



Volume 9,
Issue 3

April 2021

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

- Reflections and Photos from the Annual Meeting
- New NCAS Board Members
- Derieux Award Winners
- CASCAS News

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117th Annual Meeting Participant Reflection

By Kelsey Krumanocker, Lenoir-Rhyne University

The 2021 NCAS meeting was the first scientific conference I have had the privilege of attending.

I spent the first three years of my undergraduate experience anticipating the day I would present my own research. I had watched the upperclassman biology students go through the research process and continually thought about what my own project would be. My anticipation and excitement only grew as I started the research process in the Fall of 2019.

Now, over a year later, I can reflect on my research experience as a whole. I am entirely grateful for the opportunity to plan and conduct an experiment from start to finish.

Some of the biggest lessons I learned is that simple questions often have complex answers and that failure can sometimes be the greatest teacher. As scientists, we should never be afraid of failure because failure is often what moves us forward into new realms of knowledge.

While it would have been ideal to present in-person alongside students from across the state, I was thankful for the opportunity to present on an online platform. It is an extremely valuable experience to give a formal presentation in front of your peers and academic mentors as it is a way to build our communication skills and confidence as scientists. Some major highlights from the conference were our keynote speaker and the panel on science communication. Dr. Hu was both highly entertaining and informative. He made a lasting impact on all of us by emphasizing the importance of creativity and collaboration in our fields. Furthermore, the science communication panel with Rob and Haley Nelson also seemed to have a huge impact on the way students and faculty view communication in our fields. I thoroughly enjoyed the conversation sparked by this panel and am thankful for professors like Dr. York who are making an effort to make science communication an integral part of the classroom. Overall, I loved being a part of this year's conference and am appreciative of the collaborative efforts of everyone involved to make the conference happen. I would have never predicted the impact doing research at an undergraduate level would have on my success as a biology student. Thank you NCAS for giving me the chance to share my research story.



*Kelsey Krumanocker,
Lenoir-Rhyne University*

NCAS In The News!

Report By Dr. Karen Guzman, Campbell University

Dr. David Beamer of Nash Community College, not only has the distinction of being one of our newest NCAS board members, but also has a new millipede species that has been named after him! He collected the millipedes that were ultimately identified as a new species back in 2003 and 2004, but early this year, a paper was published with the data confirming the finding.

Although David found this new species of milipede, his main research focuses on salamanders, for which he also contributed in discovering a new species. If you would like to learn more, follow [this link](#) to a news article on the topic.

We love learning more about what our members are doing and what they are passionate about, so we hope you will send us news about yourself, or maybe one of your colleagues.

Wrap-Up: 117th NCAS Annual Meeting

From Dr. Judy Moore, Local Arrangements Committee, Lenoir Rhyne University

The 2021 Annual Meeting of NCAS was held virtually March 12-13, 2021, with 150 registered attendees from at least 17 colleges and universities: 88 undergraduates and 62 faculty, graduate students, and sponsors. Twenty-six 3-minute pre-recorded lightning talks (22 undergraduate) were submitted and discussed in live-via-Zoom Q and A sessions on Friday night. Saturday, 20 students and 4 faculty presented their research in 15 minute live-via-Zoom oral presentations. Faculty volunteers judged undergraduate lightning talks and oral presentations, and at the culminating live-via-Zoom awards ceremony Dereix awards for highest rated talks and presentations were announced.

The keynote address by Dr. David Hu, “How to Walk on Water and Climb up Walls” was a particularly inspiring and thought-provoking discussion of his work in the biophysics of unusual animal movements.

The weekend also included business meetings for the Board of Directors, Senior North Carolina Academy of Science, and the Collegiate Academy of the NCAS, including elections of new officers.

Excellent virtual workshops on effective communication of science, overseeing student research in the virtual world, and applying to graduate and professional schools were well attended and well received. Welcome packets for attendees along with awards were distributed by mail.

Welcoming New NCAS Board Members!

From Dr. ?



Elected member 2020-2023
Dr. David Beamer
Nash Community College
Dept. of Biology
522 N Old Carriage Rd, Rocky Mount, NC
27804
Ph: 252-451-8334



President-Elect 2021-2022
Dr. Michael Kingston
Elon University
Dept. Biology
McMichael Science Building 124E
2625 Campus Box Elon, NC 27244
Ph: 336-278-6182



Treasurer 2021-2024
Dr. Evan Reynolds
Campbell University
Dept. of Chemistry and Physics
143 Main Street
Buies Creek, NC 27506
Ph: 910-893-1736



Webmaster 2021-2024
Dr. Stephanie Mathews
Campbell University
Department of Biological Sci
PO Box 308
Buies Creek NC 27506-0308
Ph: 910-814-4910

For the full list of board members, go to <https://www.ncacadsci.org/bod>

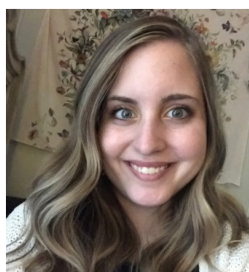
Congratulations Derieux Winners–Oral Presentation

From Dr. Laura Reichenberg, Pfeiffer University

Category	Award	Name	Institution	Title
Ecology, Botany, & Zoology	1 st Place	Jean Ross	Elon University	Multiple functions for multiple signals: the role of sound and vibration in mediating courtship and competition in a Neotropical katydid
	2 nd Place	Caitlyn Vester	Campbell University	Microbial diversity of Campbell University ants
	3 rd Place	Olivia Nunn	Lenoir-Rhyne University	Ant species distribution and density varies based on tree species
Chemistry, Engineering & Physics, Science Education	1 st Place	Katherine Darrigrand	Campbell University	Predictors for Success in General Chemistry
Cell Biology, Molecular Biology, & Physiology	1 st Place	Spencer Welland	Lenoir-Rhyne University	CBCT image enhancement through machine learning: The impact of loss functions.
	2 nd Place	Kelsey Krumanocker	Lenoir-Rhyne University	Using RT-PCR to determine the role of programmed cell death in <i>Gossypium hirsutum</i> fiber maturation
	3 rd Place	Jillian Petersen	Lenoir-Rhyne University	Kinematic Responses of Zebrafish (<i>Danio rerio</i>) to Predation in an Acidified Environment

CANCAS Officers 2021

From Dr. Laura Reichenberg, Pfeiffer University



Emma Throneburg,
President
Lenoir-Rhyne University



Alicia Sigmon,
Vice President
Lenoir-Rhyne University



Maggie Carter
Secretary
Lenoir-Rhyne University



Gabriel Corn
Historian
Lenoir-Rhyne University

Congratulations Derieux Winners— Lightening Talks

From Dr. Laura Reichenberg, Pfeiffer University

Category	Award	Name	Institution	Title
Ecology, Botany, & Zoology	1st Place	Hannah Beasley	Lenoir-Rhyne University	Effects of Seed Density on Biomass Yield of <i>Trifolium repens</i>
	2nd Place	Maggie Keller	Lenoir-Rhyne University	Prey acquisition behavior in <i>Xenopus laevis</i>
	3rd Place	Payal Patel	Nash Community College	Investigating the Distribution and Taxonomic Status of <i>Eurycea bislineata</i>
Cell Biology, Molecular Biology, & Physiology	1st Place	Zi Yae Kang	UNC Greensboro	Effects of carbon nanodots on cytotoxicity and tumor necrosis factor-alpha-induced pro-inflammatory molecule expression in vitro and in vivo
	2nd Place	Mercedes Dos Santos	UNC-Pembroke	Boosting the cellular garbage disposal: enhancing lysosomes can lower amyloid- β and alleviate the cognitive decline in a mouse model of Alzheimer's disease.
	3rd Place	Jared Tuton	UNCP	"Evidence of Organophosphate-Mediated Synaptopathology is Governed by Neuron-Specific $\beta 1$ Integrin Responses
Microbiology	1st Place	Sydney Karre	Lenior Ryne	Effect of bacteriophage treatment on antibiotic sensitivity in drug-resistant bacteria
	2nd Place	Amanda Brechko	Campbell University	The Identification of Potential Antibiotic Producing Bacteria from Soil at Campbell University
	3rd Place	Taylor Braswell	Campbell University	Isolation of predatory bacteria from Small Pond in Buies Creek, North Carolina
Chemistry, Biochemistry & Physics, Science Education & Physics, Science Education	1st Place	Daniel Mogollon	Campbell University	Examining the effectiveness of natural versus synthetic indigo during the development of a pedagogical Chemistry of Art experiment
	2nd Place	Chandler Williford	Campbell University	Development of a multistep pedagogical experiment involving alcohol halogenation and Williamson ether synthesis
	3rd Place	Julianna Lykthey	Campbell University	Synthesis of a cyanine dye monomer for polydiacetylene polymerization

A Sincere Thank You to Derieux Award Judges

From Dr. Laura Reichenberg, Pfeiffer University

On behalf of the Collegiate Academy of the North Carolina Academy of Sciences, we would like to thank the individual listed below for offering your time and expertise as a judge for our Derieux Award for Excellence in Undergraduate Research and for providing valuable feedback to our student presenters. Your willingness to volunteer was critical to the success of this event. We appreciate your generous support and hope that you will consider supporting us again in the future.

Carly York
Darryl Bing
Michael Kingston
Evan Reynolds
David Cartrette
Taek You
Karen McDougal
Laura Reichenberg

Scott Schaefer
Luc Dunoyer
Stephanie Mathews
Katie Riley
Maria Pickering
Sarah Goforth
Eric Anderson

Daniel Grimm
Michael Stiff
Maria Santisteban
Carrie DeJaco
Catherine Key
Thomas Cook
Jason Pajski

Institutions with Group Membership:

Catawba College
Lenoir-Rhyne University
Pfeiffer University
Fayetteville State University
Guilford College
UNC Pembroke

A Pause in Yarbrough Grants for 2021-2022

A note from the Yarbrough Grants Committee:

Due to complications with funding logistics we regret that the Yarbrough Grant will be inactive for the 2021 – 2022 cycle.

FUTURE NCAS ANNUAL MEETINGS

2022 Campbell University

2023 East Carolina Univ.

2024 Winston Salem State U.

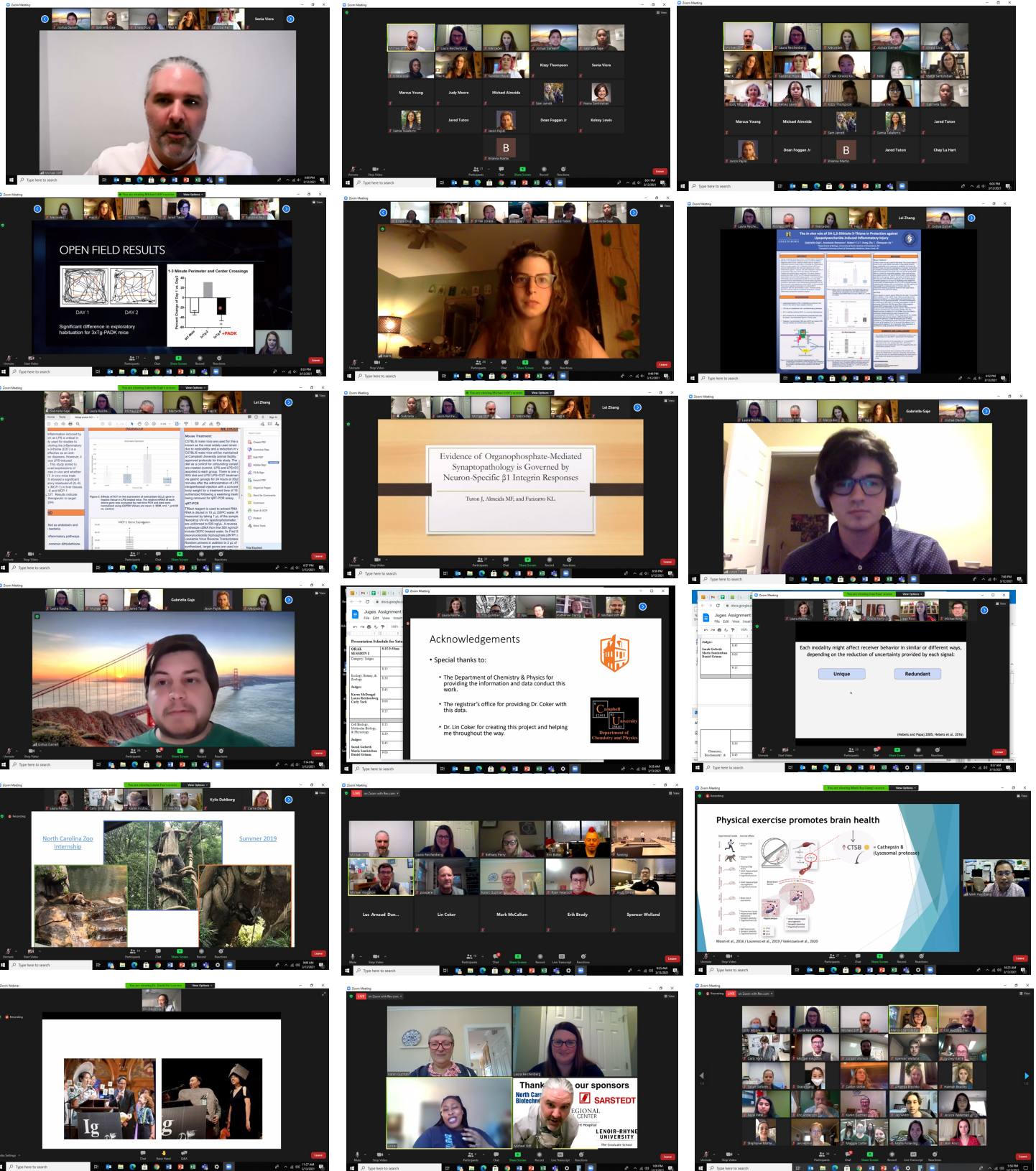
2025 *Could be your institution!*

Contact us today!

Dr. Marisol Santisteban
maria.santisteban@uncp.edu

Screenshots of the Annual Meeting

From Dr. Laura Reichenberg, Pfeiffer University and Dr. Marisol Santisteban, UNC—Pembroke



Thank you to our Annual Meeting Sponsors!

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Scientist Lectureship

**LENOIR~RHYNE
UNIVERSITY**

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Biotechnology Center**

The North Carolina Biotechnology Center is a private, nonprofit, state-funded corporation that accelerates life science technology-based economic development: innovation, commercialization, education, and business growth.

**FRYE REGIONAL
MEDICAL CENTER**

A Duke LifePoint Hospital



**WAKE FOREST
UNIVERSITY**

GRADUATE SCHOOL of
ARTS & SCIENCES

Individual Donors:

Dr. Robert and Katherine Esch
Drs. Karen and Gary McDougal





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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.

Con-

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
- CASCAS 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

