



President's Letter

Report by: Dr. Jim Fuller, NCAS President, Vice President IntelliGENETICS LLC

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*What's going on in
the North Carolina
Academy of Science:*

- Letter from our new President, Jim Fuller
- CANCAS Fall Workshop Announcement
- Yarbrough Award Winners
- Recognizing Dr. Frank Schwartz

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I hesitated when asked to run for President of the North Carolina Academy of Science. I was already over committed, did I have the time? Like many of you I was already volunteering in many commitments. I have a full time job and busy family. It always seems like there are not enough hours in the day and I have learned that saying “no” to new commitments is sometimes necessary to keep balance in my life. But I ended up saying “yes” and was elected.



I agreed to run for President of NCAS because of the importance of what NCAS does. Every aspect of our lives is touched by science. Medicine keeps us healthy and living longer. Transportation gets us where we are going faster than ever before. We carry around cell phones in our pockets and can talk instantly to people around the globe. Yet science is also taken for granted. It is so common that many people are losing the sense of wonder at the things we have achieved and what we can achieve in the future. That sense of wonder is what got me interested in science as a child. The writer Arthur C. Clarke's third law has always stuck with me. “Any sufficiently advanced technology is indistinguishable from magic.” It was the magic of science that led me to where I am today.

NCAS is a special organization. We are a multi-disciplinary organization that takes that spark of interest seen in young scientists and helps it to grow. When I attend the NCAS annual meeting, I see the student that I used to be. Students who love science. We have a phenomenal body of professional scientists and students in the state of North Carolina, but it is those students who are the future. Scientists have a responsibility to help mentor future scientists. The members of NCAS are doing just that. NCAS is a multi-disciplinary group that is on the front lines of teaching and mentoring young scientists. But NCAS is a volunteer organization in an age where everyone is over committed. A multi-disciplinary organization fighting the growing trend of scientists to become more and more specialized. I volunteered and continue to do so because NCAS and all those young future scientists needed my help. Because of the importance of the mission of NCAS. I made it a priority and found the time needed. But NCAS needs the help of all its members. I ask all of you to find a little extra time and to help NCAS achieve its mission. Not everyone has to make large commitments, but every minute counts. The next time you are talking to your friends and colleagues, tell them about NCAS. Help us to grow and to continue to be a vibrant community for all scientists, students, and those who love science in the state of North Carolina.

Dr. Frank J. Schwartz is Honored as Editor Emeritus

Report by: Dr. Lisa Kelly, NCAS Historian, Pembroke University

The *Journal of the North Carolina Academy of Science* has featured the research of North Carolina scientists for the last 130 years. Few people have worked harder to maintain a quality journal than has the journal's long-time editor, Dr. Frank J. Schwartz of the UNC Institute of Marine Sciences (IMS). Last May, the Academy's Board of Directors recognized Dr. Schwartz for his long and meritorious service by bestowing on him the honorary title of Editor Emeritus. Because health issues limited his travels near home, a ceremony recognizing his service to the Academy was held on 5 August 2014 at the UNC Institute of Marine Sciences in Morehead City, North Carolina. Numerous friends and colleagues attended the ceremony, as did a reporter from the *Carteret County News-Times*, and the Academy's Historian, Lisa Kelly. Speaking on behalf of the Academy, Immediate Past President Michael Kingston noted many of Dr. Schwartz's accomplishments and conferred a plaque of appreciation, which reads:

Dr. Frank J. Schwartz
Editor Emeritus

The North Carolina Academy of Science bestows this honorary title in grateful appreciation for long and meritorious service as Editor of the *Journal of the Elisha Mitchell Scientific Society* from 1995-2002 and Executive Editor of the *Journal of the North Carolina Academy of Science* from 2002 to 2014.

May 30, 2014

When Dr. Schwartz first stepped in as editor of the journal, his work was cut out for him. Everything was still done on paper, and the journal had fallen far behind in publishing. In just a year, he managed to steer the journal back on track, publishing quarterly issues thereafter. Over the next 18 years, he edited scores of paper submissions, procured scores of reviewers, wrote numerous book reviews, and authored and co-authored more than 120 research papers for the journal.

Dr. Schwartz is one of the world's leading experts on sharks, and he has published extensively on sharks, as well as on a host of freshwater and other marine organisms. He has studied shark populations of North Carolina's coastal waters since 1967, when he first joined the faculty of IMS. In 2003, UNC Press published Dr. Schwartz's book -- *Sharks, Skates, and Rays of the Carolinas* -- which was written for a wide readership. His expertise on sharks has attracted the attention of journalists and reporters, and articles about his work have been featured in *Our State* magazine, in the *Carteret County News-Times*, and in *Wildlife in North Carolina* magazine. As Professor and Curator of Fishes at IMS, Dr. Schwartz continues to do research aboard his 48-foot shark boat, the *Capricorn*. He has outlined a book about his travels, and he continues to write research articles for publication.



Photo Credit: Lisa Kelly



Photo Credit: Lisa Kelly

Featured Scientist, Dr. Eric Butler

Report by: Dr. Beth Overman, NCAS Publications Committee, NC State University

The featured scientist for this issue is a new addition to the NCAS family – Dr. Eric Butler at Shaw University. Dr. Butler is a graduate of NC State University and is faculty in the Biology department at Shaw. He’s been a biologist for a long time – for as long as he can remember! When asked how he became interested in this area of study, he cites a book that was written in a research based manner. “The book I read about ecology was set up so that each chapter was a big question and the answer to the question. Sometimes the answer wasn’t complete – there were several options and the book said more research was needed. This really fascinated me and set me on my current track,” he shares. Since then, whether as a graduate student researcher or faculty, he’s been teaching and working with students in the lab. “I’ve always enjoyed teaching,” he reflects. “I held teaching assistantships in college and graduate school and really enjoyed that. My last semester of graduate school I did some adjunct work and taught students who were not as well prepared. While this was hard it was also very rewarding because my teaching could really make a difference for these students. That pretty much sealed the deal for me – at that point I knew I wanted to stay involved in teaching undergraduates in more than just a passing way.” When it comes to undergraduate research, he enjoys working with students as they discover new things. “I really

enjoy discovering things. One of the joys of being a faculty member is that I can find something that interests me and just start research on it. As long as I’m doing research and giving undergraduates internships nobody cares that I’m not patenting

a new device or solving a particular problem for them. I can just work on whatever problems interest me. It’s also a lot of fun to involve undergraduates in this process. Undergraduates are used to being given repeat work that serves only to teach them a skill set but in which the results are already known. It’s exciting for them to be able to come alongside me and find things out with me instead of after me,” he says. Recently, he’s had the chance to work with students off campus in an experiential learning environment, as he took the Wildlife Biology Club on a 5-day camping trip up the North Carolina coast. This experience stands out to him as one of the most rewarding experiences with students yet. “Most of the students had essentially no experience camping or even being out in the woods and seeing live animals in their natural habitats.”

Dr. Butler partnered with the NC Museum of Natural Sciences for



Dr. Butler and his students on Jockey’s Ridge. Photo credit: Megan Chesser

this trip, and they [blogged](#) along the way. There are many exciting things on the horizon for his students, as he hopes to do more experiences like this in the future, as well as new projects in the classroom and lab. “We’ve got some projects finishing up that I think will get some of our undergraduates published which I am really excited to see. We’re also doing a combined math and biology project looking at discovery rates of new species to show the students how they can integrate their math classes with biology to figure out interesting new things. I’m hopeful that this will catch the students’ attention and make them realize that they need to be well-rounded scientists.” We look forward to what comes next for you, Dr. Butler!

CANCAS Fall Research and Career Workshop Campbell University, Buies Creek, NC November 8, 2014

Report by: Dr. Michele Malotky, CANCAS Director, Guilford College

The CANCAS Fall Undergraduate Research and Career Workshop is scheduled for November 8, 2014 at the Leslie Campbell Science Building located on the Campbell University Campus in Buies Creek. The workshop will run from 9:00 am to 4:30 pm. The workshop will include sessions related to research/study abroad opportunities, research skills and career preparation. Students will have the opportunity to improve their resumes and interviewing skills. Two discussion panels consisting of current and former students and professional school admissions and industry representatives will provide an open forum for career and research questions. There will be plenty of networking opportunities with peers and faculty during the Luncheon, CANCAS Business Meeting and evening social. Pre-registration will be available online at the CANCAS website starting October 10th. Please mark the date in your calendar and register to save your spot at the CANCAS Workshop!

Congratulations, 2014-2015 CANCAS Officers!

President	David Creasman Campbell University	dacreasman1229@email.campbell.edu
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Yarbrough Award Winners Announced

Report by: *Dr. Yuko Miyamoto, Yarbrough Committee Chair, Elon University*

Highest Recognition

Rebecca Johnson (Mentor: Dana Emmert), Warren Wilson College, “Interindividual Variance of the Metabolism of Chlorpyrifos via cyp450 Enzymes”

Susie Masecar (Mentor: Amanda Chunco), Elon University, “Biodiversity vs. Sustenance: Effects of Agricultural Practices on Mammals”

Adele Price (Mentor: Michele Malotky), Guilford College, “Pathogenic Assays to Test the Efficacy of Potential Anti-microbial Substances”

Brian Smout (Mentor: Mark Brenner), Warren Wilson College, “Oyster Mushroom Mycelium Filter to Degrade Bacteria and Atrazine in Water”

Honorable Mention

Caitlin Rubow (Mentor: Marsha Fanning), Lenoir-Rhyne University, “Analyzing Nest Activity of *Sialis sialis* in Nest Boxes Based on Temperature”

Morgan Packer (Mentor: Taek You), Campbell University, “Binding Studies of Transcription Factors, MafA-Pdx1 Fusion Protein to Insulin Promoter for Regulating Insulin Gene Expression”

Andrea LaPlante (Mentor: Alisa Hove), Warren Wilson College, “Phenological Responses of *Brassica oleracea* to Increase Soil Temperatures”

Brian Liechti (Mentor: Laura Lengwick), Warren Wilson College, “Assessing Active Organic Matter on the Warren Wilson College Farm”

Caleb Brown (Mentor: Melanie Lee-Brown), Guilford College, “Investigating the Natural Product Aurachin C as a Quorum Quenching Agent for *P. aeruginosa*”

Susan Ethridge (Mentor: Sue Calcagni), Catawba College, “Is *Chlorella vulgaris* an Effective Bioremediation Agent for Caffeine in Aquatic Systems?”

Emma Johnson (Mentor: Michael Dorcas), Davidson College, “Effects of Temporary Translocation on Semi-aquatic Turtles”

Thanks to
Meredith College
for hosting our
Home Office and
NC Academy of
Science
Headquarters!

We Recently Updated the Listserv!

If you know of someone currently not receiving the newsletter and other materials through the listserv, please let us know so we are not missing anyone! Feel free to also forward the newsletter to your friends and colleagues from all areas of science.

Save the Date – NCAS 2015 Annual Meeting

Report by: Dr. Allyn Howlett, Local Arrangements Committee Chair, Wake Forest School of Medicine

The Wake Forest School of Medicine, the Wake Forest Graduate School of Arts and Sciences, and Wake Forest Innovation Quarter are pleased to host the 2015 annual meeting of the North Carolina Academy of Sciences at Wake Forest Biotech Place in the heart of the Wake Forest Innovation Quarter, Winston-Salem NC. Our local arrangements committee, from the many academic institutions in Winston-Salem, NC, is planning an excellent program that will be of interest to scientists throughout the state. We hope to have you join us March 27-28, 2015.

North Carolina Academy of Sciences 2015

**Wake Forest Biotech Place
Winston-Salem, NC
March 27-28, 2015**



Hosted by
Wake Forest Innovations
Wake Forest
School of Medicine,
Wake Forest University
...Graduate School Arts & Sci
Winston-Salem Univ
Salem College
Forsyth Technical
Community College

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ARTS & SCIENCES
The Office of Postdoctoral Affairs

Job Openings in the Scientific Community

For more information on how to apply, go to <http://www.ncacadsci.org/NCAS/jobOpportunities.html>

1. Tenure track position in Biology at Wofford College, Spartanburg, South Carolina.

The Biology Department of Wofford College, Spartanburg, South Carolina invites applications for a tenure-track position to begin Fall 2015. Wofford is a nationally-ranked, residential, Phi Beta Kappa, liberal arts institution of 1600 students. Biology is the largest major at the College, and eleven other dedicated, full-time biologists will befriend and mentor the successful candidate. **Deadline to apply is October 12, 2014.**

2. Program Director, Academic Engagement, Duke University

The Program Director, Academic Engagement (DAE) holds a professional academic advising position in the AAC and reports to the Associate Dean and Director of the Academic Advising Center in the Office of the Dean and Vice Provost for Undergraduate Education.

3. Associate Consultant/Consultant, Bionest Partners, NYC

Bionest Partners is a boutique strategy consulting firm, focused exclusively on the medical industry. We work with our clients to help them answer key issues that arise during the development and commercialization of their products.

4. Lead Life Scientist/Data Modeler, PrimusLabs, Santa Maria CA

Since 1987 PrimusLabs has been providing the fresh produce industry with technical services related to the safe production and handling of produce. This position entails the development of rich, strategic analyses to help our clients make decisions by emphasizing data mining capabilities, finding critical problems within their supply chain, and implementing solutions that allow them to take preventive/corrective actions regarding food safety.

5. Program Manager-Life Sciences, The New York Academy of Sciences, NYC

Duties:

Work with the Director of Life Sciences Conferences to design, develop, and execute the New York Academy of Sciences' (the Academy) annual portfolio of approximately 15 local, national, and international conferences across the spectrum of Life Sciences.

6. Publishing Assistant, Nature Medicine, NYC

Nature Medicine seeks an Assistant Editor to join the editorial team based in New York. The journal is seeking candidates with expertise in neuroscience but will also consider exceptional candidates with other backgrounds.

Closing date: Sept 30, 2014.

7. Senior Scientist-Large Molecule Analytical, Catalent Pharmaceuticals, RTP NC

Catalent Pharma Solutions is the leading global provider of advanced delivery technologies and development solutions for drugs, biologics and consumer health products.



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Check us out on the web!
<http://www.ncacadsci.org/home.html>

The **objective** of the North Carolina Academy of Science is to *encourage the advancement of science within the state of North Carolina by promotion of scientific research and by the fostering of education in the sciences*". The North Carolina Academy of Science meets these objectives by...

- Publishing a peer reviewed scholarly journal, the *Journal of the North Carolina Academy of Science*.
- Fostering and encouraging student involvement in the sciences through support of the Collegiate (CANCAS) and Student Academies (NCSAS).
- Promoting interactions among scientists and students throughout North Carolina.
- Providing a forum for exchange of ideas for solving issues important to North Carolina.

The Academy members include individuals from academia, industry, government, and all others who support the objectives and goals of the Academy.

North Carolina Academy of Science

Our Mission

The North Carolina Academy of Science promotes public appreciation of science, science education, scientific research and a meaningful role for science in public policy.

Our Goals:

Promote public appreciation of science

- Partnership with Science Centers
- Public Lecture Series
- Newsletter

Promote science education

- NCAS Webpage
- Academic Lecture Series
- NCAS Publications: Journal, Educational Publications
- Student Academy - Middle & High School

Promote scientific research

- Yarbrough and Bryden Research Grants
- CANCAS Undergraduate Research Workshop
- Presentation Opportunities at Annual Meetings

- Journal of the North Carolina Academy of Science

Promote science in public policy

- Symposia
- News Releases
- Position Statements
- Interactions with Public Officials

