



**ASSOCIATION OF MINORITY HEALTH PROFESSIONS SCHOOLS, INC.
(AMHPS)**

**ANNUAL SYMPOSIUM ON CAREER OPPORTUNITIES IN BIOMEDICAL SCIENCES AND
HEALTH PROFESSIONS
ABSTRACT SUBMISSION OVERVIEW**

Each year AMHPS offers students the opportunity to showcase their scientific acumen, by inviting all students to submit abstracts of their scientific work. The abstracts are reviewed and those accepted are invited to compete in a scientific poster presentation during the Symposium. The abstracts submitted by students should reflect scientific research conducted by students in collaboration with a professional mentor(s) and should focus on the biomedical sciences and/or human health. By allowing students to showcase their research, students are exposed to leaders in scientific fields, gain experience preparing and presenting scientific information to an audience, and are recognized for their achievement.

Using the criteria detailed below, the abstracts will be reviewed and judged by an AMHPS research committee. Students who receive approval for their abstracts will receive additional instructions about developing their posters. Abstract that are not selected to compete in the Symposium poster presentation will receive written feedback on their submission.

Students will compete with peers in their grade category (high school & undergraduate) for first, second, and third place cash awards. The deadline for submitting an abstract for consideration coincides with the Symposium registration deadline.

What is an abstract?

An abstract is a short informative or descriptive summary of a longer report. The abstract should provide readers with a preview or snapshot of the information they will read or hear about later. The primary purpose of an abstract is to “guide the reader.” As a descriptive summary of information, the abstract should briefly state the **problem** (the purpose or the goal), the **methods** used, the **results** and the **conclusion**. Please indicate your role in the project.

GENERAL RULES AND GUIDELINES:

The following rules and guidelines must be reviewed prior to submitting an abstract to the Symposium:

- All abstracts must be submitted in conjunction with the online application by the established deadline.
- Only students can be the presenting authors.
- Only one submission per student is acceptable. If a student submits more than one abstract, all abstracts associated with that student will be rejected.
- All students who have their abstracts accepted must be prepared and available to present their poster at the Symposium and give a three-minute summary of their presentation.
- All abstracts must focus on the biomedical science and/or medicine or human health.

RULES FOR PREPARATION OF ABSTRACTS

- Title
 - The abstract should have a title
 - The project title should be bolded in all capital letters

- Author
 - The abstract should have a minimum of two authors and no more than four authors listed on the abstract. Abstracts with only **one** author will be rejected. Please list authors in the following order:
 - 1) Student Presenting;
 - 2) Research mentor; and
 - 3) Additional investigator associated with research
 - Please use the appropriate abbreviation, **et al.**, to reference contributing authors beyond the recommended four. *Ex. Jessica Smith, John Jackson, Linda Parker, Mary Brown, et al.*
 - The presenting authors' name and institutional affiliations, italicized
 - The presenter's mentor/advisor's name, degree, title, underlined
 - The names, degrees and affiliations of other investigators associated with the research

- The abstract should not exceed **300** words

- The abstract must contain the following:
 - **Title**- Descriptive heading of the research conducted
 - **Background** – Brief summary of specific information on your topic necessary for the reader to understand the details of your research. This section should end with your **hypothesis or a statement of the questions your research intends to answer**

- **Methods** – Brief summary of the research methods used and your role in the project. Specific details about the procedures are omitted unless they are very important
- **Results** – Brief summary of exactly what your results were
- **Conclusion** – Brief summary explaining what the data means and how the data addresses your hypothesis/questions

CRITERIA FOR ABSTRACT SELECTION

All abstracts are reviewed by the Research Advisory Council (RAC) of the Association of Minority Health Professions Schools (AMHPS) according to the listed criteria. The RAC will score all abstracts based on:

- Adherence to established guidelines
 - Did the student explicitly follow the directions pertaining to content and layout?
- Relevancy of research to the biomedical sciences and/or human medicine/health
 - Does the research focus on the biomedical sciences and/or human health?
 - Is the research meaningful?
- Quality of the research design and methodology
 - Is the hypothesis clearly stated?
 - Are the methods clear and appropriate?
- The quality of the written content
 - Are there any typographical, spelling, or grammar errors?
 - Is the information communicated clearly and appropriately for grade level?

EXAMPLES OF ABSTRACTS

Hypertension and Fruit and Vegetable Intake among Youth, 1998-2003. Sophia Student, Danielle Mentor, PhD, Peter Investigator, M.S., Cheryl Teacher, MEd, MPA *Future Scientists High School, Atlanta, GA, Juniper Medical School, Atlanta, GA.*

Background: Many nutrients in fruits and vegetables (F/V), such as dietary fiber, folate, and potassium are associated with reduced risk for cardiovascular disease. It has been shown that consuming fruits and vegetables 3 times per day was associated with lower blood pressure, stroke mortality, heart disease mortality, cardiovascular disease mortality, and all-cause mortality. The purpose of this study is to examine the trends of hypertension (HTN) and F/V consumption for the years 1998-2003 among Non-Hispanic Whites, Non-Hispanic Blacks, Hispanics, and Asian youth. **Methods:** The Youth Behavioral Risk Surveillance System (YRBSS) was used to analyze trends of F/V intake and self-reported HTN among Non-Hispanic Whites Non-Hispanic Blacks Hispanics and Asians youth. F/V intake was defined as eating 5 or more fruits and vegetables per day. HTN was defined by a self-reported question on the YRBSS.

Results: Throughout the five year period, there has been minimal, albeit significant, change in the amount of F/V intake as well as hypertensive status among youth. Asians reported highest intake of 5 F/V. In contrast Non-Hispanic Blacks had the lowest intake of 5 F/V. Correspondingly, Non-Hispanic Blacks had the highest HTN

rates whereas Asians had the lowest HTN rates. Interestingly, Non-Hispanic Blacks had the largest change in their amount of F/V intake. Additionally, Asians had the largest HTN increase over the years although it was not significant. **Conclusion:** Although it is advised that a higher consumption of F/V is protective against cardiovascular disease, the frequency of intake has shown that Non-Hispanic Blacks were the only race/ethnicity to have increased their amount of F/V intake from 1998-2003. However this increase did not seem to affect their HTN status which remained the highest among the different race/ethnic groups. This difference in Non-Hispanic Blacks increased consumption of F/V and increase in HTN should be further investigated.

Use of DNA Sequence Analysis to Support Biomedical Research on Health Disparities in Georgia. William C. Student, Jane Mentor, MD

Peachtree College, Atlanta, GA., Genetic Research Laboratory at Doctor's General Hospital, Atlanta, GA.

Background: The Genetic Research Laboratory at General Hospital was established to assist General Hospital investigators requiring DNA sequence analysis. Originally DNA sequencing was done primarily to analyze DNA plasmid constructs or to determine sequences of clones identified by screening cDNA or genomic libraries. However, the modern sequencing lab has a very different purpose. **Methods:** Using the latest technology we can improve upon the utility of state of the art genetic laboratories. The continuing improvement of polymerase chain reaction (PCR)-based technologies, coupled with the immense flood of data from the Human Genome Project (HGP), now makes it possible to target virtually any human gene segment for analysis. In addition, advances in DNA sequencing technology driven by the HGP ensure that sequencing remains relatively inexpensive. **Results:** As a result, several investigators are using DNA sequencing coupled with nucleotide polymorphism (SNP) analysis to identify candidate genetic biomarkers for various diseases or conditions. Research projects making use of this technology at General Hospital include the analysis of smooth muscle cell receptors involved in hypertension and/or stroke as well as other smooth muscle cell gene candidates for cardiovascular disease; mitochondrial DNS mutations in ovarian and colorectal tumors; the effect of histocompatibility loci on maternal-child HIV-1 transmission; LDH promoter variant in spermatogenesis; and determination of antiretroviral drug resistance in HIV-1 variants. The eventual plan is to build a patient database which can be a resource for General Hospital investigators doing research related to health disparities.

Conclusion: DNA sequence data and SNP data generated at General Hospital, as well as data from oligonucleotide microarray expression analysis and other types of nucleic acid analysis will be archived on dedicated servers in the Hospital Bioinformatics laboratory.

Research, authors, and locations listed above are fictional and included for example only