FOURTH ANNUAL PHI ZETA RESEARCH DAY
TUSKEGEE UNIVERSITY COLLEGE OF VETERINARY MEDICINE, NURSING AND ALLIED HEALTH

CALL FOR ABSTRACTS

The purpose of Phi Zeta Research Day is in line with the mission of the Phi Zeta Veterinary Honor Society, which is “to recognize and promote scholarship and research in matters pertaining to the welfare and diseases of animals”. The 4th annual Tuskegee University School of Veterinary Medicine Phi Zeta Research Day will be held on Friday, September 18, 2015 in conjunction with the Biomedical Research Symposium.

The objectives of the event are to:

1. Encourage students to share their research with the scientific community
2. Enhance the pertinent skill of being able to present and translate research data to a diverse audience
3. Provide a forum for the presentation of research being performed at Tuskegee University School of Veterinary Medicine and facilitate collegial interactions and networks

We would like to invite all student members of the Tuskegee University School of Veterinary Medicine (veterinary students, graduate students, interns) and other related biomedical fields to present your research at Phi Zeta Research Day. The research must embody the Phi Zeta Honor Society Mission. You may present research that has been presented at other conferences previously. You do not have to be a Phi Zeta member to participate. Presentations will be judged and monetary awards will be given.

Abstract submission is due by August 18, 2015 to Dr. Teshome Yehualaeshet at teyehual@mytu.tuskegee.edu.

Please indicate if you would like to present your research in the form of an oral presentation or a poster. The committee will determine the final selection of presentation format and you will be informed of your abstract status acceptance by August 28, 2015.

Abstract and Presentation Guidelines:
Abstracts should be no more than 300 words, and typed in size 12 Times New Roman text. Submit abstracts electronically in a Microsoft Word Document. On a separate page include the title of your abstract, your name, student status and e-mail address, and whether you would prefer to do an oral or poster presentation. Oral presentations should be no more than 15 minutes in length. Allocation of time for poster presentations will be in 30 minute intervals. Please submit your information to Dr. Teshome Yehualaeshet at teyehual@mytu.tuskegee.edu by August 18, 2015.
Chronic exposure to low doses of estradiol-17β (E2) is known to decrease dopamine (DA) production by inducing reactive nitrogen species in the hypothalamus, resulting in hyperprolactinemia that predisposes rats to mammary and pituitary tumors. However, the exact mechanism by which E2 produces this effect is not clear. Since DA synthesis is regulated by the enzyme tyrosine hydroxylase (TH), we hypothesized that E2 exposure causes nitration of TH to decrease DA production. To test this, we exposed young (Y) and middle-aged (MA) intact and ovariectomized female rats to a low dose (20ng/day) of E2 for 90 days. At the end of treatment, brains were collected and sectioned. The arcuate nucleus (Arc) and median eminence (ME) were microdissected and analyzed for nitrate levels and nitrated TH respectively. Nitrate levels (µM/µg±SE) were higher in the Arc of intact E2-treated (3.81±0.9 and 4.97±1.22; Y and MA respectively) animals compared to the controls (1.93±0.4 and 1.59±0.3; Y and MA respectively; p<0.05). We also observed an increase in the levels of nitrated TH in the ME of E2 treated intact and ovariectomized rats compared to sham implanted animals. These changes were observed after E2 treatment in both Y and MA rats. These results indicate that chronic E2 exposure increases reactive nitrogen species in the hypothalamus, which probably leads to nitration of tyrosine residues in TH. This could lead to a reduction in TH function, inhibiting DA synthesis.

Supported by NIH AG027697.