student researchers to spend more time on research. We invite you to visit the [KU Biology website](#) for the latest news and events. As always, we encourage you to share your news and stay connected by submitting your information [online](#). We are hosting a KU Biology Alumni Social on April 14, and you are invited to attend this networking event, which will include a special presentation by Sara Sawyer, KU alumna. We hope to see you there!

Dr. Greg Burg
Director

New KU Degree in Applied Science

The new Bachelor of Applied Science in Biotechnology is KU's first and only applied science degree. Courses in the biotechnology program will be offered beginning spring semester 2016 at the KU Edwards Campus in Overland Park, Kansas. The program was created to meet the industry demand in the fast-growing biotechnology field and is funded by the **Johnson County Education and Research Triangle initiative**.

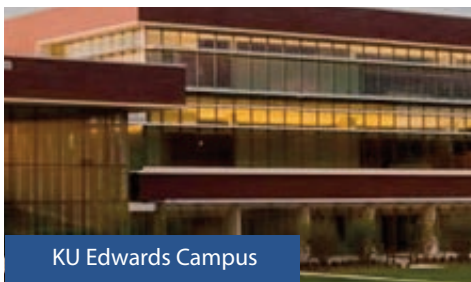
Bachelor of Applied Science in Biotechnology

The biotechnology program is designed for the undergraduate student who has obtained an associate's degree, or two years of general education and science courses. Biotechnology is grounded in biological sciences, physical sciences, mathematics, and biotechnology. "What's unique about this program is that it offers students cutting-edge, hands-on training that will prepare students for the demands of the biotechnology industry within the greater Kansas City area," said Greg Burg, director of the Undergraduate Biology Program.

Meeting Industry Needs

There are more than 200 bioscience companies that employ over 20,000 people in the Kansas City region. These companies have a significant and growing demand for scientists trained in biotechnology. Additionally, these companies have expressed a need for scientists adept at critical thinking, the ability to communicate, and the ability to work in teams. KU has developed the only bachelor's degree program in Kansas to meet this high-demand for biotechnology skills.

KU has facilitated a partnership between academia and the Kansas City area biotech industry. "We have worked to identify the industry's demands in both scientific knowledge and technical skills. We have developed a program to address these demands and plan to deliver highly qualified, highly employable graduates to the KC biotech industry," said **Randy Logan**, Biotechnology Program Director. Graduates of the new program will be prepared for careers in the life sciences — lab managers, microbiologists, biochemists, biomanufacturing technicians, pharmaceutical technicians, food scientists, agricultural scientists, among others.



KU Edwards Campus



KU Clinical Research Center



K-State Olathe

KU BioScholarship Program

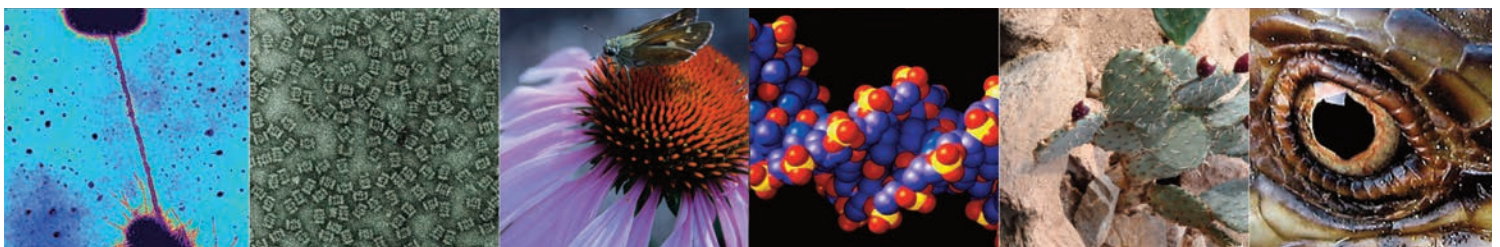
Since 1998, KU's BioScholarship Program has provided renewable scholarships to outstanding undergraduate biology students thanks to the generosity of alumni and friends. BioScholarships are awarded to incoming high-ability freshmen who have demonstrated a commitment to scholarship and who plan to participate in research with a biology faculty member and pursue departmental honors in biology. They are encouraged to avail of the many opportunities KU offers for academic and pre-professional development, such as being undergraduate teaching assistants and participating in the Biology Majors Advisory Committee (BMAC) and various other student organizations.

In 2015, we welcomed two new BioScholars. **Claire Byers** (Jim A. Orr BioScholarship) is from Wichita, KS, and is pursuing a B.S. in Ecology, Evolution, and Organismal Biology. **Joseph Loomis** (Smiley-Gilligan Family BioScholarship) is from Iuka, KS, and is pursuing a B.S. in Biochemistry and a B.S. in Chemistry.

We awarded six students with BioScholarships in 2014. **Chloe Adams** (Howieson BioScholarship) is from Shawnee, KS, and is pursuing a B.S. Microbiology major. **Marilyn Barragan** (Howieson BioScholarship) is from Olathe, KS, and is pursuing a B.S. Microbiology degree. **Elise Base** (Robert and Lillian Bell BioScholarship) is from Norman, OK, and is pursuing a B.A. Biology degree. **Michael Cory** (Smiley-Gilligan Family BioScholarship and Elio Schaechter BioScholarship) is from Wichita, KS, and is pursuing a B.S. Biochemistry degree. **Paige Hansen** (Howieson BioScholarship) is from Brookings, SD, and is pursuing a B.S. in Ecology, Evolution, and Organismal Biology. **Zachary Grant** (Howieson BioScholarship) is from Wichita, KS, and is pursuing a B.A. in Microbiology. We are honored to continue to support such outstanding BioScholars.

These eight BioScholars join our current BioScholars group of **Lauren Arney** (Haller Silva BioScholarship), **Alexandra "Alex" Arvanitakis** (Howieson BioScholarship), **Emily Binshtok** (Howieson BioScholarship), **Abigail "Abby" Fields** (Howieson BioScholarship), **Aadil Khan** (Howieson BioScholarship), **Sanjay Parashar** (Howieson BioScholarship), **Jennifer Kaberline** (Howieson BioScholarship), and **Rachel Watson** (Howieson BioScholarship).

We are also proud of our BioScholar alumni who are teachers, surgical residents, medical students, pharmacy students, veterinary medicine students, post-doctoral associates, and doctoral students. Thank you to our contributors that enable us to support outstanding undergraduate biology students in the KU BioScholarship Program.



Biology Students Receive Distinguished Awards

Students Receive Campus Awards

Class of 1913 University Award Winners



Ashley Farris, a senior in biochemistry from Wichita, was the recipient of the Class of 1913 Award, which is given to a senior man and woman who have demonstrated academic excellence.

Farris was recognized for her outstanding accomplishments including a high GPA and her research experience.

KU Today

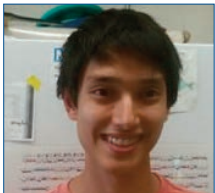
Undergraduate Research Award Recipients



Mackenzie Johnson

Two biology students are among the 15 students awarded the Undergraduate Research Award for the Fall 2015. Students are evaluated on a submitted proposal, academic records, and a recommendation letter from their research mentor. Award winners receive \$1,000 to support their research with a mentor.

Mackenzie Johnson is a junior from Olathe, majoring in ecology and evolutionary biology. Her research is "Clonal Interference: The Effect of Clonal Reproductive History in Asexual Populations on the Rate of Evolution," and she is mentored by Maria Orive, ecology and evolutionary biology.

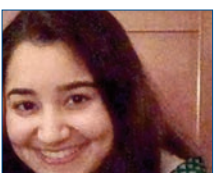


Justin Massey

Justin Massey is a junior from Overland Park, majoring in biochemistry. His research is "Protein-Protein Interactions Using the Bacterial Two Hybrid System to Support Biological Function in Chlamydia," and he is mentored by Scott Hefty, molecular biosciences.

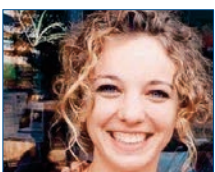
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Global Scholars



Zaara Baig

Two biology students, **Zaara Baig** and **Paige Hansen**, were among the 14 sophomores at the University of Kansas recently chosen as Global Scholars. Students are chosen based on their academic achievements and interest in global studies. Each scholar receives \$1,000 to be used towards a study abroad program. This year, Global Scholars will participate in a weekly seminar "From the Social to the Global: Seeing the World Through Flamenco and Latin Popular Dance."



Paige Hansen

Zaara Baig is from Leawood, Kansas, and is pursuing biology and Spanish degrees. **Paige Hansen** is from Brookings, South Dakota and is majoring in ecology & evolutionary biology and English.

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McNair Scholars

Samantha Beauchamp and Dalton Leprich are two biology students who were selected as 2015 TRIO McNair Scholars. The purpose of the McNair program is to provide support and resources to students who are typically underrepresented in graduate programs. These high-achieving students aspire to be researchers or university professors. They are given a faculty mentor and additional support for pursuing graduate and doctoral degrees.



Samantha Beauchamp, Kansas City, Kansas, sophomore

Beauchamp is a microbiology major with research interests in microbiology, virology, and infectious disease, particularly drug resistance in bacteria, Type III secretion systems, filoviruses and retroviruses.

Dalton Leprich, Lenexa sophomore

Leprich is a microbiology major with research interests in how the human microbiome affects overall human health, and in finding a cure for malaria.

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Women of Distinction Calendar

Current biology students and recent biology alumnae are among the 25 women featured in the 2015-2016 Women of Distinction calendar, which is produced by the Emily Taylor Center for Women and Gender Equity.

Paige Whiteside

Biology, KU (2015).

Hometown: Jefferson City, Tennessee

Big XII Council on Black Student Government, vice chair (2014-15)

Mordean Taylor Archer Most Outstanding Council Member of the Year Award (2015)

EMMPWR (Exposing Multicultural Males to Personal Wellness Resources) research project assistant (January 2015-present)



Rajvi Shah, Hawks for Health

B.S., neurobiology, minor in psychology, pre-medicine concentration.

Hometown: Stilwell

Honors Program Student Council, co-president

Student Health Advisory Board (Student Senate) voting board member

IBM Thomas J. Watson Memorial Fund Scholar



Ally Briggs, Sisters in Service

B.S., biochemistry, minor in leadership studies, KU (2015).

Hometown: Ottawa

Alternative Breaks, co-director (2014-15)

Kansas Women's Leadership Institute graduate (2014)

Phi Delta Epsilon pre-medical fraternity, community service chair.





Leigh Loving, Hawks for Health

Graduate student, public health, Columbia University.

Hometown: McPherson

B.S., biology with an emphasis in genetics, KU (2015)

Jayhawk Health Initiative, founder

Rhodes Scholar finalist (2015), Truman Scholar finalist (2014)

Kathleen McCluskey-Fawcett Outstanding Contribution Award (2014), Outstanding Woman Student in Leadership (2014)

Shelby Webb, Sisters in Service

Graduate student, public health, emphasis in epidemiology, KU Medical Center.

Hometown: Ottawa

B.S., biology with a concentration in genetics, KU (2015)

Alternative Breaks, co-director (2014-15)

Board of Class Officers, Campanile Award Winner (2015)

College of Liberal Arts & Sciences student senator (2013-15)



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Students Receive National Recognition

Udall Scholarship Award

Jennifer Stern, and ecology and evolutionary biology major from Lawrence, received the prestigious Udall Scholarship. The Udall Foundation awards 50 scholarships and 50 honorable mentions to students nationwide who are dedicated to studying how to protect the environment. Stern received honorable mention in 2014, and was selected for the award in 2015. Stern's research mentors in ecology and evolutionary biology are Leo Smith, assistant professor, and Joy Ward, Dean's Professor of the College of Liberal Arts and Sciences. Stern has future plans to study the effects of climate change on arctic ecosystems in graduate school.



Jennifer Stern

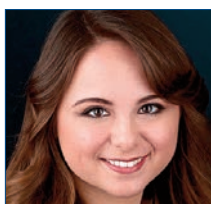
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Two biology students win astronaut scholarship award

The two biology students were selected for the Astronaut Scholarship Foundations Astronaut Scholarship. This is this first year KU was invited to submit students for consideration of the scholarship program. KU was selected because of the university's outstanding undergraduate programs in science, technology, engineering and mathematics (STEM).

Jennifer Stern (pictured above) is a senior majoring in an ecology and evolutionary biology, and she is from Lawrence, Kansas. She has conducted research with Joy Ward and Leo Smith, professors in the Department of Ecology and Evolutionary Biology.

Jessica van Loben Sels is a senior majoring in microbiology. She works in Professor David Davido's lab researching herpes simplex virus. Davido, Department of Molecular Biosciences, nominated her for the scholarship.



Jessica van Loben Sels

KU Today

Spotlight on Two Exceptional Staff



Angela Gere has been at KU Undergraduate Biology Program for three years. She is the senior administrative assistant and her duties include managing the front office, distributing keys, and other administrative tasks. In June, Angela was selected as KU's Employee of the Month, and Diane Goddard, Vice Provost, made a surprise visit to Haworth to present the award. Angela adjusted to KU quickly and proceeded to master complex responsibilities with ease. She was well deserving of her Employee of the Month recognition. As manager of the front office, Angela interacts with many different people, including students, faculty, parents, vendors, and other visitors. She uses her excellent communication skills to discover what people need, when many times they do not know what help they need.

Angela is responsible for the classroom scheduling for the department which involves coordinating the scheduling needs among three units and entering scheduling changes for more than 100 biology courses, as well as coordinating efforts with the central scheduling on campus. Angela helps with three student-centered events including Career Night, the Honors Symposium, and the Graduation Recognition Ceremony. Her favorite project is the Graduation Recognition Ceremony, which is a huge undertaking for Angela and others in the department, but always a success despite the many obstacles. She loves seeing all of the happy families at the ceremony who are there to share the graduates' experience. What Angela enjoys most about her job is the atmosphere at KU, and the interaction with the many people she comes across every day.

When she's not at KU, Angela enjoys spending time with her family which includes her husband of 19 years and her two daughters, ages 14 and 10. Her hobbies are her daughters' sports. She loves to watch them participate in their many sports!



Gil Ortiz provides graphic design and printing services for the three biology units—Ecology and Evolutionary Biology, Molecular Biosciences, and Undergraduate Biology. You can see his work throughout the halls of Haworth, on biology websites, and in scientific journals. He occasionally provides service to other units on campus, and even other schools who partner with KU.

Gil has worked in KU Biology since October, 2001. He came to KU with a background in advertising, television, direct mail and the garment industry. He has a bachelor's degree in visual communications from the Colorado Institute of Art (now known as The Art Institute). His freehand skills, computer knowledge, and the ability to make ideas come to print, landed him the job in biology, and he has been here ever since—nearly 15 years.

He enjoys the variety that his position offers. He works with professors and students on different projects including scientific illustrations, brochures, print design, production, web banners, event posters, and more. Not only does he get to do a variety of projects, he works with many different clients in the University setting. He works with other faculty members from other schools on campus, and he likes learning about what they do.

Gil frequently is asked to do scientific illustrations and he feels a sense of accomplishment when he sees his illustrations accompanying articles published in scientific publications. Gil feels his greatest achievement is what he has accomplished at KU, and he plans to retire from KU someday.

When he's not at KU, Gil enjoys painting, cooking, playing guitar and visiting art museums. He likes spending time with his family and friends, who are important to him.

Thank You for Your Support of KU Biology Student Research!



We are excited to announce that our campaign to raise funds for the purchase of a research grade laboratory glassware washer was successful, and a washer has been purchased. This purchase will enable our student researchers to spend more of their time on research, and less time washing research glassware. We'd like to express our sincerest thanks to the members of the Biological Sciences Advisory Board, Alumni, Friends of KU Biology, the Undergraduate Biology Program, and the Departments of Ecology and Evolutionary Biology and Molecular Biosciences whose contributions made this purchase possible.

- John Howieson
- Nick Franano
- Michael and Kathleen Beckloff
- Cynthia Reiss-Clark
- Rob and Betsy Weaver
- Joseph and Melody Gatti
- John Brown and Mary Hise
- KC Area Life Sciences Institute
- Joan Hunt
- Carolyn Holcroft
- Del and Carol Shankel
- Haifa A.M. Alhadyian
- Deborah and David Faurot
- Joseph Lutkenhaus and Janet Woodroof
- Susan Egan
- Jenna and Brian Goodman, with a matching gift from KU Endowment
- KU Undergraduate Biology Program
- KU Department of Ecology and Evolutionary Biology
- KU Department of Molecular Biosciences

Give a Gift to Support Undergraduate Students

Give Now

- **Jim Orr Bioscholar Fund** – Support for undergrad student BioScholars.
- **Elio Schaechter Bioscholar Fund** – Support for undergrad student BioScholars.
- **Ken and Helen Nelson Opportunity in the Biosciences Fund** –Support for undergraduates pursuing faculty-led research opportunities.
- **Biological Sciences Development Fund** –Supports special programs for students including Career Night and Undergraduate Biology Recognition Ceremony.

For other giving opportunities, contact
Jenna Goodman at JGoodman@KUEndowment.org (785.832.7417)

Connect with Us



Visit us online and share your information.

Join us for a KU Biology Alumni Social on April 14 (4:15-6:30 pm) at the Kansas Union on campus!

Special presentation by alumna Sara Sawyer:

“Ebola, HIV, and Influenza: Animal Viruses that Infect Humans”

Registration requested

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