



FOR IMMEDIATE RELEASE

## **NC-MSEN Hosts the NC Junior Science and Humanities Symposium in Chapel Hill, NC - March 15 and 16, 2009**

Sponsored by:

The Academy of Applied Sciences

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### **NC Junior Science and Humanities Symposium**

This past Sunday March 15<sup>th</sup> and Monday the 16<sup>th</sup> the North Carolina Mathematics and Science Education Network (NC-MSEN) hosted 100 highly motivated ninth through twelfth grade students for the North Carolina Junior Science & Humanities Symposium (NC JSHS) at the Friday Center in Chapel Hill, NC. This exciting annual event recognizes superior student research in science, mathematics and engineering, and selects those local students who will represent North Carolina at the National Symposium in Colorado Springs, CO.

The student participants at this year's Symposium had submitted research papers for preliminary adjudication by a panel of PhD reviewers. From a field of 41 papers, the top ten submissions received invitations to present their research orally during Monday's sessions, after which a panel of PhD judges selected the top five students to attend the National JSHS Symposium at the end of April in Colorado Springs, CO. In addition, three cash scholarships were awarded.

Twenty eight students also were invited to present poster displays summarizing their research; 16 participated in the poster sessions. A panel of reviewers questioned the students individually about their research and findings, in order to award prizes to the top three presentations.

The Symposium opened on Sunday night with a banquet at the Friday Center. Dr. José D'Arruda, Physics Professor at UNC Pembroke, delivered a lively keynote address on current topics in astronomy and astrophysics. Additional remarks were provided by Dr. Rita Fuller, Regional Director of NC JSHS and Associate Director of NC-MSEN; and by Dr. Verna L. Holoman, Executive Director of NC-MSEN.

Other distinguished guests to the Symposium included Lieutenant Colonel (Retired) Albert Mrozek, US Army JROTC, Durham NC; Colonel Reed F. Young, Chief, Technology Integration and Outreach Division, US Army Research Office, Raleigh, NC; and Ms. Ashley Wade, Program Specialist, Youth Services, US Army Research Office, Raleigh, NC.

Bright and early on Monday morning the presentations began. The students who made oral presentations were:

<b>Eric Baeuerle</b>	Providence Day School
<b>Charles Hands</b>	Emsley A. Laney High School
<b>Justin Huang</b>	North Carolina School of Science and Mathematics
<b>Eileen Jang</b>	North Carolina School of Science and Mathematics
<b>Chiraag Kulkarni</b>	North Carolina School of Science and Mathematics
<b>Jennifer Telschow</b>	E.E. Waddell High School
<b>Patrick Tenorio</b>	North Carolina School of Science and Mathematics
<b>Sajith Wickramasekara</b>	North Carolina School of Science and Mathematics
<b>Haoming Xu</b>	North Carolina School of Science and Mathematics
<b>Peter Zhu</b>	North Carolina School of Science and Mathematics

The students who made poster presentations were:

<b>Brandi C. Bugg</b>	City of Medicine Academy
<b>Ajia Burris</b>	UNC Charlotte Center for Mathematics, Science and Technology Education (Harding University High School)
<b>Samanda Emery</b>	UNC Charlotte Center for Mathematics, Science and Technology Education (Independence High School)
<b>Tamir Hasan</b>	North Carolina School of Science and Mathematics
<b>Eli Hornstein</b>	North Carolina School of Science and Mathematics
<b>Tiffany King</b>	UNC Charlotte Center for Mathematics, Science and Technology Education (Independence High School)
<b>Ashley Carmen Kuan</b>	UNC Charlotte Center for Mathematics, Science and Technology Education (Olympic High School)
<b>Giovanni Leon</b>	East Wake School of Health and Sciences
<b>Kevin Li</b>	North Carolina School of Science and Mathematics
<b>Aswin Lingachary</b>	North Carolina School of Science and Mathematics
<b>Dalana Mack</b>	Josephine Dobbs Clement Early College High School
<b>Zaria Shields</b>	Hillside High School
<b>Julian Tucker</b>	UNC Charlotte Center for Mathematics, Science and Technology Education (Harding University High School)
<b>Chanelle Whitehurst</b>	E.E. Waddell High School
<b>Juan Wilkins</b>	Hillside High School
<b>Grant Wilson</b>	Hillside High School

After lunch and a tour of the UNC Chapel Hill campus, awards were presented at the closing banquet. Dr. Harold Martin, Senior Vice President of Academic Affairs, extended greetings from the UNC General Administration. Featured speaker Dr. Jag Sankar, Distinguished University Professor and White House Millennium Researcher at NC A&T University, gave an inspiring survey of the ways his Revolutionary Metallic Biomaterials initiative is blurring the boundaries of scientific disciplines, paving the way for a new era of research and development.

Finally, Drs. Martin and Sankar joined Drs. Fuller and Holoman in presenting the awards. The students recognized for outstanding achievement in the oral presentation of research, and given expense-paid trips to represent North Carolina at the National JSHS Conference are:

First Place, \$1500 scholarship:

**Eileen Jang**, North Carolina School of Science and Mathematics – “Natural Organics Control Aggregation of Mercury Sulfide Nanoparticles in Freshwater Systems”

Second Place, \$1000 scholarship:

**Patrick Tenorio**, North Carolina School of Science and Mathematics – “Simple Quadratic Fields”

Third Place, \$500 scholarship:

**Peter Zhu**, North Carolina School of Science and Mathematics – “Rational Bioengineering of LadA Monooxygenase in Polyethylene Degradation Pathway”

Fourth Place:

**Justin Huang**, North Carolina School of Science and Mathematics – “Transforming E. Coli to produce  $\beta$ -Galactosidase for Measuring the Efficiency and Yield of  $\beta$ -Galactosidase Activity”

Fifth Place:

**Sajith Wickramasekara**, North Carolina School of Science and Mathematics – “A Functional Genomic Framework for Chemotherapeutic Drug Improvement and Identification”

The students recognized for outstanding achievement in poster presentation are:

First Place:

**Kevin Li**, North Carolina School of Science and Mathematics – “Mechanisms of Transmembrane Protein Sorting in Lens Cell Membranes”

Second Place:

**Zaria Shields**, Hillside High School – “The Synthesis of S-Dichlorovinylmercapturic Acid”

Third Place:

**Ajia Burris**, UNC Charlotte Center for Mathematics, Science and Technology Education (Harding University High School) – “Varying Levels of Hormone Sensitive Lipase in Cachectic Rats”

A \$500 Teacher Award was presented to Dr. Myra Halpin of the North Carolina School of Science and Mathematics, in recognition of excellence in mentoring NC JSHS participants.

JSHS was formed as a national organization in 1958, with the goal of promoting original research and experimentation in the sciences, engineering and mathematics at the high school level, and to publicly recognize students for outstanding achievement, ultimately widening the pool of trained scientific and engineering talent prepared to conduct research and development vital to our nation. This year’s Symposium comes at a time when national focus on the competitiveness of our education system is incredibly high; President Obama spoke explicitly to the cause in his Congressional Address a few short weeks ago, urging that new standards of excellence and achievement be set.

NC-MSEN is an enthusiastic partner to JSHS, hosting this symposium for the eleventh year. Celebrating its 25<sup>th</sup> anniversary this year, NC-MSEN provides statewide leadership for the improvement of mathematics and science teaching and learning, with two goals: strengthening the quality and increasing

the size of the teaching base in science and mathematics education; and increasing the pool of students who graduate from North Carolina's high schools prepared to pursue careers that require math and science. Housed in the UNC Center for School Leadership Development (CSLD), a division of UNC General Administration, NC-MSEN oversees pre-college and professional development programs at a dozen sites across the State.

For more information about the Junior Science and Humanities Symposium, visit [www.jshs.org](http://www.jshs.org). For more information about NC-MSEN, visit [www.unc.edu/depts/msen](http://www.unc.edu/depts/msen).

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*The North Carolina Mathematics and Science Education Network (NC-MSEN) is a constituent program in the UNC Center for School Leadership Development. It has two primary components: teacher professional development and a pre-college program. The purpose of the Pre-College Program is to broaden the pool of high school graduates who are prepared to pursue college/university majors that lead to careers in mathematics, science, technology, engineering, and teaching.*

*Please visit [www.unc.edu/depts/msen](http://www.unc.edu/depts/msen) for more information.*