MEHARRY MEDICAL COLLEGE
2007 Student Research Day Program

Annually, for the past 50 years, Meharry Medical College has provided a forum for students in all schools of the College to present their research findings to their peers, faculty, administration, and visitors. Prizes are given for the best poster presentation by students in the Allied Health Professions, Dental, Graduate and Medical Schools. A grand prize is presented for the best overall student presentation.

The 51st Annual Meharry Medical College Student Research Poster Session will be held in the Harold D. West Basic Sciences Center atrium on Wednesday, March 21, 2007. From 8:30 a.m. – 12:00 Noon, presenters will be available in the West Basic Sciences Center Atrium to describe posters developed from abstracts they submitted. At 2:00 p.m. the Student Research Day Award Program and Guest Lecturer will be presented in the S.S. Kresge Learning Resources Center, Compton-Nelson Auditorium.

ELIGIBILITY FOR PARTICIPATION

All Meharry Medical College affiliated undergraduate and graduate students who conducted research at Meharry or elsewhere during 2006-2007 are eligible to submit abstracts and present posters in competition for awards.

Post-doctorate, Clinical Fellows and Residents are invited to submit abstracts and present posters for scientific information ONLY.

DEADLINE FOR RECEIPT OF ABSTRACTS

Monday, February 14, 2007

ABSTRACT SUBMISSION

Preceptor approved abstracts, **NOT EXCEEDING 300 WORDS**, should be submitted as hard copy and on diskette in Microsoft Word, or by E-mail. (An approval signature line is designated on the abstract form). The presenting author will be notified of the assigned Poster Board or Table Top number. Abstracts should be hand-carried, mailed or E-mailed to:

Ms. Thyckla T. Gray
School of Graduate Studies and Research
Harold D. West Basic Sciences Building, M121
Meharry Medical College
Nashville, TN 37208-3599

E-mail address: tgray@mmc.edu

INSTRUCTIONS TO AUTHORS

1. Typed abstracts NOT EXCEEDING 300 WORDS should be single-spaced with 1 inch margins around. Abstracts should include the following information:

   - Titles (TYPED IN CAPITAL LETTERS), Author(s) [**Students only** – Bold and Typed in Title Case], Department(s), Institution, City, State and Zip Code.

   - Text should include statement(s) on:
     - ✓ The nature of the problem
     - ✓ What is generally known already (historical background)
     - ✓ What was done
     - ✓ How it was done
     - ✓ What was found
     - ✓ What do the findings mean

   - *Text should not include tables or line drawings*

2. On separate lines below the body of the abstract

   - School Affiliation: Allied Health, Dental, Graduate, Medical
   - Student Status: Freshman, Sophomore, Junior, Senior, Graduate (1st year, 2nd year, 3rd year, or above)
   - Project Proposal: Research Project or Table Demonstration
   - Name of Institution Where Research Was Conducted, if different from Meharry Medical College
   - Sponsor or Mentor: Individual providing funds and laboratory space
   - Local Address (Required)
   - Local Telephone Number (Required)

3. If your project uses ANIMALS, you MUST submit an official letter, or copy thereof, from the Institutional Animal Care and Use Committee (IACUC) which states that your project was reviewed and approved.

   If your project uses HUMAN SUBJECTS, you MUST submit an official letter, or copy thereof, from the Institutional Review Board (IRB) which states that your project was reviewed and approved.

SAMPLE ABSTRACT

THE HORSESHOE CRAB NERVOUS SYSTEM AS A MODEL FOR COMPUTER HARDWIRING. **John Smith**, Department of Computer Science, Meharry Medical College, Nashville, TN 37208-3599

The horseshoe crab (*Limulus*) contains an extremely simple nervous consisting of a *corpora pedunculata* and cardiac ganglia. The small numbers of neurons in this system require a large number of axon branches in order to interconnect the various body organs. The objective of our research was to demonstrate that the nervous system branches were so efficient that the pattern of interconnections would serve as a model for design of a superconducting analog computer. Neuronal patterns and interconnections were determined by recording electrophysiological events using a rotating kymograph and supravitally staining the impaled neuron using mood indigo. We found that lateral myelinated neurons running from distal feeler surface to the proximal tail region were one micron in diameter and transmitted impulses at a rate of one kilometer per second. Dendritic branches from these neurons interconnected with the cephalic ganglia and were, therefore, able to control the cardiac pacemaker. These results are consistent with the hypothesis that the Limulus nervous system is sophisticated enough to serve as a model for both an analog and digital computer.

This project was supported, in part, by Greenback Foundation Grant B52203.

Presenter's Name: _____

School Affiliation: _____

Student Status: _____

Project Proposal: _____

Name of Institution where Research was Conducted: _____

Sponsor or Mentor: _____

Department: _____

Local Address (Required): _____

Local Telephone Number (Required): _____

_____ _____

Student Signature Preceptor/Mentor Signature

DIRECTIONS FOR POSTER PREPARATION

The purpose of a poster is to give the observer the background and summary of your research. It should be self-explanatory and leave you free to discuss particular points raised by an interested observer.

The essentials of poster arrangement are as follows:

A. A bulletin board with your assigned number will be placed in the Harold D., West Basic Sciences Building atrium. Your completed table top demonstration should be in place by 8:00 a.m. on March 21st^{h}.

The poster board surface area is 44¾″ high and 68½″ long. (If electrical connections are required, a student must submit a request to Ms. Malynda Gaines, extension 6533, by March 3, 2007.) Your poster will usually consist of a number of illustrations, tables, and typed items; to enhance their appearance, these may be arranged on 2-3 pieces of 22 X 28 inch (or smaller) white or colored paper before coming to the display area. These may be directly attached to the bulletin board or your display may be attached as individual sheets directly to the bulletin board. These materials should be attached to the bulletin board using push pins or thumb tacks which YOU MUST SUPPLY.

B. Place a banner strip with title, student author(s) and institution where research was conducted at the top of your board space. Lettering should be one or more inches high. **DO NOT INCLUDE FACULTY** since they are listed in the abstract as sponsors.

C. The following items should be included in your poster presentation:

(1) the abstract
(2) a brief introduction providing a historical background of your project. The introduction should conclude with the hypothesis developed from this background and tell why you did the research (what question you are asking).
(3) your experimental design and research techniques. Diagrams illustrating special equipment used with a brief, descriptive legend are helpful (a picture is worth a thousand words). Simple use of colored paper backings can effectively add visual emphasis.
(4) results should be displayed in the form of tables, graphs, illustrations, photographs, etc. Each figure should be numbered sequentially. Each should have a one or two line heading describing the intent of the experiment from which that data was obtained. In a legend beneath the figure should appear detailed information pointing out only the most important data in the figure and conclusions; mention of special methods should be brief and should be placed at the end of the legend. The figure itself should be simple eliminating unnecessary details.
(5) a short discussion relating the results to your introduction and discussing the significance of your unique research finding.
(6) A summary or list of conclusions

All items should be printed large enough to be read from a distance. Most photocopy machines can enlarge copy and make large, readable diagrams, graphs, and legends.

When you run out of space in the first column below the abstract, begin a new column to the right (it is easier for viewers to scan a poster by systematically reading from top to bottom rather than back and forth in front of the poster).

DIRECTIONS FOR TABLE TOP DEMONSTRATION

A. A table top with your assigned number will be placed in the Harold D., West Basic Sciences Building atrium. Your completed table top demonstration should be in place by 8:00 a.m. on March 21st.

The tables measure approximately 30"x72"x29". (If electrical connections are required, a student must submit a request to Ms. Malynda Gaines, extension 6533, by March 3, 2007.)

B. Place a banner strip with title, student author(s) and institution where research was conducted on your table top. **DO NOT INCLUDE FACULTY** since they are listed in the abstract as sponsors.

C. Each table top demonstration may be presented by one student only during the judging.

D. The student must remain at his/her table during the judging session.

E. All displays, including charts, models, projector and screen, etc., must be confined to the table top. Signs hanging down from the table toward the floor are not permitted.

F. Displays must not exceed more than 3 feet above the table top.

G. The student MUST SUPPLY his/her own table covering

H. The oral presentation should be no longer than 5-7 minutes in length.

I. Amplified sound devices, heavy office equipment, patients or live models cannot be used. (Sound reproducing devices with individual earphones may be used.)

J. No advertising material may be distributed, nor any material shown which in any way resembles a commercial promotional effort. Drugs mentioned in any presentation generally should be identified by the chemical formula or by generic or common names.

GUIDELINES FOR STUDENT PRESENTATIONS

CONTENT

Why

The audience needs to understand why you are trying to solve this particular problem. The problem should be answered at the appropriate level, meaning that you will be answering this question to people of all types of backgrounds. Some people will be in your specialty, some will not even have a basic understanding of the type of science that you do. The key is to get your message across at all levels. To accomplish this, remove as much jargon as you can without losing content.

What/How

Once you have told the audience why you are doing this work, you can now get into what you have done and how you have done it. This is where you can get into details (data, methods. innovations, results, discussion, etc.) of your work; keep in mind your audience. Details are important, but do not lose your audience.

What Next

Although this can usually be in your summary, it is important to convey that you understand where this research is leading you, and that you understand the implications of your work.

PRESENTATION

Logical Flow

Each presentation needs a logical flow to best present your work. A typical flow might be the title, introduction, explanation of your work, followed by a summary/conclusion. Remember, each section should flow into the next section.

Visual Aids/Impact

Effective figures are the key to a successful presentation. Effectiveness comes in a variety of forms. Sometimes scientists go overboard with colors and slides, as they discover the many intricacies of their computer programs. Keep your presentations simple, each figure with a legend and a caption. Colors can have positive and negative impact. Use them for different symbols, but leave background colors simple. However, do not constrict your visual artistry.

For presentations, part of your visual impact is you – how you dress and present yourself. Keep this in mind as you prepare for your presentation.

Verbal

Articulating your ideas verbally is a key for success in any field and any career. You might be nervous, making it seem difficult to speak. The key to remember is to speak slow and loudly and – RELAX!!! If you are giving an oral presentation, be sure to Practice, Practice, Practice. If you are presenting a poster, run through the key ideas that you want to convey. Remember: RELAX!!!

JUDGING CRITERIA FOR RESEARCH POSTERS

(Original Research – Doctoral, Dental and Medical Students)

Problem/Purpose:

a) significance for general health field
b) clearly stated
c) questions the study design; answers should be clearly defined
d) show originality and creativity

Procedures:

a) provide data based on an adequate sample size
b) use correct and appropriate statistical methods
c) provide valid and reliable data

Presentation and Content:

a) title should be brief and clearly displayed
b) content should reflect the author's familiarity with the specific subject area and related fields
c) materials should be carefully organized to show relationships and smooth transitions between sections (i.e., Introduction, Methods, Results and Discussion)
d) style and language should conform to standard English usage
e) conclusions should be consistent with the evidence

JUDGING CRITERIA FOR RESEARCH PROPOSAL POSTERS

(MSPH Students)

Background:

a) literature and practical observations should be clearly and logically presented
b) information should lead to the question to be investigated
c) questions should be clearly stated; show originality and creativity, have significance for the general health field

Proposed procedures:

a) should be based on an adequate sample size
b) use correct and appropriate statistical methods
c) use techniques which are well understood, demonstrably validated, and provide reliable data

Presentation and Content:

a) title should be brief and clearly displayed
b) content should reflect
c) materials should be carefully organized to show relationships and smooth transitions between sections (i.e., Introduction and Methods)
d) style and language should conform to standard English usage

JUDGING CRITERIA FOR TABLE TOP DEMONSTRATIONS

(Allied Health and Dental Students)

Dental Students

Definition:

A table top demonstration is not an essay, lecture, or exhibit. It must be shown or demonstrated completely in no more than 5 to 7 minutes. A table top demonstration ,may demonstrate a method of oro-facial therapy, showing preventive, restorative, surgical or diagnostic procedures, or it may concern itself with material or devices directly related to dental care. A table top demonstration may also demonstrate a method or result of some research which may not have immediate relevance to clinical dentistry. It may also show the application of one of the basic sciences to the art and science of dentistry. Visual aids may be developed and used. Amplified sound devices, heavy office equipment, patients and live models may not be used.

Presentation and Content:

a) title should be brief and clearly displayed
b) scientific merit clearly stated
c) basic science or clinical research correlation clearly demonstrated
d) show originality and creativity
e) demonstration should reflect the author's familiarity with the specific subject area and related fields
f) demonstration materials should be arranged in a neat manner
g) presentation should be done in a professional manner

Allied Health Students

1. Personal Appearance
   a. Complete Uniform
   b. Grooming

2. Audio and/or Visual Aids
   a. eye appeal/color
   b. appropriateness of choice
   c. lettering/readability/sound
   d. creativity/construction
   e. effective use

3. Delivery
   a. voice
   b. clarity of ideas
   c. presentation appeal/personality/poise/eye contact
   d. familiarity with subject matter

4. Content
   a. quality/level of research
   b. accuracy of information
   c. appropriateness of topic/subject area for clinic
   d. topic appeal/uniqueness

CATEGORIES FOR PRIZE DESIGNATIONS

1. Original Research
   - Dental Students (1st, 2nd, 3rd Place Awards)
   - Medical Students (1st, 2nd, 3rd Place Awards)
   - 1st and 2nd Year Graduate Students (1st, 2nd, 3rd Place Awards)
   - 3rd Year and above Graduate Students (1st, 2nd, 3rd Place Awards)

2. Research Proposals
   - MSPH Students Only (1st, 2nd, 3rd Place Awards)

3. Table Demonstrations
   - Dental Hygiene Students (1st, 2nd, 3rd Place Awards)
   - Dental Students (1st, 2nd, 3rd Place Awards)

4. Grand Prize

AWARDS

1) All participants will receive certificates acknowledging their participation
2) First ($100), second ($75), and third ($50) place awards will be given in each category
3) Grand Prize is the C. W. Johnson Award consisting of $200 and a plaque.