

MOLECULAR SIEVE

Andrews University

Department of Chemistry & Biochemistry

An American Chemical Society Approved Program since 1976

Fall 2025

Guaca-mole, Le-mole-ade, Mole-asses Cookies!

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Molecular Sieve: produced annually by the Dept. of Chemistry and Biochemistry

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Berrien Springs, MI 49104

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Online at <https://www.andrews.edu/cas/chemistry/>

Our students, faculty and staff went all in for a fabulously fun National Chemistry Week full of bonding events and fellowship along with some good chemical competition and education.

On the eve of Mole Day, the Gamma Sigma Epsilon (GSE) honor society officers invited everyone to join them for an American Chemical Society televised event with the theme, “The Hidden Life of Spices.” With the help of the “program in a box” goodies, we heard from



Sean Rogers

researchers about the complex world of spice and flavor chemistry, and learned that spices include chemicals like capsaicin, myristicin, and many more. With various methods and instruments, chemists explore these components. We are proud that our students engage early and often with the GC-MS, NMR, HPLC, ICP, and other instruments in this exploration. We are also very proud of our 3rd-year major, and GSE officer, Sean Rogers was a recognized winner in the Chem-Clash quiz bowl, at 47th out of thousands of participants around the world!

On Mole Day itself, 10-23, at 6:02 p.m., we gathered our students and their friends together to raise a glass of le-*mole*-ade in a toast to Avogadro and his famous number. The



Toast to Avogadro's Number

event and it's timing always give us a chance to explain the importance of 6.022×10^{23} to newcomers.

We are thankful to the officers of the Chem Club who planned a meaningful vespers for the Friday following Mole Day. We continued the tradition of decorating periodic table cupcakes, and heaping guaca-*mole*



on our haystacks. After an inspiring worship presentation, and prayer, there was a marsh-

(Continued on page 2)

CHEM Week & Mole Day

mallow roast around the firepit in the backyard of Drs. Randall and Ahlberg.



But wait, there's more! On Monday, October 27, Dr. Ahlberg and some of the GSE officers put on an event celebrating chemistry and community at the Berrien Springs Community Library. Our students are certainly not hiding their light under a bushel.



Faith & Science

It's been another exciting year for faith and science. Dr. Hayes and his wife have been teaching about how chemistry points to a Creator. Churches, schools, and many programs have hosted *Chemical Design of Earth* programs this past year, including the following: Paw Paw (MI); Hot Spring Science Program (SD); the Maranatha Group at Andrews; Crescent City SDA Church (CA); Keene SDA Church and SWAU (TX). We presented online chapels for Griggs and Advent Hope (South Africa), and a week of prayer for Ruth Murdoch in Berrien Springs.

Dr. Hayes is working on a modern chemistry-based Pathfinder honor set. Currently, there is only one chemistry honor, that is terribly out of date, as it was written in 1937. The NAD Pathfinder committee reports that they get many complaints about this particular honor. In February 2025, Dr. Hayes and family launched a new chemistry honor at a Pathfinder Retreat in Camp Wakanda, in Wisconsin. The new honor, "Reactions and Solutions," is the first of many new chemistry-based honors that will explore the wonders of chemistry, along with God's chemical design of the Earth and life. Dr. David Nowack recently repeated and improved the execution of this honor with the Niles, Pathfinder Club in Michigan. Teamwork makes the dreamwork!

Dr. Hayes and Dr. Nowack (emeritus) contribute to the YouTube channel "Long Story Short," which creates videos to address the latest research on abiogenesis. The ninth [video](#) came out this past year. Please support by subscribing, watching, and sharing these fun and informative videos. Many talks are lining up for next year, and we are thankful for the support of donors, alumni, and the department that encourages this chemical mission work. Please reach out to Dr. Hayes if you think your church would appreciate hearing from a scientist about God's marvelous chemical design of Earth.



STEM Day for Teachers

The STEM departments at Andrews hosted nearly 50 educators from schools across the US on Sept. 4, 2025. The event brought teachers into our labs to engage in discussion and demonstrations on how to bring science, technology, engineering and math into their elementary and secondary classrooms.

Dr. Lisa Ahlberg led the chemistry portion of the program, designing a collection of labs that are adaptable to various ages and skill levels. She put together supplies to assist the teachers in repeating the labs at their own schools. In addition, she created a student kit that supplies everything needed for five student lab groups to follow along with the teacher for each lab.

Monica Nudd, one of the organizers of STEM Day described the free, high-quality lab kits that each participant took home as a truly impactful blessing. “The schools receive materials that they can use year after year,” she said. “Most kits of this caliber would cost hundreds of dollars, and [for this event] they are free. We need to get the word out of how good [STEM Day] is so that more people can attend.”

Jeremy Hall, vice president for Education for the Michigan Conference, shared, “Learning needs to be fun, and I think that the people who have been teaching the teachers are making the learning fun and interesting. He continued, “Even though we’re here at a university with the ability to have complexity, they’re showing our teachers that you don’t have to be a professor to do science experiments.”

Nathan Crabtree, a fifth through eighth grade teacher at Aboite Christian SDA School, praised the labs and professional development instruction, saying, “Chemistry is fun. Finding experiments that can be done safely in the elementary school classroom, I do like.”



April 2025 Giving Day

We are so grateful that, in April 2025, our alumni and friends stepped up to help us purchase the beautiful, and comfortable sectional couch you see in the photo below. The Reading Room is a quiet space where students come to study, eat their lunch, do their homework, attend a seminar or class presentation, gather for a party, or celebration, etc.

We are also thankful that some chose to participate in Giving Day by providing funds to replenish stackable scholarships to support our majors financially. Your generosity is a blessing to students.

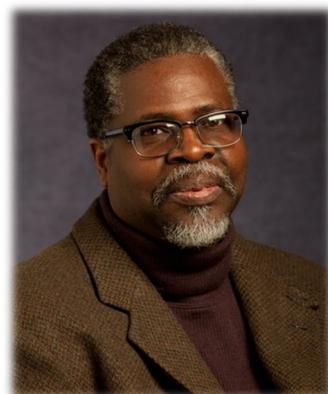


Murray Retirement

Dr. Desmond Murray retired from Andrews at the end of May 2025. During his 30 years of service, Dr. Murray was passionate about getting students (and anyone else) involved in research, developing his “BEST Early” approach. In 2018, he had the opportunity to work with American Chemical Society Publishers to edit a book on this topic with colleagues. In 2012, his impact on education in the state of Michigan was recognized with a science teacher of the year award.

Dr. Murray was also instrumental in building up the chemistry seminar series. His efforts brought many renowned speakers to our campus, including two Nobel Prize winners. Even in retirement, he continues hosting his Environmental Friday series, bringing science news to the public.

Enjoy retirement, Dr. Murray; you will be missed.



Scholarships 2025-2026

Lois K. Mutch Scholarship

Nicholas Zeismer, Zane Freeman

Dwain Ford Scholarship

Ethan Delacruz, David Creitz

Richard Cook Scholarship

Christopher Inae

Thomas Mullin Scholarship

Christopher Inae

Theodore Hirsch Scholarship

Andrew Seo

Minesinger Scholarship

Hannah Escamilla

Robert Wilkins Scholarship

Jordan Kim

H. F. Halenz Scholarship

Hanna Escamilla, Samuel Martin,
Ethan Delacruz

Ralph Scorpio Scholarship

Jordan Kim

John & Elizabeth Sangerloo Scholarship

Nicholas Zeismer, Zane Freeman,
Aalyah Christie, Jordan Kim

Tait Family Scholarship, stackable

Sophia Alvarez, Andrew delaRoca,
Chelsee Jeronimo, Megan Kim,
Madeline Pierre, Hitiel Plata,
Sean Rogers, Brendaliz Moris

Richard Ritland Scholarship

Zane Freeman, Andrew Seo

Berg-Johnson Scholarship

Samuel Martin, Jake VanDenburgh

Doug & Dee Wacker Scholarship

Hannah-Mae Gordon

Glen & Jeremy Abbott Scholarship

Joseph Chi

Alumni Notes

Michelle Thomas (BS Biochem '25)

When I graduated, I was offered positions at Columbus Adventist School in Ohio to teach high school science, Napa Valley SDA School in California for a similar role, and Thunderbird Adventist Academy as a science teacher, among a few others.

I'm currently back home in Maryland, teaching a multi-grade middle school class at Baltimore White Marsh Adventist. It's been such a blessing, and I'm really enjoying sharing science with my students and seeing the amazing work God is doing in them.

I truly miss the Andrews community and the chemistry department greatly. Wishing you all the best, and I hope to hear from you soon!

Jason Regneantu (BS Biochem '25)

Shortly after graduation, I started working as a separation chemist at Bureau Veritas doing HPLC tests for the presence of drugs in the air or on surfaces of pharmaceutical companies.

Within a year, I plan to start my masters in separation chemistry.

On a personal note, I've been happy to be located close to my family. Here is a new addition; her name is Willow.



Heecheon Oh (BS Biochem '25)

It's been about a month and a half since my program dental school program started here at Loma Linda. I'm doing my best to survive the typical first-year struggles.



We had a pickleball tournament a few weeks ago, and I won the beginner competition! I'm enjoying the new chapter of life, new environment, new people, new places to explore. I still miss the Andrews campus and the warm, welcoming atmosphere of the chem. dept.

Darien Jung (BS Biochem '24)

One of my favorite memories of Andrews is the serenity of Lake Michigan. I've attached a photo of what I am currently up to: being an EMT and a stepping stone in the recovery of patients!



Alumni Notes

Chloe Gaban (BS Biochem '24)

I'm currently in my second year of pharmacy school at Loma Linda. This past summer, I had the wonderful opportunity to join a mission trip to Brazil, where our team served the local communities along the Amazon River. It was a really exciting and meaningful experience. Some of my favorite moments during the mission trip were swimming with the pink dolphins and eating good Brazilian food. Speaking of food, some of my fondest memories at



Andrews include attending the International Food Fair and getting to try food from all around the world, as well as spending time with friends from so many different backgrounds.

Zoë Gentles (BS Chem '23)

I'm doing well—I just graduated in May with my masters of science in epidemiology from the University at Albany, in New York. My thesis was entitled, "Differences in Mental Health Outcomes in Immigrant vs. U.S.-Born Populations in Urban vs. Rural Areas in the United States." Here's a [link](#) to the paper, and my graduation photo.



Aaron Jacobs (BS Chem '21)

I'm finishing my PhD in analytical chemistry at Michigan State University in December. My dissertation is, "Electrochemical Analysis of Drugs and Disease Biomarkers Using Inkjet-Printed Carbon and Boron-Doped Diamond Electrodes." I am grateful to have been offered a postdoctoral fellowship position in clinical chemistry at the Mayo Clinic. So, my wife, Abby, and I will be moving to Minnesota! The appointment lasts for two years, after which I will be a board-certified clinical chemist. We're very excited for this next chapter in our lives.



Alicia Dent Agard (BS Biochem '20)

Recently, I graduated from medical school, and am now working as a first-year resident physician in

obstetrics and gynecology in South Carolina. I've been married for just over 3 years to my husband Matthew Agard who is also an Andrews graduate. In my residency program I serve underserved and underinsured populations and hope to continue this in my practice as a generalist in obstetrics and gynecology when my residency ends.

My favorite memories from my time at Andrews include my involvement in the music scene both as a member of the university Singers and also in the Deliverance Mass Choir.



Seth Stacey (BS Biochem '15)

I graduated magna cum laude, in JN Andrews Honors, Phi Kappa Phi, and Beta Beta Beta societies. I treasure the time spent volunteering at New Hope Free Clinic, and with Ambassadors Medical Outreach & Relief Projects in Peru. Now I'm a member of the American Dental Association with a practice in Loveland, CO. I love all things history and science fiction, and I enjoy spending time with my wife and two cockapoos.



Clarissa Lewis (BS Biochem '13)

Originally from Boston, I did high school in St. Croix, and currently work as an optometrist at LensCrafters in Nashua, NH. When I started at Andrews, I was a chemistry major, but switched to biochemistry when my interest in optometry developed. I LOVED my time at Andrews, but I did have some academic troubles in my senior year. I ended up taking a year off. When I returned, Dr. Nowack welcomed me back into the program with open arms, a plan, and most importantly prayer. He was one of the biggest reflections of Jesus in my life and I'll never forget that appointment. Since then God blessed me with a doctorate in optometry, a community health residency, and 3 years working as the director of optometry at a community health



(Continued on page 6)

Alumni Notes

center. After my son, Johan, was born, I took part-time work at LensCrafters for better work-life balance. He is my greatest achievement thus far!

Brittany Adele Foster (BS Biochem '12)

After leaving Andrews I worked in a lab and tutored chemistry students for a year while completing my prerequisites for nursing school. I then switched careers and went through a 14-month accelerated nursing program graduating from Indiana Wesleyan University with my BSN in August 2014. I graduated from the University of Tennessee at Chattanooga in 2021 with my masters in nursing, anesthesia concentration. Currently I split my time between Chattanooga and Atlanta working as a CRNA at the Arthur M. Blank Children's Hospital in Atlanta, GA and at Grady Memorial Hospital, the number one trauma hospital in the state of Georgia. On weekends I am in Chattanooga enjoying all of the outdoor activities that Chattanooga has to offer, and when I'm not there I am traveling the world in search of other grander adventures!



Atuhani Burnett (BS Chem '01)

I recently moved to Atlanta. I'm now working at Northside Hospital Cancer Institute and at Atlanta Liver & Pancreas Surgical Specialists as a hepatopancreato-biliary and foregut surgical oncologist.



Rick Afton (BS Chem '77)

I spent 47 years in chemical management in the area of organic coatings. When I retired this year my title was Global Senior Technical Director for the Sherwin Williams Corporation. I was in charge of 10 global laboratories in North America, Asia and Europe. I pioneered the paint school which serviced

over 1800 attendees over 3 decades.

For the work and influence from my career, I was inducted into the National Coil Coaters Association Hall of Fame in April 2025. I was humbled by this recognition. Andrews University equipped me with the skills in both chemistry, math and psychology to achieve my success

Dallas Hack (BA Chem '72)

My 28 years in the military was longer and more eventual than I expected when I entered as an army physician in 1987. For the last ten years, I've worked with quite a number of organizations to advance healthcare solutions that are of particular interest to servicemembers and veterans. My two current major engagements involve VirTech Bio and Neurologics. I am the CEO of VirTech which is developing a temporary blood substitute that could keep people alive after trauma until they obtain intensive emergency care. I am also the Chief Medical Officer for Neurologics which has a technology to map and repair brain networks.

Over my career, I've received numerous military awards including the Bronze Star, two Legions of Merit, and seven Meritorious Service Medals and was inducted as a Distinguished Member of the Military Order of Medical Merit. I was recognized as the Distinguished Alumnus of the Year by Loma Linda University, in May 2015.

Attached is a photo from early September 2025 with our youngest two (of seven total) children, taken at his graduation from Navy Basic Training. My wife's name is Barbara, our son is Conner, and our daughter is Elena.

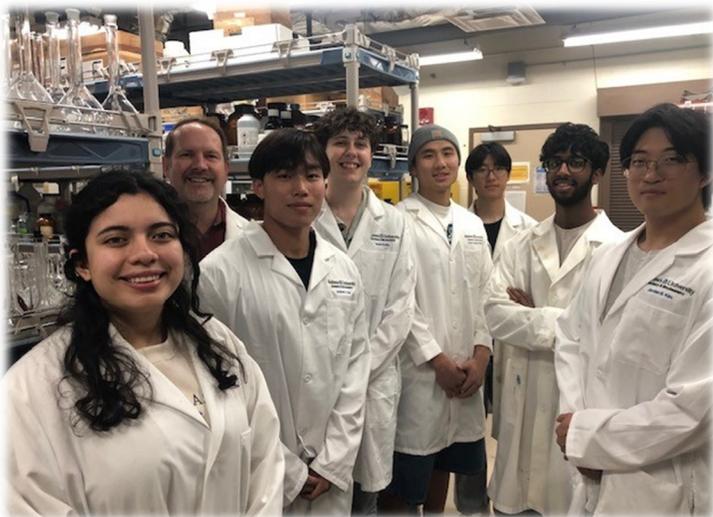


Students Are the Heart of Who We Are!



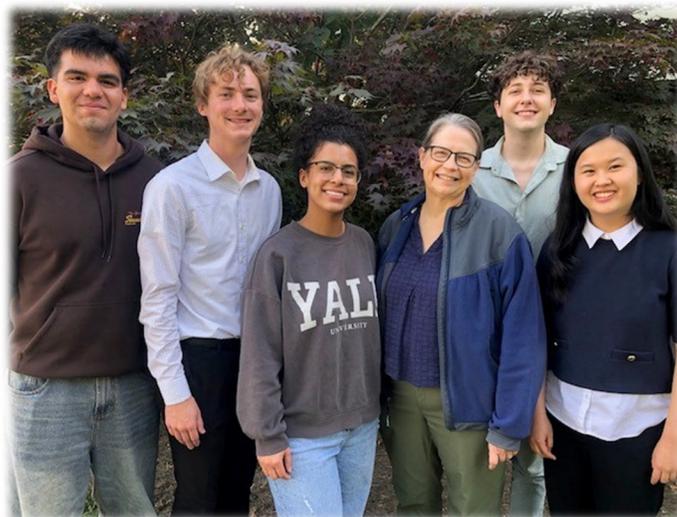
Dr. Randall welcomed a new group of analytical chemists this fall with personally embroidered quant lab coats.

Congratulations: **Aalyah Christie, David Creitz, Andrew delaRoca, Zane Freeman, Jordan Kim, Megan Kim, Oluwatimileyin Olatunde, Madeline Pierre, Hitiel Plata, Sean Rogers, and Andrew Seo.**



Chem Club for Chemists, Biochemists, and Friends

Sophia Alvarez, Secretary
Dr. Ryan Hayes, Sponsor
Andrew Seo, President
David Creitz, Vice President
Anderson Lim, Public Relations
David Joo, Social VP
Nathan Elanko, Pastor
Jordan Kim, Treasurer



*Gamma Sigma Epsilon ($\Gamma\Sigma E$)
Chemistry Honor Society (GSE)*

Hitiel Plata, Sergeant at Arms
Sean Rogers, Keeper of Formulæ (Secretary)
Brendaliz Moris, Grand Alchemist (President)
Dr. Lisa Ahlberg, Sponsor
David Creitz, Apprentice Alchemist (Vice Pres.)
Megan Kim, Keeper of Solvents (Treasurer)

From the Chair

Dear Alumni

As I look out over the beautiful snow-covered Andrews campus, I know that it's time to update our treasured alumni.

I remain grateful for our faculty and their continued commitment to an excellent hands-on education for students in the chemical sciences with a Christian perspective. In addition to academic excellence, the faculty universally demonstrate a spirit of approachability to students. This vital aspect of our work continues to be appreciated by students. Student engagement and faculty friendliness have been integral to our department's culture for decades, as evidenced by messages from alumni we receive each year. Also key to our department is the service of both John Rorabeck, who seamlessly runs the Berrien County Forensic Lab, and Dana Johnston, who provides tireless insight to help us interface with the university's various administrative structures.

Dr. Murray's retirement is a department milestone. He served in our department at Andrews for many years, focusing on providing research experiences for hundreds of students. We will miss his creativity and support for student research.

Thank you, alumni, for participating financially and prayerfully in the recent Giving Day appeals. One of our recent projects was replacing the couch in our reading room (see page 3). This room is actively used by students for studying together as they grow here at Andrews. We are also grateful for donations for stackable scholarships for students. A residential college education is expensive, and some of our students definitely need financial assistance. Thank you for supporting our students in their academic journeys.

Short of the kingdom, the future is unknown. We trust that God has a plan for Andrews to continue providing quality education in chemistry and biochemistry in the coming year and decades.



randalld@andrews.edu



Forensic Lab

The Berrien County Forensic Laboratory (BCFL) has served the county since 1972. The current analyst, John Rorabeck (BS Chem '80) is always on the lookout for newer versions of drugs with abuse potential among those items confiscated by local law enforcement agencies.

Recently medetomidine has shown up in some fentanyl formulations. A similar drug, xylazine, has been identified for several years in the illicit drug supply. However, medetomidine is a more potent anesthetic than xylazine, and both are resistant to the life-saving effect of naloxone (Narcan), carried by first responders for drug emergencies.



The detection of such emerging drug trends highlights two hallmarks of the mission of BCFL. First, to report on the evolution of the drug culture that is willing to create new mixtures while not respecting the danger this puts upon their customers. And second, to provide state-of-the-art instrumentation and method development to detect and report these findings to law enforcement professionals, influencing their decisions in promoting safer and healthier communities. Thank you for continuing to support Andrews University, a gift that keeps on giving.



rorabeck@andrews.edu



E-mail alumni updates and pictures to chemistry@andrews.edu

Congratulations, 2025 Graduates!



Pictured above from left to right:

Kamillie Hernandes, is applying to medical school for fall of 2026;

Gabriella Srikureja, is pursuing an MD at Loma Linda School of Medicine;

Anders Jeronimo, is applying to medical school for fall of 2026;

Ian Neidigh, is pursuing a PhD in biophysical chemistry at Yale;

Michelle Thomas, is teaching at Baltimore White Marsh Adventist School;

Jason Regneantu, is a separation chemist at Bureau Veritas, near Chicago;

Suvan Campbell, is a medical scribe at Kalamazoo emergency room and a patient care assistant at an orthopedic surgery center while applying to medical school;

John Roosenberg, is at Stony Brook School of Dental Medicine working on a DDS;

Quintin Wilson, is working on an MLS degree prior to entering forensics;

Heecheon Oh, is at Loma Linda University pursuing a DDS.

