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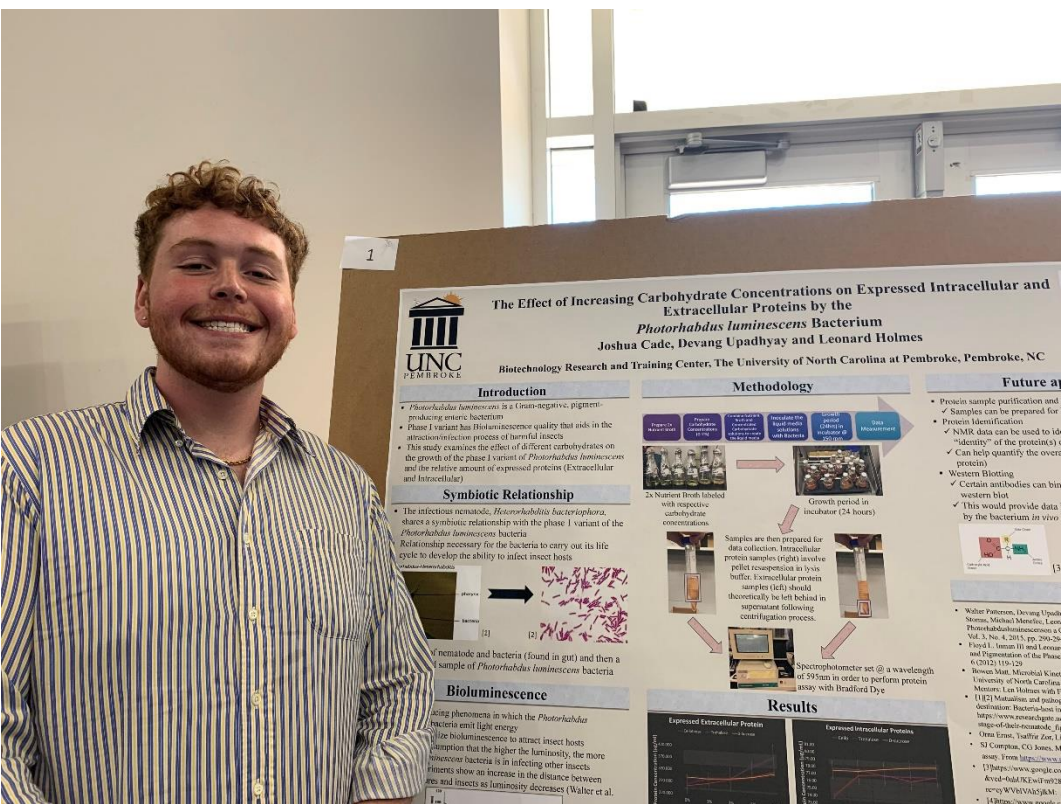
NEWSLETTER

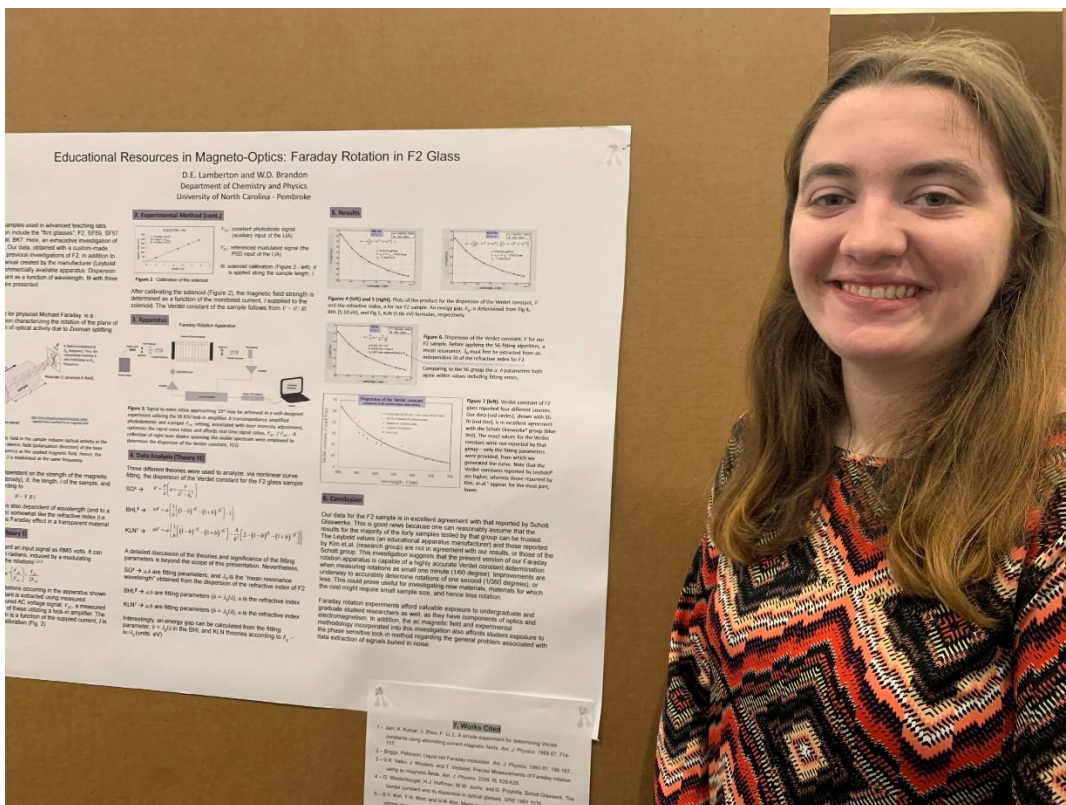
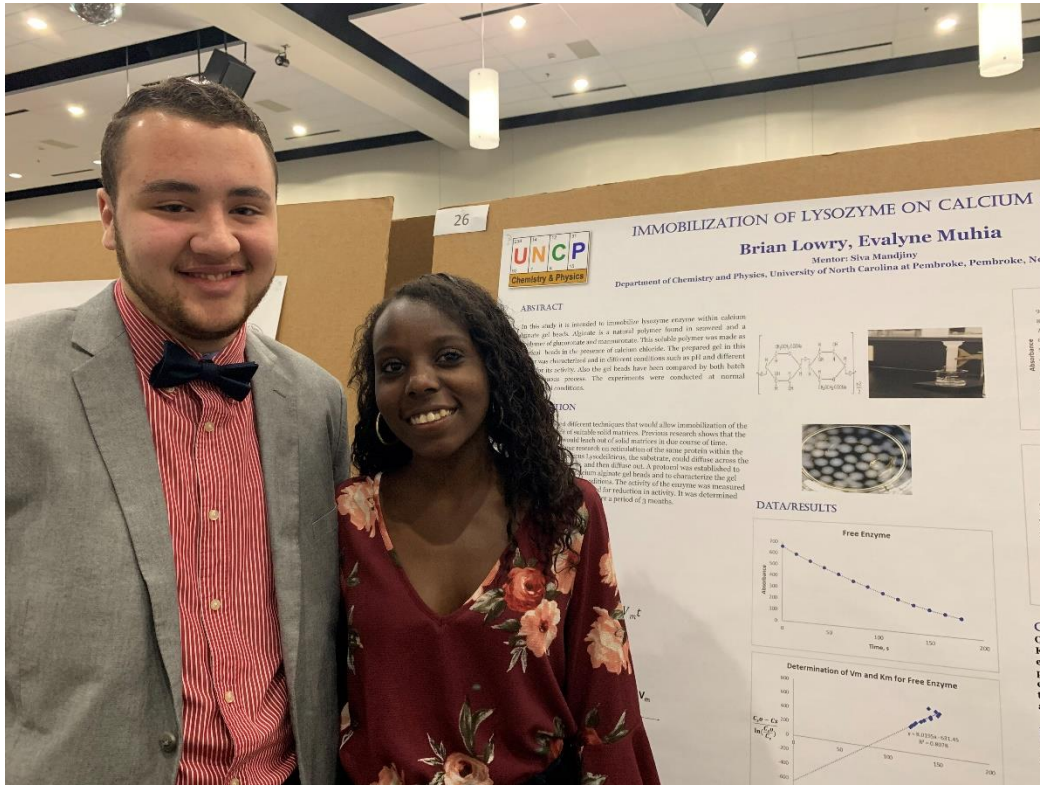
April
2019

Chemistry and Physics Department, Oxendine Science Building – Room 3101, Pembroke, NC 28372
chem_phy@uncp.edu 910/521-6247

PURC Symposium

The Pembroke Undergraduate Research and Creativity Symposium took place on April 10 in the UC Annex. There was much excitement to see our students and to hear their oral presentations and see their posters during the PURC conference. A special “thanks” to all the mentors who worked tirelessly with the students for their progress. The mentors are **Len Holmes, Devang Upadhyay, Roland Stout, Cornelia Tirla, Rachel Smith (RISE), Paul Flowers, Meredith Storms, Sally Vallabha (RISE), Tom Dooling, Bill Brandon, and Siva Mandjiny.**





Dr. William Brandon Civic Engagement

INVITED PROGRAMS (Outreach/Service)

Dr. William D. Brandon did several *Selected Demonstrations: UNCP Road Show* for the month

1. St. Paul's High School (in collaboration with Deionja Johnson, April 11, 2019)
2. St. Paul's High School (in collaboration with Deionja Johnson, April 12, 2019)

Demonstrations:

Standing waves and resonance in a vibrating string

Speed of sound

Wave optics (diffraction in air and water)

AM laser (transmit sound)

Diode lasers

USB and PC power supply "hacks"

AC vs DC voltage

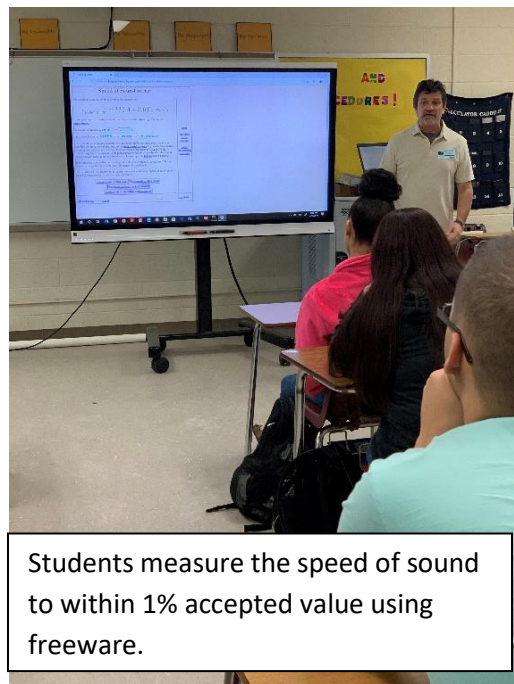
Electrical properties of materials

Magnetic induction

*wave drivers, AM laser, lab stand, photodetector, polarizers, diffraction gratings (among other inexpensive apparatus all constructed by Dee Johnson in PHYS 5xxx) were donated to St Paul's High school



Ms. Deionja Johnson: Teacher at St. Paul's High School



Students measure the speed of sound to within 1% accepted value using freeware.



Demonstrating RGB laser
powered by PC power supply

Dr. William Brandon's Promotion



Congratulations, Dr. Brandon on your promotion to Full Professor of Physics. Job well done!

Dana Lamberton

Drs. Bill Brandon and Siva Mandjiny would like to share the great news about our '3+2' Program. This is the end of our first 3 years and two of our students have applied to NCSU for the Engineering Program. Dr. Mandjiny talked to Dr. Kim Roberts, The Program Coordinator, at NCSU for the results and found out that Dana Lamberton (APHY '3+2' student) got accepted into the Program. We are so excited for Dana's achievement. Special "Thanks" to Drs. D'Arruda, Dooling, Rice and Brandon for helping her to get into the Program. Congratulations, Dana!

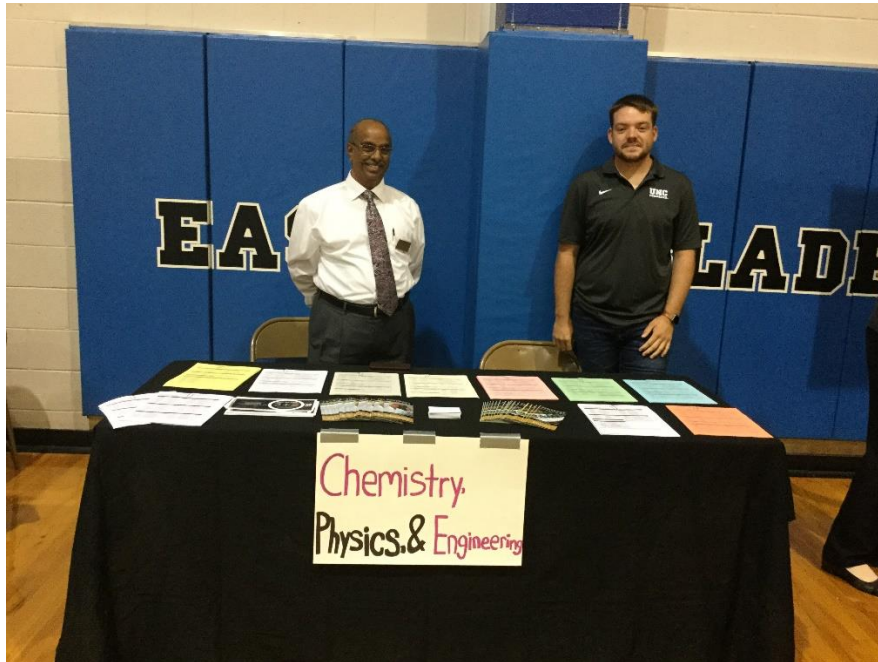
Jackson Bounds

Jackson Bounds has been accepted to UNC – Wilmington, NC. He will be studying for his Masters of Science in the Chemistry Program. Congratulations, Jackson!

East Bladen High School Major Exploration Fair

Dr. Siva Mandjiny and Ethan Williamson attended the East Bladen's Inaugural Major Exploration Fair on Wednesday, April 17th. They spoke to freshmen, sophomores, and juniors students on Chemistry, Physics, and Engineering majors. It was a memorable event for all. Thank you, Dr. Mandjiny and Ethan.





FARM BUREAU SYMPOSIUM AT UNCP BIOTECHNOLOGY CENTER

Dr. Leonard Holmes and Devang Upadhyay cordially invite you to the 10th Annual Farm Bureau BioAg Symposium on April 25th. This year's theme is the importance of regional agriculture, farmers and community, and agricultural education presented by Mr. Larry Wooten and Dr. Debby Hanmer. A dinner will be provided to all registrants. Special piano music will be performed by Mrs. Michelle McCallum during dinner. "Thank you" to the Farmers and Farm Bureau for their continued support to our University.



UNCP Biotechnology Research and Training Center
Regional Center, 115 Livermore Drive, Pembroke, N.C. 28372

Date: Thursday, April 25, 2019

Time: 5:30-8 p.m.



Mr. Larry Wooten
President, Farm Bureau



Dr. Debby Hanmer
Associate Professor, UNCP

Dr. Tom Dooling's Rocket Team

The rocket was shipped to Wisconsin and the Rocket Team is ready for launch. We wish them all the luck under the leadership of Dr. Dooling as they travel to Wisconsin on April 25 – 28.

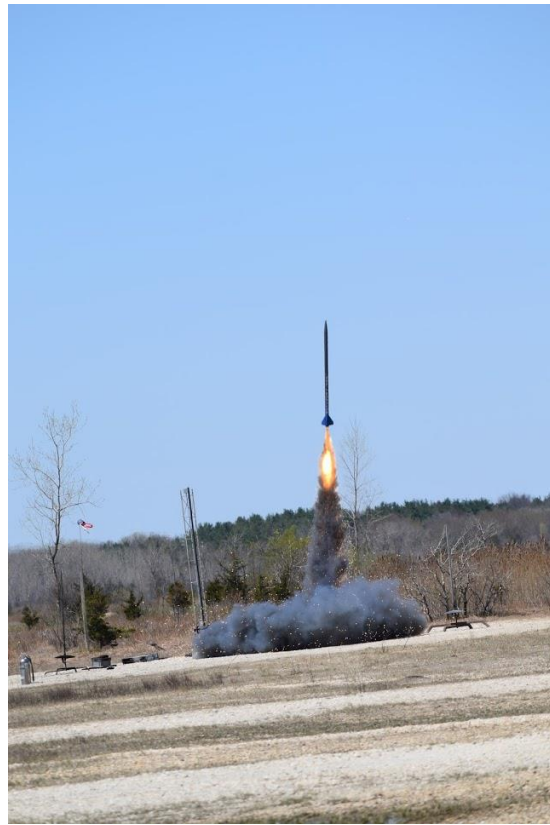
Students did their presentations to the judges. They were quizzed by the judges on the construction of their rocket, how the altimeter works, how the parachute will get deployed and on total safety procedures. The team was chosen the first-time winners. Special “thanks” to Drs. Dooling and D’Arruda (co-advisor) for their achievement in sending our UNCP’s rocket in the outer orbit. Hope our adventure continues forever and we are so proud of both the faculty and the students. Congratulations Team!

Here are the links to our rocket team’s trip.

<https://photos.app.goo.gl/BMajPeoFRAtDEvr88>

<https://photos.app.goo.gl/tLne8TnuFbEo64LXA>







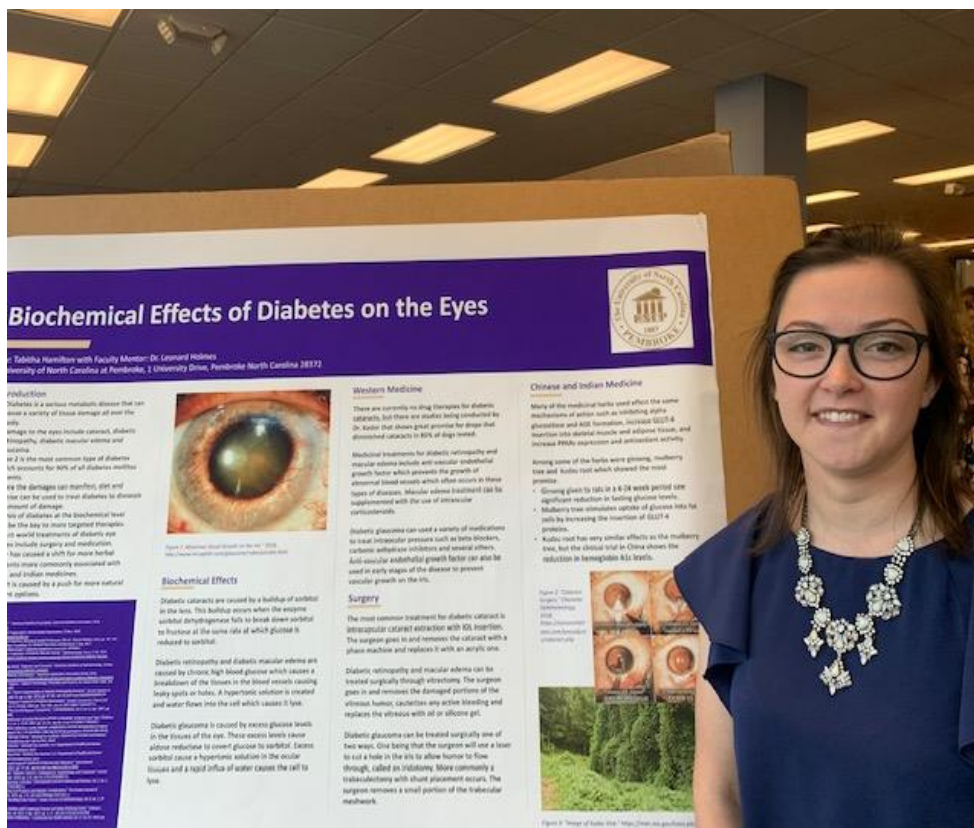
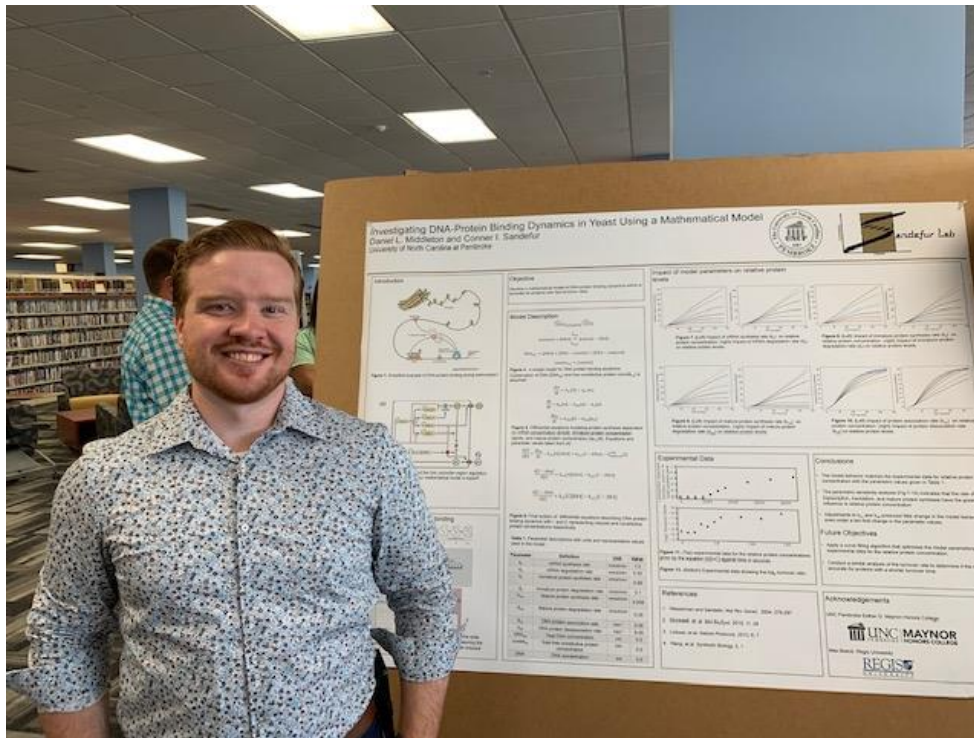
Maynor Honors College Senior Project Symposium

The senior project spans the course of two semesters. Students work with a faculty mentor to develop and complete the project, which can take the form of a traditional thesis, a campus dialogue project, a service-learning project, or a creative project. All project types involve a written component, which is archived at the Mary Livermore Library. The students received the Honors College medallions on April 26.

Great job!

Congratulations to our students:

- | | |
|---|-------------------------|
| Tabitha Hamilton | Mentor: Len Holmes |
| <i>Biochemical Effects of Diabetes on the Eyes and Treatment Options</i> | |
| Dana Lambertson | Mentor: Quinton Rice |
| <i>Quantum Cryptographic Fidelity Investigation</i> | |
| Daniel Middleton | Mentor: Conner Sandefur |
| <i>Investigating DNA-Protein Dynamics in Yeast Using a Mathematical Model</i> | |
| Adrianna Oxendine | Mentor: Siva Mandjiny |
| <i>Science Education in Impoverished Communities</i> | |
| Ethan Williamson | Mentor: Meredith Storms |
| <i>HPLC Method Validation: A Global Application for the Analysis of Amoxicillin</i> | |





Chemistry and Physics Graduate Social

The 2019 Spring Graduate Social was April 26, 2019. It was a great turn out with students, faculty, and staff. Everyone enjoyed the good fellowship and great food. Our graduates for this semester are: **Barstrom, James M.; Gerges Mariam; Torres, Omar; Abumohsen, Yara; Bellamy, Laura V.; Bounds, Jackson Gregory; Dong, Xin; Holowka, Dawn C.; Middleton, Daniel; Nagra, Abinav S.; Salmon, Jairus; Stewart, Jawan; Villalobos, Oscar; Watson, Makayla Anne; Williamson, Ethan Lane; and Willoughby, Hunter D.** Congratulations to our graduates. Job well done!





More photos can be viewed at:

<https://drive.google.com/drive/folders/1gSdJQteXFo8Mslm4CUjCmijYKgCR6j2?usp=sharing>

Thank you, Hope and Carolyn, for the great organization and we appreciate for all you do for the department.

IMPACTS Science Expo

Dr. Siva Mandjiny, Heather Shamburger, Zin Dong, and Yagot Nasser attended the “*Inspiring Meaningful Programs and Communication Through Science*” program in Laurinburg, NC on April 27. Thank you, Dr. Mandjiny, for your dedication to sharing science with the public.



Hawk Assistants

Special “thanks” to Brandon Lowery and Tyler Millwood for their help in the department this semester.

