



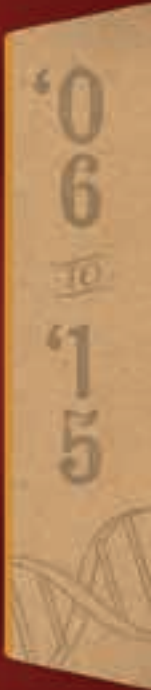
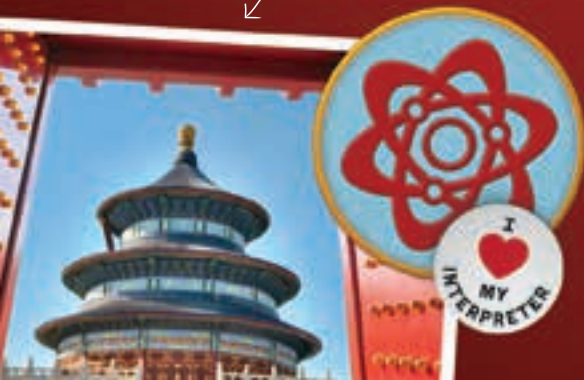
Great Wall of China!



THE
NORTH CAROLINA INTERNATIONAL
SCIENCE CHALLENGE

科技

Temple of Heaven



WELCOME *TO* BEIJING



Dr. Sam Houston
President and CEO
North Carolina SMT Center

Amazing things can happen when connections are made.

In 2005, Dr. Fran Nolan, then the director of the Grassroots Science Museum Collaborative, visited Beijing. He had met Lee Han earlier in the year and she invited him to visit the Beijing Youth Science Creation Competition that is an annual science event put on by the Beijing Association of Science and Technology. In 2006, Dr. Nolan and a delegation of three North Carolina students and several leaders in N.C. education traveled to Beijing to take part in the activities with the students sharing their research.

This year, 2015, marked our tenth trip to the BYSCC. Nearly 40 students have presented their own research to thousands of Chinese citizens. The BYSCC also includes delegates from Australia, Russia, Ukraine, Czechoslovakia, South Africa, and others. It is a unique

opportunity for students and delegates to engage with their peers from around the world. Each year the students remark about how they and student science research are celebrated in Beijing.


In order to determine student participation to attend the BYSCC, the SMT Center created the NC International Science Challenge. The Challenge is open to high school students in North Carolina who are conducting their own research. The competition begins with a research paper that is reviewed by a panel of scientists or engineers. Finalists for the trip to Beijing give oral presentations again judged by a panel of scientists, engineers, and educators. Students have submitted research in engineering, technology, environment, and biomedicine. All the successful students started by asking a research question they wanted to passionately pursue.



In April 2006, Dr. John Hardin and Dr. Nolan penned an article for the SMT Center newsletter that outlined three lessons learned from their travel:

- Science and Education are about discovering and sharing information; as a result, they flourish when given the stimulus and freedom to grow.
- Each country has its own unique strengths and weaknesses relative to science education; by working together and sharing our experiences, both countries can learn and benefit.
- We live in an increasingly dynamic, interdependent, and technology-driven world; in such a world, surviving requires responding to change and working with others to produce new knowledge that is shared for the good of all.

The idea that STEM = Strategies that Engage Minds® resonates. The students that take part in the NC International Science Challenge are tackling real problems. Their science is relevant. These students are thinkers. They can create solutions. Many of them are about to embark on a collegiate career, some are already beginning their careers, but all of them have already established a foundation from which build. We are proud that for the past decade we have been able to provide this opportunity for the students, as well as the legislators, educators, and others of North Carolina.



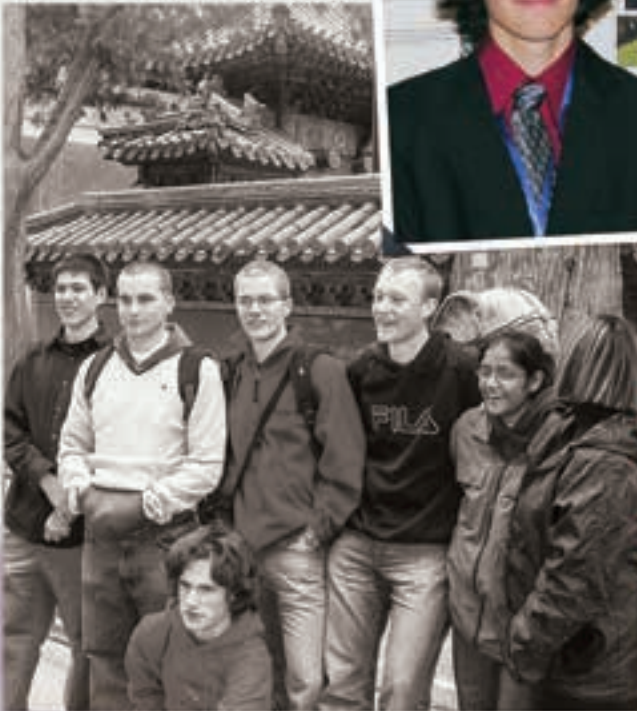
MEET *THE* STUDENTS

Justin Russell CROWDER

Northwest Guilford High School
Greensboro, N.C.
Guilford County

Project Title:

Iontophoresis Powered by Quartz Piezoelectricity



Andrew Campbell ROWLAND

Asheville High School

Asheville, N.C.

Buncombe County

Project Title:

*Study of the Principles and Design of
Monopropellant Decomposition Rockets*



Samuel E. WELLS

Northwest Guilford High School
Greensboro, N.C.
Guilford County

Project Title:

*Effects of Several Cooling Methods on
Computer Processor Overclocking*



Andrew BERNARD

Northwest Guilford High School
Greensboro, N.C.
Guilford County

Project Title:

*Effect of altitude changes on microinvertebrate
populations at Mount Mitchell*



Sarah DAWKINS

Northwest Guilford High School

Greensboro, N.C.

Guilford County

Project Title:

Should Azomonas insignis be reclassified?

Currently:

After graduating with a Bachelors of Science degree in Biology and Chemistry from East Carolina University, Sarah is now a Technical Account Specialist at Ecolab in Greensboro, North Carolina.

"My advice for students going on this trip would be to soak it in. Take as many pictures as possible, buy lots of souvenirs, and try to make as many friends as you can. I would also keep an open mind and enjoy every minute of it. This trip is a trip of a lifetime that you will look back on forever. You work hard to get the opportunity to go on this trip and you should enjoy every minute of it."



Eric LUIBRAND

Southwest Guilford High School

Greensboro, N.C.

Guilford County

Project Title:

Modelling Stormwater Runoff with CITYGreen

Currently:

Eric graduated from NCSU in mechanical engineering and is now in the Edison Engineering Development Program (EEDP) at GE Aviation in Cincinnati, Ohio. In his current role, he is the design engineer for high pressure turbine airfoils. As part of the EEDP program, he is also working on his masters in mechanical engineering from the University of Cincinnati.

"I learned a lot about the culture in different countries. Especially how there seems to be a huge push for STEM research, education, and jobs. I was particularly surprised by the STEM focus in China."



Kyle O'DONNELL

Southwest Guilford High School

Greensboro, N.C.

Guilford County

Project Title:

Effect of temperature changes on the frequency of sounds produced by certain mallet instruments

Currently:

After graduating from NCSU with a BS in Textile Technology and Western Kentucky University with an MBA, he now runs his own textile manufacturing company (OnlyFootprints.us).

"Since this was my first time abroad, I use to think the USA was made up of many different people. Now, I believe we share distinctly American traits."



Mark HENDRICK

Northwest Guilford High School
Greensboro, N.C.
Guilford County

Project Title:

*Development of Ultralight Materials for
Use in Micro-Air Vehicle Wings*



Kyle O'DONNELL

Southwest Guilford High School

Greensboro, N.C.

Guilford County

Project Title:

*Comparing the Effectiveness of
Wind Turbines & Tidal Turbines*

Currently:

After graduating from NCSU with a BS in Textile Technology and Western Kentucky University with an MBA, he now runs his own textile manufacturing company (OnlyFootprints.us).

"Looking back, my hard work and research for this high school science competition exposed me to "real world" research methods and presentation skills. This culminated in undergrad and graduate research awards, along with \$35,000 to start my own company."



Melanie WILEY

N.C. School of Science and Mathematics
Durham, N.C.
Durham County

Cummings High School
Burlington, N.C.
Alamance County

Project Title:

*The Effects of Reaction Conditions on
Alexa Fluor Labeling of α -Synuclein*

Currently:

After graduating with a Bachelors of Science in
Biochemistry and Molecular Biology, Melanie is
currently a Research Associate at Duke University.



Brandon YOUNG

William G. Enloe High School

Raleigh, N.C.

Wake County

Project Title:

Finding Activators for Procaspase-3 Protein

Currently:

After graduating from the University of Maryland Baltimore County as a Biology major in 2013, Brandon chose to attend the Medical University of South Carolina's M.D./Ph.D. program. He is currently in his second year of medical school and actively studying for the board exam. He begins his Ph.D. work in structural biology the summer of 2015.

"I learned that the need for scientific advancement is universal. This trip showed me that many people across the globe share a passion for science and want to not only contribute to the field but also see it help and save lives of others."



Eileen Kao JANG

N.C. School of Science and Mathematics
Durham, N.C.
Durham County

Green Hope High School
Cary, N.C.
Wake County

Project Title:

*Natural Organics Control Aggregation of Mercury
Sulfide Nanoparticles in Freshwater Systems*



Shara Katherine WEAVER

JD Clement Early College High School
Durham, N.C.
Durham County

Project Title:

*The Effect of Activation in the Brain's Reward Pathway
on Dopamine Concentrations and Motivated Behavior*



Brandon YOUNG

William G. Enloe High School

Raleigh, N.C.

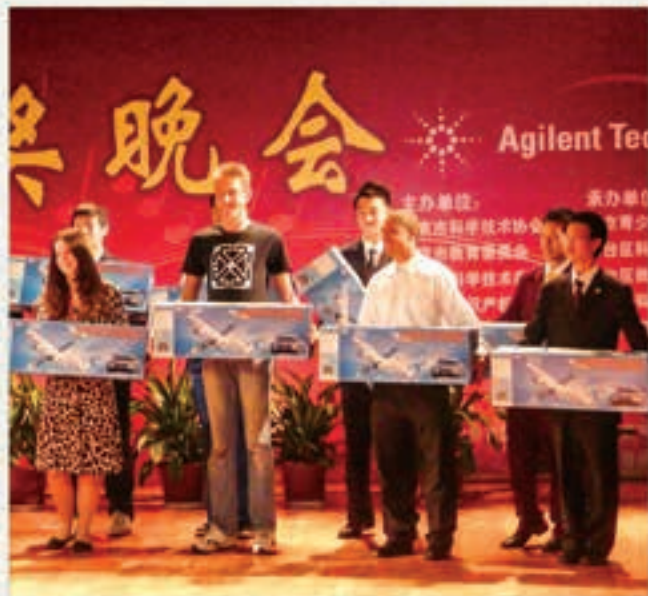
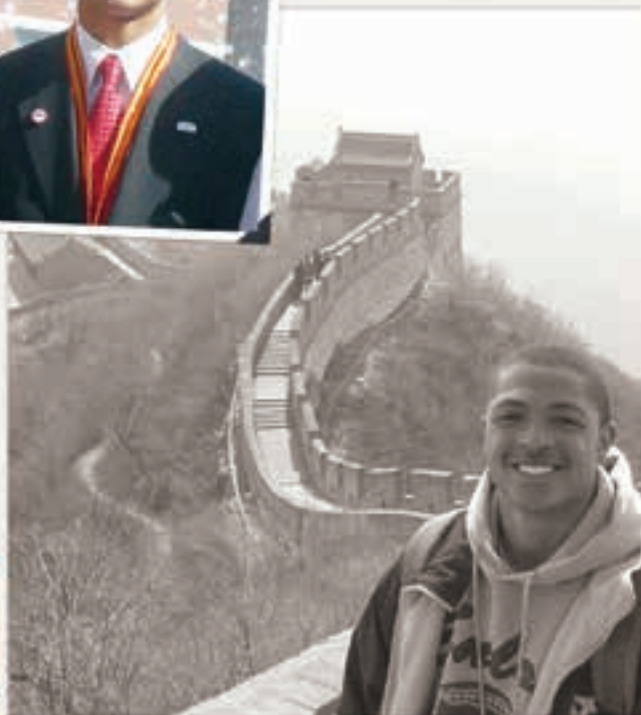
Wake County

Project Title:

Finding Activators for Procaspase-3 Protein

Currently:

After graduating from the University of Maryland Baltimore County as a Biology major in 2013, Brandon chose to attend the Medical University of South Carolina's M.D./Ph.D. program. He is currently in his second year of medical school and actively studying for the board exam. He begins his Ph.D. work in structural biology the summer of 2015.



Darren Feng ZHU

N.C. School of Science and Mathematics
Durham, N.C.
Durham County

Ronald Wilson High School
Pfafftown, N.C.
Forsyth County

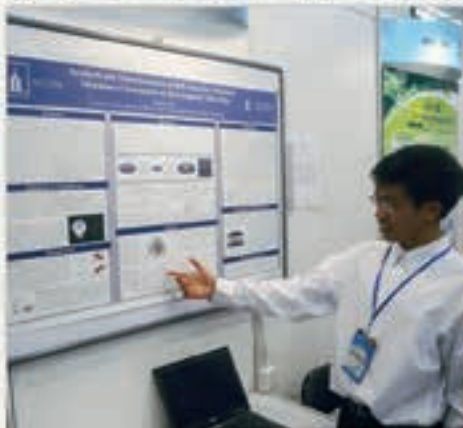
Project Title:

Synthesis and characterization of self-assembled monolayer formation of isocyanides on ferromagnetic thin films

Currently:

Darren is currently working on a biotech startup to commercialize cancer diagnostics technology.

"My fondest memory of the Beijing trip was interacting with the student delegates from other countries."



Shalini CHUDASAMA

N.C. School of Science and Mathematics
Durham, N.C.
Durham County

Wakefield High School
Raleigh, N.C.
Wake County

Project Title:
*Heparin Forms Macromolecular Complexes with
Protamine and Lysozyme*

Currently:
Shalini graduated from UNC with a major in Business Administration and a minor in Chemistry, and started working at Bain and Company as an Associate Consultant last fall.

"I learned not just about honey bees, underwater robotics, and cancer receptors, but many phrases in Mandarin from my interpreters, as well as ancient Chinese design and architecture at the Beijing Science Museum!"



Victoria Monique JONES

Wake Early College of Health and Sciences
Raleigh, N.C.
Wake County

Project Title:

*Modification of Transfer Ribonucleic Acid (tRNA):
The Binding of tRNA by YrdC, a Putative
Threonyl-tRNA Transferase*

“Presenting research to an international audience was an amazing opportunity. I'm glad we were provided with Chinese translators because of the difficulty explaining some concepts. I did note that many of the delegates were not so interested in our projects solely, but in its effects on humanity and the 'big picture.'”



Victoria MELBOURNE

Wake Early College of Health and Sciences
Raleigh, N.C.
Wake County

Project Title:

*The Effect of a Residue 61 Mutation on the
Structure of Ras GTPase*

*"Presenting my work in front of an international audience
was amazing. It was great to watch the facial expressions
of the other students. Most were surprised that a high
school student was conducting cancer research."*



Chelsea SUMNER

Knightdale High School

Knightdale, N.C.

Wake County

Project Title:

The Effect of Catalase on the Oxidation of Hydrogen Peroxide at Carbon Fiber Microelectrodes Using Fast Scan Cyclic Voltammetry

Currently:

Chelsea is a senior at Campbell University, where she will graduate with a major in Clinical Research and double minors in Spanish and Biology. She is working as a Clinical Operations Intern at PharPoint Research, Inc in RTP and loving it. In the fall, Chelsea will start the next chapter of life at UNC Eshelman School of Pharmacy.

"The trip was absolutely fantastic but the people made it life changing."



Jenifer Alexandra BROWN

N.C. School of Science and Mathematics
Durham, N.C.
Durham County

Cedar Ridge High School
Hillsborough, N.C.
Orange County

Project Title:

*Modification of Cotton Fabric by Silane
Coupling Agents, and Assessment for
Use in Oil Spill Remediation*

"After reflecting on today's events, I'm very inspired by how much people in China honor their students for doing well in science. In North Carolina, the award ceremonies for science fairs aren't nearly as exciting as those in Beijing. It was cool to see how much these students enjoy what they are doing and how excited they are to share their work with others."



Melissa CHAN

William G. Enloe High School

Raleigh, N.C.

Wake County

Project Title:

The Effect of Solvent on the Interactions of Polyacrylonitrile with Single-walled CNT's for the Development of Ultra High Performance Fibers

Currently:

Melissa is a senior at Harvard, concentrating in Molecular and Cellular Biology.

"I gained a lot of understanding for what the research landscape is in China, which ultimately motivated me to become involved with Chinese education. Three years after joining the Beijing Youth Science Creation Competition, I helped start the Harvard China Thinks Big Conference and Competition."



Si-Yi Ryan LEE

N.C. School of Science and Mathematics

Durham, N.C.

Durham County

Ardrey Kell High School

Charlotte, N.C.

Mecklenburg County

Project Title:

Developed technique to visualize protein folding pathways, allowing for easy identification of intermediate helices and their transformations during protein folding

"I realized the grave role of interpreters in world relations. I felt that people should start selling pins that say 'I love my interpreter.' I would buy one."



Angela Q. ZHANG

N.C. School of Science and Mathematics

Durham, N.C.
Durham County

Chapel Hill High School

Chapel Hill, N.C.
Orange County

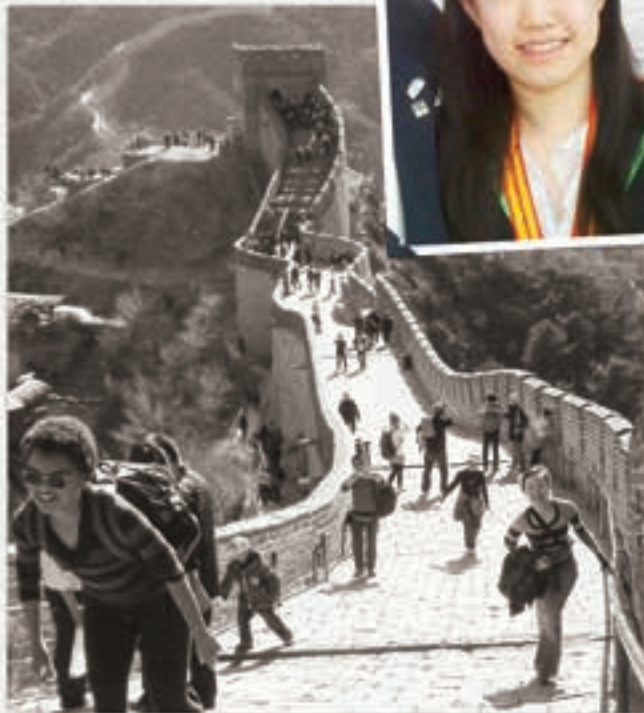
Project Title:

The study of the immunological interactions between Escherichia coli and human breast milk

Currently:

Angela is currently a senior at MIT, about to complete a double major in Biology and Biological Engineering. She will be pursuing an M.D./Ph.D. dual degree immediately following graduation.

"While I expected to meet many other students on the trip, I did not expect to bond with the translators as much. Our translator, Aaron was one of the kindest and most enthusiast people I met on the trip."



Alyssa FERRIS

N.C. School of Science and Mathematics
Durham, N.C.
Durham County

Farmwood Academy
Raleigh, N.C.
Wake County

Project Title:

*The effect of epigenetic modifications on
active and inactive centromeres*



Ivan KUZNETSOV

William G. Enloe High School

Raleigh, N.C.

Wake County

Project Title:

*Development of Cold Plasma Textile for
Filtration and Decontamination Applications*

Currently:

Ivan Kuznetsov is a junior at Johns Hopkins University majoring in Biomedical Engineering and Applied Mathematics & Statistics. He is a recipient of a JHU Charles R. Westgate Scholarship (full tuition for the undergraduate study) and of a National Goldwater Scholarship.



Greeshma SOMASHEKAR

N.C. School of Science and Mathematics
Durham, N.C.
Durham County

Green Hope High School
Cary, N.C.
Wake County

Project Title:

Inter-alpha-trypsin inhibitor heavy chain 4: functional effects on the inflammatory response to lung injury

"The opening ceremony was unlike anything I've ever seen before... the Chinese really do treat their young scientists like rock stars."



Vipul VACHHARAJANI

N.C. School of Science and Mathematics

Durham, N.C.

Durham County

Reynolds High School

Winston-Salem, N.C.

Forsyth County

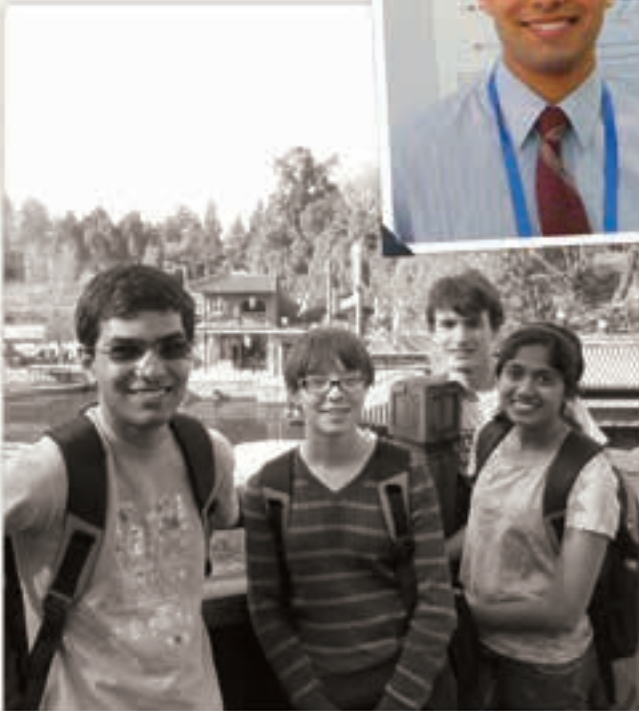
Project Title:

The RNA-Binding Protein HuR Binds and Stabilizes pre-mRNA in vivo

Currently:

Vipul is currently working on his Bachelors of Science in Mathematics and Biological Engineering at MIT.

"I was struck by the number of languages represented among the Chinese translators. In the USA, we're mandated to learn one foreign language, and most people don't retain fluency past high school. By comparison, these students were completely fluent in three languages."



Forrest ASHWORTH

N.C. School of Science and Mathematics
Durham, N.C.
Durham County

Apex High School
Apex, N.C.
Wake County

Project Title:

*Genetic Dissection of the Galanin Expressing
Population of the Locus Coeruleus*

"A Chinese student came and talked to me about my project. I thought he understood the project and asked better questions than did most of the formal judges. The project he was presenting at the competition was not even in a related field—it was botany."



Dhruv JAIN

William G. Enloe High School

Raleigh, N.C.
Wake County

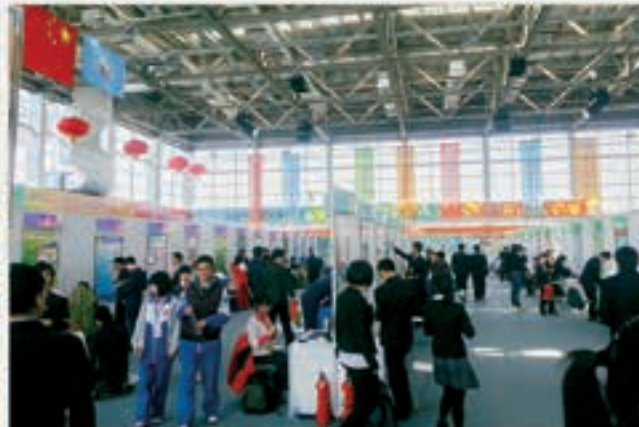
Project Title:

Development of Glucose Sensors Composed of Soft Materials

Currently:

Dhruv is currently studying as a sophomore in the Jerome Fisher Program at the University of Pennsylvania pursuing dual degrees in business and material science engineering.

"While in Beijing, I made some of the strongest friendships that I ever have found in my life, both with the delegates from NC as well as with students from abroad. Even to this day, I'm still friends from the conference that I met from all of the world including Italy, Denmark, and Germany!"



N.C. School of Science and Mathematics
Durham, N.C.
Durham County

William G. Enloe High School
Raleigh, N.C.
Wake County

Project Title:

*Electrodeposition of Group IV Chalcogenide
Thin Film Solar Cells*

*"Award announcements were
alternated with performances.
We saw traditional Chinese
orchestras, dances, poetry
slams, comedy skits, and
choruses, all in a whirlwind
of color and sound."*



Edward ZHAO

N.C. School of Science and Mathematics
Durham, N.C.
Durham County

Panther Creek High School
Cary, N.C.
Wake County

Project Title:

*Premotor Symptoms of Parkinson's Disease:
A Systematic Meta-analysis*

Currently:

Edward is pursuing a degree in biochemistry at University of Pennsylvania and developing skills to succeed in the future as a physician or researcher.

"Of the high school students I talked to, it seemed that many of them wanted to study in America or other foreign countries at some point in the future, whether it is college or graduate school."



Alec ARSHAVSKY

East Chapel Hill High School

Chapel Hill, N.C.

Orange County

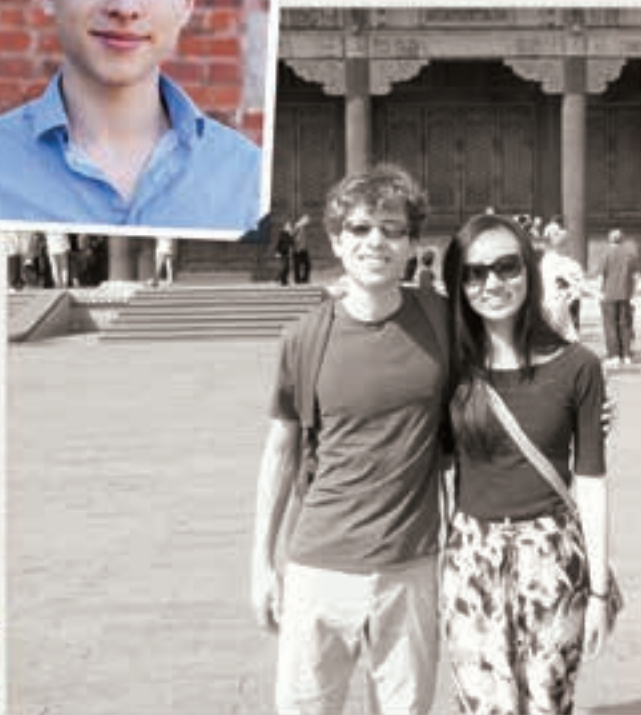
Project Title:

*Automatic Characterization of Donor Tissue for
Corneal Transplantation Surgery*

Currently:

Alec is currently studying Electrical Engineering at Stanford University and is a Research Assistant at Duke University Eye Center.

"One of the coolest and more important things to get out of the trip is just the exposure to other cultures, especially the less western ones, so do try to talk to the Chinese finalists in the exhibition hall about their projects and lives."



Emily ASHKIN

Providence Day High School

Charlotte, N.C.

Mecklenburg County

Project Title:

*MUC1 as a biomarker for TGF- β 1 inhibition:
Investigating the role of MUC1 in the switch of TGF- β 1
function from a tumor suppressor to a tumor promoter
in pancreatic ductal adenocarcinoma*

Currently:

Emily is completing her senior year of high school at Providence Day School. Recently, Emily was named a finalist in the Intel Science Talent Search. She plans to attend Rice University in Houston, Texas, majoring in Biochemistry and Cell Biology with a minor in Hindi, while continuing her research at M.D. Anderson Cancer Center.

"As an American scientist, my perspective is unique, and the opportunity to compare perspectives and passions with other students from all over the world was a priceless experience."



Anne Blythe DAVIS

Lake Comfort School

Swan Quarter, N.C.

Hyde County

Project Title:

*Determining the Effects of Phosphorus Interception
by Aluminum Potassium Sulfate On Cyanobacteria
Concentrations in Lake Mattamuskee*

Currently:

Anne is currently a full-time junior at Stanford Online High School. She is continuing research on the chemistry of Lake Mattamuskeet and recently completed a study that measured the effects of varying conductivity on phytoplankton concentrations in the presence of nitrogen and phosphorus.

"Drink plenty of water, have a solid elevator speech, only wear comfortable shoes, be social, your translators are your best friends, take a lot of pictures, talk to people and learn about what they're doing!"



Maggie PAN

N.C. School of Science and Mathematics

Durham, N.C.
Durham County

Providence High School

Charlotte, N.C.
Mecklenburg County

Project Title:

*Optimizing the Synthesis of Flat-Sheet Phase
Inversion Polyvinylidene Fluoride (PVDF)
Membranes for Membrane Distillation*

Currently:

Maggie is currently a freshman at MIT. Maggie is one of the organizers for the annual HackMIT event, a marathon coding event that brings together 1000+ hackers from all over the country (and Canada!), as well as sponsors from top companies like Google/Facebook/Dropbox/Bloomberg, etc. for a weekend of innovation every fall.

*"I learned that it's indeed possible to build lasting
friendships out of just a week together!"*



Rachel COHN

N.C. School of Science and Mathematics

Durham, N.C.

Durham County

Project Title:

*Emerging Marine Diseases: Variation in Response to Climate Change Conditions Among Strains of *Serratia marcescens**

Currently:

Rachel is a senior at NCSSM.



"The past three days of setup, judging, and ceremony have flown by, but by far, my favorite part was the last morning, being swarmed by school children interested in science!"



Peter LUO

William G. Enloe High School

Raleigh, N.C.

Wake County

Project Title:

*Characterization of Human Genetic
Variation Affecting Salmonella invasion*

Currently:

Peter is a senior at Enloe.

*"The Great Wall and the Silk Street shopping center were
loads of fun, and each of us left the awards with either
medals or cash or both."*



Megan MILLER

Western Alamance High School

Elon, N.C.

Alamance County

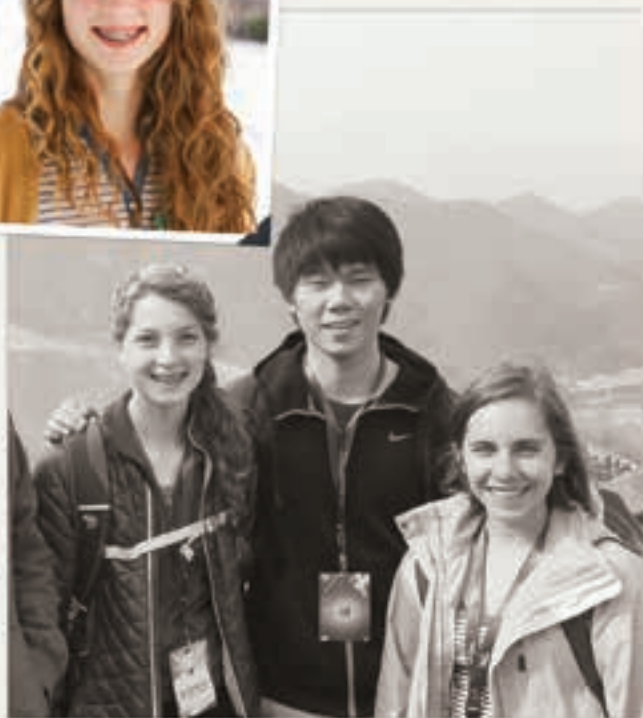
Project Title:

*Fuel Efficient Passive Flow Control
for Class 8 Tractor Trailers*

Currently:

Megan is a junior at Western Alamance High School.

*"I have made such amazing memories and friends during
these days in Beijing and I know I will never forget them."*



Jenny WANG

N.C. School of Science and Mathematics
Durham, N.C.
Durham County

Project Title:

*Fully Automated Computational Brain Image
Segmentation for Cross-Modality Analysis of
Neurodegenerative Diseases*

Currently:

Jenny is a senior at NCSSM.



OBSERVATIONS FROM BEIJING

Russ Campbell

Burroughs Wellcome Fund



Across Weiming Lake, the Boya Pagoda at Peking University rises above the campus landscape. Built as a water tower in 1924, Boya Pagoda's literal translation is "elegant knowledge." Elegant is a word I hear from our translators often. It is a trait they admire. In English, elegant can be defined in two ways. The first is the traditional use of the word, pleasingly graceful and stylish in appearance or manner. Think Audrey Hepburn.

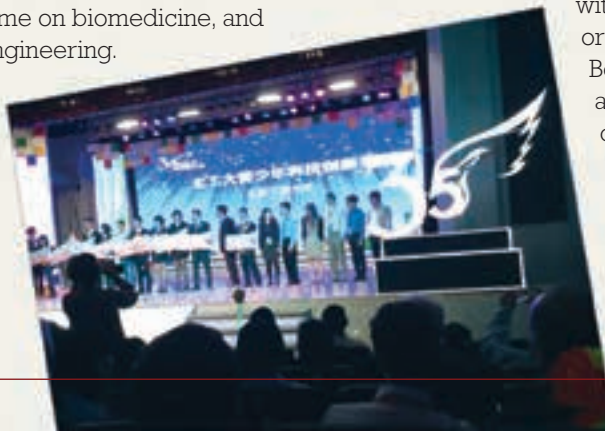
The second applies to a scientific theory or the solution to a problem that is pleasingly ingenious and simple. This elegance is the reason why we are in Beijing. A U.S. delegation from North Carolina, consisting of four high school students, two organizers, and three invited guests, are here for the 35th Annual Beijing Youth Science Creation Competition (BYSCC) being held at Beijing Middle 101 in the Haidian District. The challenge focuses on creating projects and research that intend to answer societal problems, and the delegates are here to both compete and observe.





A North Carolina delegation has been participating in the BYSCC since 2006. In the gymnasium at Beijing Middle 101, throngs of students, ranging in ages from elementary to high school, gather around posters and talk to the student scientists. In this gymnasium are gifted students from all over the world who will go on to be the leaders of scientific enterprise, the champions of science education, and from their enthusiasm, there's a palpable energy that circulates throughout the room/gymnasium/competition. The students wander from poster to poster. They talk science with other students from other countries including Russia, Ukraine, Australia, Denmark, Czechoslovakia, and South Africa. They exchange ideas, business cards, and social media information. Science builds on collaboration, which can begin with a connection in this gym.

At the BYSCC, nearly 2000 high school students from Beijing and more than a dozen countries showcase their research and inventions. The efforts of the student participants reflect relevant issues. Some focus on environmental issues, some on biomedicine, and others on efficiency in engineering. They dare to pose elegant solutions.



A significant majority of the projects focus on environmental issues such as climate change and air pollution. Air pollution is a critical concern in China, as the country leads the world in coal consumption, fueled by its meteoric growth. Student research projects included devices for measuring air quality, a robot that purified air, and a window designed to separate the outside smog-filled air with clean indoor air. During our weeklong visit, we saw only hints of blue sky, mostly hidden behind a thick curtain of pollution.

There's a lavish award ceremony that features a traditional shadow puppet show, music, and dancing. In our group, Megan and Rachel take home a prize for excellence in innovation. Rachel and Peter receive second prize recognition for excellence. The following day Jenny takes home first place for excellence for her research.

The celebration of student accomplishments is enviable at BYSCC. For the Chinese students in particular, there's a lot on the line. Some of the awards come with acceptance into a university or college. Dignitaries from the Beijing Association of Science and Technology and other public officials attend the ceremonies. The audience is loud, cheering on their friends when they are



escorted to the stage to receive their awards and pose for pictures from the small army of photographers attending the event. The event demonstrates that academic success can be celebrated at the same level at which we celebrate our athletes and celebrities.

The final day we are treated to a visit to the Great Wall of China at Badaling. We are walking on one of the great wonders of the world, portions of which are more than 500 years old. It's an engineering marvel that winds through the mountains that border northern China.

It is not lost on me that the wall was meant to keep others out, a symbol of a great divide and isolation. But we are here through the connections of science and the ability to imagine a future that cuts across borders and walls to help solve the greatest concerns of humanity.

Earlier in the week, we toured the Imperial Garden with its gnarled, ancient trees and natural stone sculptures of weathered white rock. The students,

Jenny, Megan, Peter, and Rachel, snapped pictures of themselves at the Hall of Imperial Peace. Our three translators, college students at Beijing universities, took in the sights from nearby.

"I really like this place," said Joan, a translator from Beijing Normal University. "It's full of stories."

The week was full of stories. Stories of individual students, told this week through science, the best of which demonstrate elegant solutions to overcome obstacles. To use science and technology to establish solutions based on a pragmatic need is a powerful tool and one that is celebrated at BYSSC. This celebration is not about a singular week, or project, or ceremony. This is an experience that will further fuel a passion for research and empathy to help others, and generate

a lifetime journey of seeking elegant knowledge that creates global change.





PARTICIPANTS

Adult Attendees to Beijing Youth Science Creation Competition '06-'15

2006

Rice Strange
Senator Kay Hagan
Jeanette Hagan
Rick Basom
Nancy Sung
John Hardin

2007

Todd Boyette
DeeDee Whitiker
Jeff Smith
Bev Sanford
Trisha Willoughby

2008

Senator A.B. Swindell
Senator Debbie Clary
Ruth Haas
Karen Schafer
Karl McKinnon

2009

Ira Trollinger
J.B. Buxton
Melissa Bartlett
Karen Giroux

2010

Lew Ebert
Representative Maggie Jeffus
Representative Susan Fisher
Representative Joe Tolson
Todd Boyette
Betsy Grant

2011

Margaret Arbuckle
Ken Mayer
John Tate
Lisa Rhoades

2012

Kimberly Reynolds
Mark Sorrells
Karl Rectanus
Sharon Morrissey

2013

Steve Hill
Jeff Warren
Jan Webster
Jeff Cox

2014

Craig Horn
Jeni Corn
Glenn Kleiman
Jim Simpson

2015

Russ Campbell
Patrick Miller
Angela Quick



Dr. Fran Nolan, formerly the executive director of the Grassroots Museum Collaborative, helped establish the partnership with the Beijing Association of Science and Technology a decade ago. Since 2006, he has attended each Beijing Youth Science Creation Competition along with his wife, Robin Bergeron-Nolan, a health educator with Guilford County Schools. Fran and Robin oversee the logistics for the trip and ensure that all goes well. In 2015, Fran was recognized by the BYSCC with a Special Merit Award. It is his dedication to this partnership that has enabled North Carolina students and educators a glimpse into science education in China.





Signing of Memo of Understanding with the Beijing
Association of Science and Technology

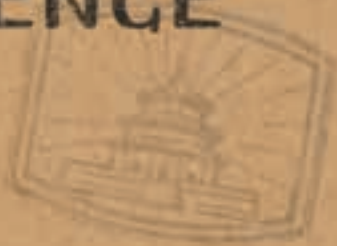
SMT Center Board of Directors Meeting

27 April 2010 at the Burroughs Wellcome Fund
Research Triangle Park, NC



North Carolina delegation visit the
Zhoukoudian Peking Man Site in 2006

THE
NORTH CAROLINA INTERNATIONAL
SCIENCE CHALLENGE





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