CALL FOR ABSTRACTS

Morgan State University
23rd Annual Undergraduate and Graduate Science Research Symposium

Thursday, April 14, 2016
8:00 AM - 3:00 PM
Morgan State University Student Center
Calvin and Tina Tyler Ballroom

Sponsored by
School of Computer, Mathematical and Natural Sciences
NIGMS-RISE Program
Dubois-Diggs Sociological Society
ASCEND Center for Biomedical Research

Registration and Abstract Submission Form available on the MSU website and the SCMNS website
or contact
Dr. Lisa Brown, Key Hall Room G-52 (x3631) (lisa.brown@morgan.edu) or
Mrs. Marlene Peery, Key Hall Room G55/56 (x4339) (marlene.peery@morgan.edu)
MORGAN STATE UNIVERSITY
STUDENT CENTER BALLROOM
APRIL 14, 2016

TENTATIVE SCHEDULE OF ACTIVITIES

8:00- 8:50 REGISTRATION & POSTER SET UP

8:50-9:00 WELCOME AND OPENING REMARKS:
Dr. Gloria Gibson, Provost and Sr. Vice President of Academic Affairs
Morgan State University

9:00-9:30 Freddie Gray: One Year Later PLENARY
To be announced

9:30-11:30 ORAL PRESENTATIONS & JUDGING
Conference Rooms 210A, 210B, 212A, and 212B

11:00-12:30 POSTER PRESENTATIONS & JUDGING
Calvin and Tina Tyler Ballroom

12:30 INVOCATION
LUNCH

12:45 GREETINGS FROM THE PRESIDENT:
Dr. David Wilson, President
Morgan State University

1:35 INTRODUCTION OF SPEAKER:
Dr. Joanne Berger-Sweeney, President
Trinity College, Hartford, CT

1:35-2:10 PRESENTATION BY GUEST SPEAKER

2:15-3:00 PRESENTATION OF AWARDS:
Dr. Lisa D. Brown, Associate Professor and Symposium Committee Chairperson

3:00 CLOSING REMARKS:
Dr. Victor McCrary, Vice President for Research and Economic Development
The 23rd Annual Morgan State University
Undergraduate and Graduate
Science Research Symposium

RULES FOR ABSTRACT SUBMISSION

• All abstracts must be received on or before 4:00 pm on March 18, 2016. NO ABSTRACTS WILL BE ACCEPTED AFTER THIS DEADLINE.

• Abstracts and forms must be submitted electronically in MS Word format only. The subject heading of the email should read: Research Symposium abstract, presenter (your name). Abstracts should be submitted to: sciencesymposium@morgan.edu.

• Abstracts must be submitted by faculty mentors only!!!!!!

• Using the Topic Categories on the abstract form, indicate which category best describes your research area. Also, please select your presentation preference: ORAL or POSTER. For Computer Science abstracts, please note if a poster OR computer will be used in the presentation. You must provide your own computer if you plan to use it for demonstration purposes.

• ABSTRACTS MUST BE FORMATTED CORRECTLY AND FIT INTO THE BOX ON THE ABSTRACT FORM. PLEASE DO NOT CHANGE THE SIZE OF THE BOX AS THIS MAY RESULT IN YOUR ABSTRACT NOT BEING ACCEPTED. ABSTRACTS THAT DO NOT MEET ALL SUBMISSION GUIDELINES WILL NOT BE ACCEPTED.

• Upon completion of the review process, notification of abstract selection for presentation will be forwarded by email on or before March 25, 2016.

• More than one student presenter per poster presentation is allowed.

• NOTE!!!!!!!!!
All abstracts will be reviewed. The Review Committee reserves the right to limit the number of abstracts for ORAL or POSTER presentations.

For additional information, please contact:
Dr. Lisa D. Brown at (443) 885-3631 or lisa.brown@morgan.edu
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ABSTRACT FORMAT

ALL ABSTRACTS MUST MEET FORMATTING REQUIREMENTS (SEE ATTACHED SAMPLE). ABSTRACTS THAT DO NOT MEET ALL FORMATTING/SUBMISSION GUIDELINES WILL NOT BE ACCEPTED!

• Posters must not exceed 41 inches wide x 40 inches or longer
• Abstracts must not exceed 250 words, excluding title, authors, and institutions.
• Abstracts should be typed single space in Times New Roman, 11 point font.
• Abstract title must be bold and typed in ALL CAPITAL LETTERS.
• Authors should be listed as follows:
  *Joan A. Doe, Thomas T. Smith, and Carl E. Jones
  More than one student presenter is allowed. (*Indicates the student presenters).
• List Department, Institution, City, State, Zip Code (example: Department of Biology, Morgan State University, Baltimore, MD 21251).
• Skip one line, indent five (5) spaces, and begin typing the abstract.
• EACH ABSTRACT SHOULD CONTAIN THE FOLLOWING:
  1. **INTRODUCTION** outlining the significance of the research project/area.
  2. Statement of the **HYPOTHESIS** being tested or **OBJECTIVE** for the research.
  3. Brief statement of **RESEARCH METHODS** used.
  4. Summary of the **RESULTS**.
  5. Statement of the **CONCLUSIONS**.

ALL INFORMATION (STUDENT AND MENTOR INFORMATION) MUST BE COMPLETED ON THE ABSTRACT SUBMISSION FORM!!

ALL ABSTRACTS MUST BE SUBMITTED ELECTRONICALLY BY THE STUDENT’S MENTOR!!!!!
IDENTIFICATION OF GAMMA-2-MELANOCYTE STIMULATING HORMONE (γ-2-MSH) RESPONSIVE GENES IN MC3R TRANSFECTED BRAINSTEM CAD CELLS BY MICROARRAY ANALYSIS. *Segun Bernard, Brian Redmond, James Wachira and Cleo Hughes Darden. Morgan State University, Department of Biology, Baltimore, MD 21251.

Melanocortins are peptide hormones that are derived from the precursor polypeptide pro-opiomelanocortin. They mediate their effects through a family of five G-protein coupled receptors, the melanocortin receptors. Some studies have implicated other signaling pathways such as the PKC, MAP kinase, and the JAK/STAT pathways. Melanocortin receptors, melanocortin-3-receptor (MC3R) and melanocortin-4-receptor (MC4R), have been implicated in the pathophysiology of obesity, insulin resistance and salt-sensitive hypertension through gene knockout studies. In order to understand the molecular mechanisms involved in MC3R signaling, we treated MC3R/GFP and GFP control transfected cells with gamma-MSH and isolated total RNA for gene transcription analysis using oligonucleotide microarrays. Total RNA isolated from the two populations of harvested cells was amplified, labeled and co-hybridized to oligonucleotide microarrays. Eighty-eight genes were up-regulated and 91 genes were down-regulated with ≥2 ratio and p-value of ≤0.05. Several pathways were altered including signal transduction and G-protein coupled receptor protein signaling, among others. Quantitative PCR data indicate that protein tyrosine phosphatase and protein kinase nu genes are up-regulated as a result of MC3R activation by gamma-MSH. The information gathered from this study will enhance our knowledge of the molecular mechanisms involved in MC3R signaling because of its involvement in salt sensitive hypertension and cardiovascular function. (Supported by NIH/NCRR/RCMI/G12RR17581-05 and RCMI funded core facilities)