



RIT | College of
Science

John Wiley Jones

Outstanding Students in Science

Awards Ceremony
Tuesday, April 20, 2021

About John Wiley Jones

CHEMIST, BUSINESSMAN, AND BENEFACTOR



John Wiley Jones started his business career by producing Sunny Sol bleach in a bathtub in the basement of his parents' home and selling it door-to-door out of the trunk of his car.

In 1929, he started Jones Chemical Company, which has become the world's leading re-packer of chlorine and other chemicals used for water purification. With twelve production facilities in the United States, Jones Chemicals, Inc. makes and distributes chlorine and other chemicals used in water purification, paper and textile manufacturing, food production, pharmaceuticals, and industrial manufacturing.

John Wiley Jones had a passion for science education and was a generous contributor to academic excellence at RIT. In 1974, Jones Chemicals established the John Wiley Jones Distinguished Lectureship in Science to make a significant contribution to the education programs of RIT's College of Science. Jones' intention was to bring eminent scientists to the RIT campus with the expectation of a formal lecture presentation that would be open to the public. The company also created an endowment to support science education at RIT, the first grant of its kind in the university's history.

A portion of this endowment was used to establish the John Wiley Jones Award for Outstanding Students in Science as a tangible expression of Mr. Jones' wish to help and encourage young people preparing themselves for careers in scientific fields. He believed that protecting the environment and making the world safer and more fruitful for all people posed a significant challenge for future scientists.

In their selection of the John Wiley Jones Outstanding Students in Science, five academic units of the College of Science must consider the student's academic achievements, citizenship, and contributions to the quality of campus life. This year's recipients will receive a cash award and a certificate.

WELCOME

Dr. Sophia Maggelakis

Dean

RIT College of Science

Dr. Larry Buckley

Associate Dean for Academic Affairs

RIT College of Science

PRESENTATION OF AWARDS

Lily Gaffney

Chester F. Carlson Center for Imaging Science

Nana Aikins

School of Chemistry and Materials Science

Adam Giammarese

School of Mathematical Sciences

Lucas Berens

School of Physics and Astronomy

Jonathan Chu

Thomas H. Gosnell School of Life Sciences

Lily Gaffney

CHESTER F. CARLSON CENTER FOR IMAGING SCIENCE



Lily Gaffney is a third-year student who is completing her BS in imaging science and an immersion in biology.

Lily began research right away as a participant in the Freshman Imaging Project in 2018. This project developed a multi-view imaging system to image, and then build accurate 3D models of insects for use in the Rochester Museum and Science Center. Last spring, just pre-COVID, Lily approached the Center leadership about re-starting work for this project. One of our faculty members, Dr. Tony

Vodacek, had maintained the relationship with RMSC and she was going to work with him during the summer to re-build the imaging system and add new functionality to it. Unfortunately, due to COVID, her summer research plans were put on hold. However, we are confident that as soon as possible her budding research career will quickly be restarted.

Lily's academic performance has been excellent. She has been named to the Dean's List every semester since starting at RIT in 2018. In addition to her course work, she also is a key student contributor to the Center. She works in our stock room, interacting with both undergraduate and graduate students. Additionally, she is on the Executive Board of the Imaging Science Club, serving as the Treasurer. In this role, she fulfills a leadership position in the primary student-run club in the Center.

Outside the Center she is also the Vice-President of Caring Hearts for RIT Cats, a student club dedicated to caring for the feral cat population at RIT. She is also affiliated with the Hawk's Nest Greenhouse & Stables in Bath, Maine, the RIT Outdoors Club, and the RIT GLBTQIA Alliance.

The Chester F. Carlson Center for Imaging Science is proud to name Lily as a 2021 John Wiley Jones Outstanding Student in Science, and we look forward to seeing what comes next!

Nana Aikins

SCHOOL OF CHEMISTRY AND MATERIALS SCIENCE



Nana Aikins is a fourth-year biochemistry major, minoring in psychology. Originally from Ghana, Nana immigrated to the United States in 2016 and currently calls Austell, Georgia home. The School of Chemistry and Materials Science is delighted to name Nana as our 2021 John Wiley Jones Outstanding Student in Science.

Nana has been doing research with Dr. Suzanne O'Handley since Fall 2018 on a number of projects that all center on characterizing various Nudix Hydrolases from human pathogens (*M. tuberculosis*

and *M. leprae*) as potential novel antibiotic targets. He has presented this research at the RIT Undergraduate Research Symposium, the Rochester Academy of Sciences meeting, the local American Chemical Society student symposium, and he is currently scheduled to present his work at the virtual national meeting of the American Society of Biochemistry and Molecular Biology at the end of April 2021. He was awarded a BACC SURF, ASBMB Research Grant, LSAMP Research Grant, and Pasto Research Fellowship to carry out this research. In addition, Nana has done a semester of research each with Dr. Michael Gleghorn on the VapC protein from *M. tuberculosis* and Dr. Mikini Beck on using influenza models to predict other disease outbreaks.

Additionally, Nana is the recipient of a Founder Scholarship, Fred Emerson Scholarship, and Nathaniel Rochester Scholarship. He has been inducted into the ASBMB National Honors Society $\chi\Omega\Lambda$, is a McNair/LSAMP Scholar, SCMS Research Scholar, and RIT Outstanding Scholar.

Nana has also given back to his community in a number of ways. He has been a TA or LA for Organic Chemistry, Biochemistry Lab, and Biochemistry I. He is the scholarship chairman and an Eboard member of Phi Delta Theta, an Eboard member of the RIT ASBMB student chapter, and member of the Organization for African Students. Nana has volunteered in a number of capacities including in the ER at Rochester General, the Rochester Museum and Science Center, Imagine RIT, Rochester Special Olympics, and has been a Terra Science Fair Judge.

Upon graduation, Nana plans on a career in medicine as a doctor. Currently his interests are in cardiology or oncology.

Adam Giammarese

SCHOOL OF MATHEMATICAL SCIENCES



Adam Giammarese is an honors student from Port Jefferson, New York who is working towards a BS in applied mathematics and a BS in mechanical engineering (with an aerospace concentration), as well as an MS in applied and computational mathematics.

After entering RIT as a mechanical engineering major, Adam's passion for mathematics was ignited in his second year and he declared a second major in applied mathematics. In Fall 2018, Adam completed a co-op at Collins Aerospace in Danbury,

CT in which he worked with manufacturing electronics for satellites. In June 2019, he started working for another Collins Aerospace location in Rockford, IL as a systems engineering intern developing optimal simulations for three-phase commercial aircraft generators in MATLAB/Simulink. There Adam used his mathematics experience to drastically reduce simulation time while also boosting the fidelity of the simulations.

Adam started research within the School of Mathematical Sciences (SMS) starting in Spring 2019 with Dr. Tony Harkin, Dr. Nate Barlow, and Dr. Steve Weinstein on analytical solutions of a model of the nonlinear dynamics of collapsing bubbles within a fluid. This research paper is currently under peer review for publication. In Summer 2020, Adam participated in the NSF-funded Graph Theory and Dynamical Systems REU led by Dr. Darren Narayan in which, under the supervision of Dr. Nishant Malik, he used climate networks to quantify the effects of perturbations in the Amazon on the sensitivity of the global climate. For this project, Adam won the Environmental Sciences and Sustainability category of the RIT Graduate Education Showcase, and also presented his work at the Joint Mathematics Meetings in January 2021.

Outside of classwork and research, Adam has shown a great interest in giving back to the College of Science community. He acted as a student panelist on a variety of student outreach programs. These programs include COS Tiger Talks, which aided COS freshman in their transition from high school to life at RIT during COVID-19, as well as numerous open houses for COS and SMS.

Adam will be continuing his studies at RIT as a Mathematical Modeling PhD student starting in Fall 2021.

Lucas Berens

SCHOOL OF PHYSICS AND ASTRONOMY



Lucas Berens is a fourth-year physics student from Calabasas, California who is completing his BS in physics with a minor in mathematics.

Lucas has spent the past five semesters working with Dr. George Thurston on multiple fronts. His projects include estimating Van der Waals forces between human eye proteins with use of UV absorbance spectroscopy; investigating UV absorbance and available vacuum UV absorbance data of many amino acids; and modeling absorption of proteins in terms of their constituent amino acids.

For his Capstone project, Lucas is investigating single-proton final states arising from neutral-current interactions in the MINERvA neutrino detector at the Fermi National Accelerator Laboratory. Working with Dr. Aaron McGowan, Lucas is developing a Gaudi algorithm to sift through the more common charged-current interactions that produce a muon or electron, in search of the less common neutral-current interactions.

As a Learning Assistant in Sophomore Seminar, Lucas offered a series of mock oral exams to prepare his students for their final exam. Lucas is the current President of the Society of Physics Students and, along with the members of the SPS Eboard, has restructured the organization's activities to better serve the School of Physics and Astronomy's students during the pandemic.

This fall, Lucas will merge his experience in biophysics and particle physics by pursuing a PhD in Medical Physics at the University of Chicago.

Jonathan Chu

THOMAS H. GOSNELL SCHOOL OF LIFE SCIENCES



Jonathan Chu is a fourth-year biotechnology and molecular bioscience student from Fresh Meadows, New York with minors in chemistry and psychology. During his time at RIT, he has demonstrated academic success and a strong work ethic, all while balancing a variety of extracurricular activities.

For the last three years, Jonathan's natural inquisitive nature and desire to learn drove him to participate in undergraduate research under the supervision of Dr. André Hudson, where he worked to isolate and identify novel antibiotics produced

from bacteria. He has also worked on research collaborations that involve plastic degradation by bacteria and the construction of a microfluidic device for particle extraction. Being involved in scientific discovery has informed Jonathan's career path, leading him to aspire for medical and graduate studies in the future.

Outside of research, Jonathan is a Teaching Assistant for Organic Chemistry I and II, as well as a tutor for the Higher Education Opportunity Program for first generation and minority college students. Jonathan has also served on the Isaac L. Jordan Faculty Pluralism and Student Scholarship Selection Committee as the student representative. Finally, he spends much of his free time volunteering with various organizations such as the Rochester General Hospital and Foodlink.

