KAS Newsletter

www.kyscience.org | Darrin L. Smith, Guest Editor | September 2015

The Voice of Science in Kentucky

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- Wood Hudson Cancer Research Laboratory

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Faculty, staff and students at Enhanced Affiliate member organizations receive:

- ***Free KAS membership***
- ***Online access to KAS Journal***
- ***KAS Newsletter via e-mail***

Current and archived issues of the KAS newsletter are available at www.kyscience.org. You may contact the Editor of the KAS Newsletter via e-mail at executivedirector@kyscience.org.

2015 Annual Meeting
Northern Kentucky University
November 13 – 14, 2015

We start the next century with the 101st Annual Meeting for the Kentucky Academy of Science. One can find links to the registration, abstract submission, speakers, field trips, hotel & travel info, and other details about the meeting at http://kyacademyofscience.net/programs/annual-meeting/

Regular pre-registration (before October 3) for Friday and Saturday (November 13 – 14) will be $50 for KAS members / $25 for students / $75 for non-members

Abstracts are due October 3. Papers and posters will be presented and judged on Friday and Saturday, November 13 – 14.

Highlights of the 2015 KAS Meeting

Join us for a "*Night at the Museum*" at the Cincinnati Museum Center on Friday, November 13, 6 – 10 pm (http://cincymuseum.org/). Catch up with your friends and colleagues over food & drinks, and explore 2 museums: The Cincinnati Museum of Natural History and Science, and the Cincinnati History Museum. $25 includes food & beverages, admission to 2 museums, and surprise entertainment.

Inside This Issue

Experience the NKU Field Station by taking the field trip on Saturday 12 (noon) – 3 pm. Please join NKU ecologists on an excursion and travel to the St. Anne woods & wetlands just a few miles from campus. The $15 includes shuttle and box lunch – please register separately at http://kyacademyofscience.net/programs/annual-meeting/

Open House at Wood Hudson Cancer Research Laboratory Saturday, November 14, 12 (noon) – 2 pm. Please make a visit while you're in the neighborhood! We will be helping arrange the transportation. http://woodhudson.org/

Career Fair Saturday, November 14. Meet employers who are interested in hiring scientists & engineers (If you are an employer and would like to participate, find a registration form at http://kyacademyofscience.net/programs/annual-meeting/

Science Bowl! Saturday November 14, 5 pm. Compete against other Kentucky schools for a coveted trophy! A team from each school will answer questions about science & current science events. Students – watch for an announcement and sign up to represent your school – no googling allowed!

Ohio Valley Society of Toxicology meeting overlaps with the KAS annual meeting on Friday November 13. If anyone would like to participate in both, see the following website for details: http://kyacademyofscience.net/programs/annual-meeting/ohio-valley-society-of-toxicology-meeting-nov-13/

The *NKU Planetarium* will be offering free shows, Friday November 13th, 7:30 pm and Saturday November 14th, 4:30 pm
http://artscience.nku.edu/departments/pget/planetarium.html

Kentucky Science Center's Youth Science Summit
Fifty high-school student scientists will be participating in a parallel event all day Saturday November 14, and will be peeking in on the KAS poster session. KAS members should have a chance to peek in on the youth program too! Would your community be a good place for another Youth Summit? Come check it out. The Science Center is looking to add five more in 2016 (currently in Louisville, Lexington, Paducah, and northern Kentucky (NKY)). CINSAM (http://cinsam.nku.edu/) is our local partner for the Youth Science Summit. http://kysciencecenter.org/kids/youth-science-summit/

101st KAS Meeting
Tentative Program

Friday, November 13*

8:00 – 10 am: KAS Board meeting

8:00 am – 4:30 pm:
Ohio Valley Society of Toxicology Meeting

9:00 – 11:00 am: KY Org of Field Stations Meeting

10:00 am: KAS Section Officers & Judges Meeting

10:00 am: Meeting Registration Open

10:00 am: Poster set-up

11:00 am: Welcome and Keynote

12:00 – 1:00 pm: Lunch Break

1:00 – 4:30 pm: Afternoon Oral Sessions

2:00 pm: Afternoon Break and Poster Session

4:30 – 5:30 pm: Plenary Session

6:00 – 10:00 pm: "Night at the Museum"
Cincinnati Museum Center
Food, Drinks, Dancing, Both Museums Open!

7:30 pm: Planetarium Show

Saturday, November 14*

8:00 am: Meeting Registration Open

8:30 – 9:30 am: Coffee & Bagels

9:00 am – 4:30 pm:
Northern Kentucky Youth Science Summit

9:00 am – 4:00 pm: Exhibitors and Career Fair

9:00 am – 12:00 pm: Morning Oral Sessions

10:30 am: Morning Break

11:00 am – 4:00 pm: Posters (up all day)

12:00 – 1:00 pm: Past Presidents' Lunch

12:00 – 1:00 pm: Lunch (on your own) – Meet with committees in Student Union Food Court

12:00 – 2:00 pm: Open House at Wood Hudson Cancer Research Lab

12:00 – 3:00 pm: Field Trip - NKU Field Station (box lunch & transportation provided to registered participants) Maximum capacity 22. Register here:
https://www.eventbrite.com/e/kas-field-trip-nku-field-station-tickets-18077019853

12:15 pm: Graduate Student Lunch with SPOG (Science Policy & Outreach Group)

1:00 – 4:00 pm: Afternoon Oral Sessions

2:30 pm: Afternoon Break & Poster Session

4:30 pm: KAS Annual Business Meeting

4:30 pm: Planetarium Show

5:00 pm: Reception, Science Bowl & Awards
Student Union Ballroom

Call for Abstracts – KAS Meeting Northern Kentucky University November 13 – 14, 2015

The 2015 Annual meeting of the Kentucky Academy of Science will be held at Northern Kentucky University, November 13 – 14, 2015. Faculty, students, independent scholars, and practitioners are encouraged to submit abstracts for papers and posters in each of the KAS sections. The annual KAS meeting features a paper competition for undergraduate and graduate students, and a poster competition for undergraduate students. This is a great opportunity for scientists to network and collaborate.

The deadline for submitting abstracts is Sunday October 3. You must register for the meeting before you can submit an abstract.
Early registration rates (until October 3, 2014) are: Students $25; KAS members $50; Non-members $75. Registration rates will rise after October 3.

The link to register and submit an abstract is: http://kyacademyofscience.net/programs/annual-meeting/

Before submission, please review the "Guidelines for Meeting Presentations" and "Guidelines for Abstracts" located at the KAS Annual Meeting webpage. Papers and posters will be presented and judged on Friday and Saturday.

If you have any additional questions, please contact the Program Coordinator, Melony Stambaugh at program@kyscience.org.

CINCINNATI MUSEUM CENTER AT UNION TERMINAL

Guidelines for Preparation of Abstracts for 2015 KAS Oral and Poster Presentations

Text of the abstract must be 250 words or fewer.

The presenter of each paper must be registered to attend the meeting. If the presenter should not be listed as the first author, an email must be sent to the Program Coordinator, program@kyscience.org. If the first author is not a student, the presentation is not eligible for the student competition.

A proper abstract contains three components: what was done and why, what was found out (i.e., result), and what it means.

Do not use bold. Italics should be used only for the scientific names of the organisms and other expressions that conventionally appear in italics.

Scientific names of organisms should be in italics (not underlined). Spell out generic names the first time used and include the name of the describer; afterwards names should be abbreviated to first letter of the genus (plus a period) followed by a specific epithet unless confusion may result with another abbreviated generic name in the abstract, e.g., Daphnia pulex (De Geer) then D. pulex thereafter.

Use standard, well-known abbreviations when the use of abbreviations is necessary. When using abbreviations for chemical compounds, spell out the name in full at the first mention and follow with the abbreviation in parentheses, then use the abbreviation thereafter. Do not abbreviate chemical compounds in the title of the abstracts.

The following is an example of a portion of a proper abstract, as it will appear in the program:

BOTANY
Taxonomic status of the varieties of Seneca snakeroot, Polygala senega L. (Polygalaceae). AMY E. TRAUTH* and ROBERT F.C. NACZI, Department of Biological Sciences, Northern Kentucky University, Highland Heights, KY 41099.

Seneca snakeroot, Polygala senega L. (Polygalaceae), is an uncommon plant ranging throughout most of eastern North America. Two varieties have been described for the species: variety senega and variety latifolia Torrey and Gray. The taxonomic .....

Oral Presentations

All presentations should be compatible with Power Point version 2007 for Windows and brought on a USB drive, as the computers will not have a CD drive. Be prepared to load your presentation when you check in. We will be aiming to have all presentations loaded 1 hour before the session begins and will have them on the computer in your presentation room.

Poster Presentations

Each presenter will be provided with an easel or a table and a 3x4 ft. poster board identified with a number that matches the presenter's number in the program booklet. This year the poster presentations will be set up for viewing on Friday morning and judging Friday afternoon and all day on Saturday. The week prior to the meeting the program will be listed on the KAS website and will show the judging schedule for each section.

Call for KAS Governing Board Nominations

The Kentucky Academy of Science Nominations and Elections Committee is seeking assistance from the KAS membership in our effort to identify a ballot of quality candidates to assume leadership roles within the Academy for 2016.

KAS members interested in nominating colleagues for these vacant positions (or individuals willing to volunteer to be placed on the ballot) should forward the name, e-mail address/phone number for each candidate, and indicate the leadership position of interest. The Nominations and Elections Committee will contact each candidate to request the necessary information to be included on the ballot. This is an extremely important responsibility for the

members of KAS and the committee needs your assistance in identifying candidates for these vacancies.

The membership is being contacted at this time for nominations for the following offices:

- Vice President
- Two (2) Biological Sciences Representatives
- Social & Behavioral Sciences Representative
- At large Representative

Any member may nominate another member for Vice President. However, for Biological Sciences and Social & Behavioral Sciences representatives, the nominators must identify with the Division for which they are nominating. Please send nominations by September 20, 2015 to:

KC Russell,
Dept. Of Chemistry
Northern Kentucky University
Highland Heights, KY 41099
(859) 572-6110
russellk@nku.edu

KBRIN NIH R15 Grant Writing Workshop
Saturday, November 7th, 2015
KBRIN House
University of Louisville

The Kentucky Biomedical Research Infrastructure Network (KBRIN) will again offer an intensive workshop on the development of National Institutes of Health (NIH) R15-Academic Research Enhancement Award (AREA) proposals. AREA grants are specifically designed to support research projects (three years-$300,000) in the biomedical and behavioral sciences conducted by faculty and students in colleges/universities and health professional schools that have not received more than $6 million in NIH research grants in four of the last seven fiscal years. Thus, faculty at nearly all Kentucky colleges/universities is eligible.

The three main goals of the AREA program are: (1) to support meritorious research; (2) to strengthen the research environment of the institution; and (3) to expose students to research.

The workshop will be led by faculty at KBRIN institutions that have been successful in competing for AREA grants. The morning session is designed for faculty with little or no NIH grant writing experience, whereas the afternoon session is designed to enhance the competitiveness of faculty with some NIH grant writing experience. Depending upon level of experience with the NIH, registrations will be accepted for the either the full day workshop or the afternoon session only.

Past attendees at this workshop have been successful in obtaining NIH funding. ***This workshop is required to be eligible for KBRIN research grants*** (for more information, see http://louisville.edu/research/kbrin/kbrin-cores/research-core)

The morning workshop will begin at 9:00 am EST and the afternoon session will begin at 1:00 pm EST. Lunch will be provided at 12 pm (noon).

The workshop is free and open to interested faculty at all Kentucky public and private institutions. As space is limited, **please register online by Friday October 23rd at the following:** http://louisville.edu/research/kbrin/kbrin-cores/mentoring/kbrin-nih-r15-grant-writing-workshop

For registration information contact, Ms. Whitney Rogers, KBRIN UBM at whitney.rogers@louisville.edu or 502-852-3045. For additional workshop information, contact Dr. Nigel Cooper, KBRIN PI (nigel.cooper@louisville.edu) or Dr. Bruce Mattingly, KBRIN program coordinator (b.mattingly@moreheadstate.edu).

This workshop is sponsored by the Kentucky Biomedical Research Infrastructure Network (KBRIN), which is supported by a grant from the National Institute of General Medical Sciences (P20 GM103436-14) from the National Institutes of Health.

Call for KAS Research Grant Applications

The following sources of research funding are available through the Kentucky Academy of Science: The *Marcia Athey and Botany Funds* are available to support student and/or faculty research projects. The *Special Research Program* is directed particularly to faculty in Kentucky higher education institutions, public or private, involved primarily in undergraduate education; i.e., institutions which do not award the Ph.D. degree. The *Undergraduate Research Program* makes available funds for research planned and conducted by undergraduate students of Kentucky colleges and universities under the supervision of a faculty member. Applicants may submit for either an Undergraduate Research Supply Grant (up to $500) or a Summer Undergraduate Research Grant (up to $3,000). To submit a grant application, please log on to your KAS Member Profile page and select the "Apply for Grants" tab. The Terms and Conditions for all KAS Grants, the KAS Grant Application Cover Sheet, and the KAS Conflict of Interest form are downloadable in multiple formats. The **deadline for 2016 KAS Grant Applications is November 15, 2015**. All grant applications must be submitted through the online system: http://kyacademyofscience.net/programs/kas-research-grants/

The Committee on Distribution of Research Grants will review all submissions and award announcements will be made in February 2016.

Science Across the Commonwealth

Wetlands and Amphibian Conservation on the Cumberland and Allegheny Plateaus

Wetlands are areas typically found between water and land that support diverse biological communities, including amphibian species. Wetlands on relatively flat terrain such as in bottomlands or ridge tops are the primary breeding habitats for amphibians. Bottomland wetlands tend to be permanently inundated, but ridge-top wetlands are most often ephemeral, and isolated, not necessarily connected to surface water of streams, rivers, or lakes.

Small isolated wetlands and temporary bodies of water provide habitat for amphibian species that require aquatic or moist environments during egg-laying and larval stages, and terrestrial environments as adults. There, eggs and larvae are not subject to fish predators, and the shallow depth of pools may reduce the probability of fungal and viral growth that causes diseases such as amphibian chytrid fungus (*Batrachochytrium dendrobatidis*) and ranavirus. Although Kentucky has lost most of its historic natural wetlands, along ridge tops in the Cumberland and Allegheny plateaus, remaining forested ephemeral wetlands are an important habitat for wood frogs (*Lithobates sylvaticus*), marbled salamanders (*Ambystoma opacum*), and other amphibians.

Wood frog, *Lithobates sylvaticus*, captured at a natural ridge-top wetland, Rockcastle County, Kentucky

Stephen Richter and his students from Eastern Kentucky University study the ecology of amphibian species that are key indicator species

of natural and constructed wetland areas, and the ecological characteristics of wetlands that are associated with different species of amphibians. Constructed wetlands, intended to replace lost natural wetlands, provide breeding opportunities for amphibians, but typically support different amphibian communities from those of the lost natural wetlands. Conservation of specific species through constructed wetlands that imitate characteristics of natural drying ponds, with the species that would be present in natural ponds, depends above all on similar hydroperiod, or length of time surface water is present.

Richter and his students compared differences in amphibian community composition between selected constructed and natural wetlands in the Cumberland District of the northern Daniel Boone National Forest and found habitat variables that predict the presence of individual amphibian species. Wetlands were categorized by construction methods. Old wetlands, constructed between 1988 and 2003, had dams to hold water permanently. New wetlands, constructed to provide smaller, shallower pools with greater amounts of surrounding upland coarse woody debris, were permanent or ephemeral. Known natural wetlands were the third study group.

Amphibians were sampled in several sampling periods using a dip net while walking along the wetland edge. Individuals sampled were larvae, except for eastern newts (*Notopthalamus viridescens*), which were adults in the aquatic breeding stage. The measure of "capture per unit effort," calculated as the number of individuals captured/number of dip-net sweeps at each wetland, was taken as an indicator of the abundance of each species during the breeding season. Characteristics associated with amphibian habitats were also measured, including wetland hydrology (either permanent or ephemeral), aquatic vegetation, estimated vegetation cover, estimated overstory canopy closure directly above, and deepest wetland depth. All natural wetlands and a few new constructed wetlands dried during the summer, but all old constructed wetlands retained water, as they were deeper than new constructed wetlands.

Amphibian habitat conditions of constructed wetlands- greater depth and size, total vegetation, and less canopy cover- did not support the amphibian communities associated with natural smaller, drying wetlands. Natural wetlands scored higher than either old or new constructed wetlands on metrics of habitat quality, hydrology, habitat alteration and plant communities, and had greater overstory canopy closure. More individual amphibians were captured in natural than in constructed wetlands, and natural wetlands had the greatest species richness. There were differences in natural and constructed wetland types in amphibian community composition. Large ranid frogs (green frogs, *Lithobates clamitans*, and American bullfrogs, *L. catesbeiamus*) and Eastern newt (*N. viridescens*) adults were found in constructed permanent wetlands. Spotted and Jefferson salamander (*Ambystoma maculatum* and *Am. jeffersonianum*) larvae were found in all wetland types, positively associated with wetland depth. Wood frogs (*L. sylvaticus*) and marbled salamanders (*Am. opacum*), which require fluctuating water levels, were associated with natural ephemeral wetlands. Wood frogs may be excluded from permanent wetlands because of egg predation by green frog larvae and adult eastern newts. American bullfrogs and green frog larvae overwinter, excluding these species from ephemeral wetlands. The new constructed ephemeral wetlands were not used by wood frogs or marbled salamanders. These wetlands also excluded large ranid frogs (green frogs and American bullfrogs). Therefore, the similar

amphibian communities seen in new constructed and natural wetlands was due to the exclusion of ranid frogs and not the coincidence of ephemeral breeder species in both types of wetlands.

The presence of few remaining natural ridge top wetlands indicates the need for creating new wetlands more similar to the lost natural, ephemeral wetlands of the region. Because of the addition of permanent constructed wetlands, the permanent water breeders, American bullfrogs, are invasive species in the ecosystem. Ephemeral breeders such as wood frogs and marbled salamanders are confined to natural wetlands, indicating the need to construct future wetlands that can ensure ephemeral water and seasonal drying. Constructed vernal pools seek to restore to wood frogs and mole salamanders functional habitats of lost natural wetlands by reestablishing their original physiochemical, hydrological, and ecological conditions, and must be accompanied by appropriate habitat for species to breed in pools but spend their adult lives on land.

As part of their ongoing research and conservation work, Richter and his colleagues elucidated requirements associated with vernal pools and the amphibian communities they support, using the key indicator species wood frogs (*L. sylvaticus*) and mole salamanders (*Ambystoma* spp.).

Hydrology is the most important factor that ensures wetlands dry seasonally and predicts composition of amphibian communities. Pools may be located as surface water depressions in an upper watershed, or as low-ground depressions. Amphibians deposit eggs and larvae grow in ephemeral pools on different seasonal schedules. Wood frogs and spotted salamanders both lay eggs in late winter or early spring, but salamander larvae take longer to develop. Marbled salamanders deposit eggs in the dry basin in late summer, and embryo hatch after fall rains. Larvae overwinter and undergo metamorphosis about the same time of the next year as wood frogs.

Besides hydrology, the vegetation, canopy cover, and soil type affect wetlands and predict amphibian species survival. Richter and his colleagues enumerated criteria that are important for successful vernal pools. If pools are connected by groundwater, they may have mucky, organic soil and may be prevented from drying. Slopes of littoral zones around edges of natural pools are gradual to the shallow center, important for amphibian access and development. Canopy cover on constructed wetlands is less than that of natural ephemeral wetlands, which adds to the effect of hydrology to allow different vegetation to grow in pools. Surrounding forest habitat must be appropriate for ephemeral wetland species such as wood frogs and salamanders, that generally forage 300 meters distant from pools, and that migrate from breeding pools to forest, or from natal pools to new breeding pools as juveniles.

Because of the difficulty of ensuring the necessary hydrological properties, creating wetlands for replacement or restoration of lost natural wetlands does not ensure the same functional ecology for amphibian species. For wood frogs and ambystomatid salamanders, constructed pools pose high risk of predation by permanent water-dwelling green frogs and American bullfrogs. Permanent constructed wetlands may have increased the probability of diseases that are less virulent in ephemeral pools that dry or in shallow pools that get warm in summer and kill fungi and viruses. Natural pools and surrounding forest habitat provide the functional ecology necessary for the long-term endurance of wood frogs and ambystomatid salamanders. Richter and his colleagues recommend that vernal pool creation should be

used as a last resort, in landscapes subjected to severe wetland loss. When any pool creation is desirable to support wetland-centered wildlife species, it should be only after attempts are made to conserve existing pools in their suitable environmental context. Constructed wetlands should be designed to approximate as closely as possible the original natural ecological conditions. The mark of success for created vernal pools is not the number of individuals present during a single season, but long-term reproduction and metamorphosis of individuals over a period of at least five years.

Further Reading:

Brown, D.R. & Richter, S.C. (2012). Meeting the Challenges to Preserving Kentucky's Biodiversity. *Sustain,* (Fall-Winter), 22-33.

Calhoun, A.J.K., Arrigoni, J., Brooks, R.P., Hunter, M.L., & Richter, S.C. (2014). Creating successful vernal pools: A literature review and advice for practitioners. *Wetlands*, 34, 1027-1038.

Denton, R.D. & Richter, S.C. (2013). Amphibian communities in natural and constructed ridge top wetlands with implications for wetland communities. *Journal of Wildlife Management*, *77(*5), 886-896.

Drayer, A.N. & Richter, S.C. (Accepted, pending revision.) Physical wetland characteristics influence amphibian community composition in constructed wetlands. *Ecological Engineering*.

Richter, S.C., Drayer, A., Strong, J.R., Kross, C.S., Miller, D.L.,& Gray, M.J. (2013). High prevalence of ranavirus infection in permanent constructed wetlands in eastern Kentucky, USA. *Herpetological Review*, 44(3), 464-466.

Submitted by
Mary Janssen, Ph.D.
Member-at-Large, Governing Board of the
Kentucky Academy of Science

2015 Kentucky Native Plant Society Botanical Symposium

The Symposium will feature researchers and land managers discussing local ecological restoration projects, with a Keynote address from Jennifer Ceska, University of Georgia Conversation Coordinator. Thanks to generous sponsors, registration is only $25 per person (including lunch) and free to college students.

Registration and agenda is also available at http://www.knps.org/events.html.

Café Scientifique

Bowling Green's new Café Scientifique, dubbed: "***Nut Gathering***", has gone past the hypothetical and nailed down speakers for the first six months. The venue is the White Squirrel Brewery, 471 Broadway, Bowling Green, KY 42101 (http://whitesquirrelbrewery.com)

Tuesday 29 September 2015, 5:30 – 6:30 pm
Angst: How Threats to Identity and Existence Makes Us Hate Art, Skip Suncreen, and Join Extremist Groups
Aaron Wichman, WKU Psychological Sciences

Tuesday 27 October 2015, 5:30 – 6:30 pm
Innovation and Invention: 3D Printers
Joel Lenoir, WKU Mechanical Engineering

Tuesday 24 November 2015, 5:30-6:30
Star Wars: Communication Across a Galaxy
Bruce Kessler, WKU Mathematics

Tuesday 29 December 2015, 5:30 – 6:30 pm
So You Want To Be Immortal?
Dana Burr Bradley, WKU Center for Gerontology

Tuesday 26 January 2016, 5:30 – 6:30 pm
Smart Eyes: A New Way to Reveal How We Think and What We Learn
Leslie North, WKU Geography and Geology

KAS Wants You to Share Your Scientific Expertise!

From time to time, our office receives requests for experts in certain areas. Also, from the membership survey last year, members told us how they would like to be called upon to help us offer educational programs! Therefore, the establishment of a *Speakers Bureau* will help better serve Kentucky by sharing our expertise. However, we need to know more about the breadth of expertise with our membership.

Fields have been added in our database to capture more information from you about your field of expertise, and some keywords to describe what you do. Members can add these bits of information when you log in and Update your profile. (It's easy to do this when you Log-in to register for the Meeting!) This will help us search our membership and get in touch when your expertise can be helpful to someone else.

Go to this page:
http://www.kyacademyofscience.net/kas/members/login.php

Click "Update Your profile"

Journal of the KAS Volume 75

Check the KAS website as the latest issue of the *Journal of the Kentucky Academy of Science* is about to be posted. Log in to view all journals for free: http://www.kyacademyofscience.net/kas/members/login.php

Partnership Between U of L and ASRC Michelin Offers Opportunities for Chemistry Students

The University of Louisville Chemistry Department and ASRC –Michelin North America are developing a new partnership starting in 2016 to offer internship experiences to U of L chemistry students. Students will obtain job experience in an international petrochemical industry while applying their skills from the classroom. Students who are accepted into the program will receive credit hours that apply toward their bachelor's degree. For more information, contact Dr. Michael Nantz, Chair of the University of Louisville Chemistry department, michael.nantz@louisville.edu, or Mr. Karl Scharrer with ASRC- Michelin North America, karl.scharrer@us.michelin.com.

KAS would like to help bridge more gaps between our scientists in the academia and the private sector. If your school or company is interested in cultivating partnerships, or if you have a story about a partnership that you'd like to share with your fellow KAS members, get in touch with us.

Conference on Student Research

Kentucky Community and Technical College System (KCTCS) will host their annual *Conference for Student Research*, Friday, November 6 at Elizabethtown Community & Technical College. Students from institutions are invited to come and present original research results in poster format. Deadline for abstract submission is October 9. For a project submission form, please contact co-chairs Mary Janssen at marye.janssen@kctcs.edu or Felix Akojie at felix.akojie@kctcs.edu

Posters-at-the-Capitol
Frankfort, KY
February 25, 2016

Posters-at-the-Capitol is designed to celebrate the research, scholarly, and creative experiences of undergraduate students at Kentucky's public institutions of higher education. This program provides students with the opportunity to present scholarly projects to state legislators and to impress upon them the importance of faculty-mentored projects to the overall education of Kentucky students. Poster presentations are being sought from undergraduates in ALL DISCIPLINARY AREAS. *Posters-at-the-Capitol* will take place on February 25, 2016, but the submission **DEADLINE is Wednesday, OCTOBER 14**. Please submit to the following: http://campus.murraystate.edu/services/URSA/. Questions can be directed to Jody Cofer Randall, Murray State University (270-809-3192).