THE CHEMIGRAM

Starts with a

SPARK

BYU Chemistry & Biochemistry

2025

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Dear Alumni and Friends,

It has been a remarkable year in the Department of Chemistry and Biochemistry at BYU. As we reflect on our progress and look to the future, I am filled with gratitude for the dedication of our students, faculty, staff, and alumni. Each of you continues to elevate our mission of excellence in teaching, research, and service.

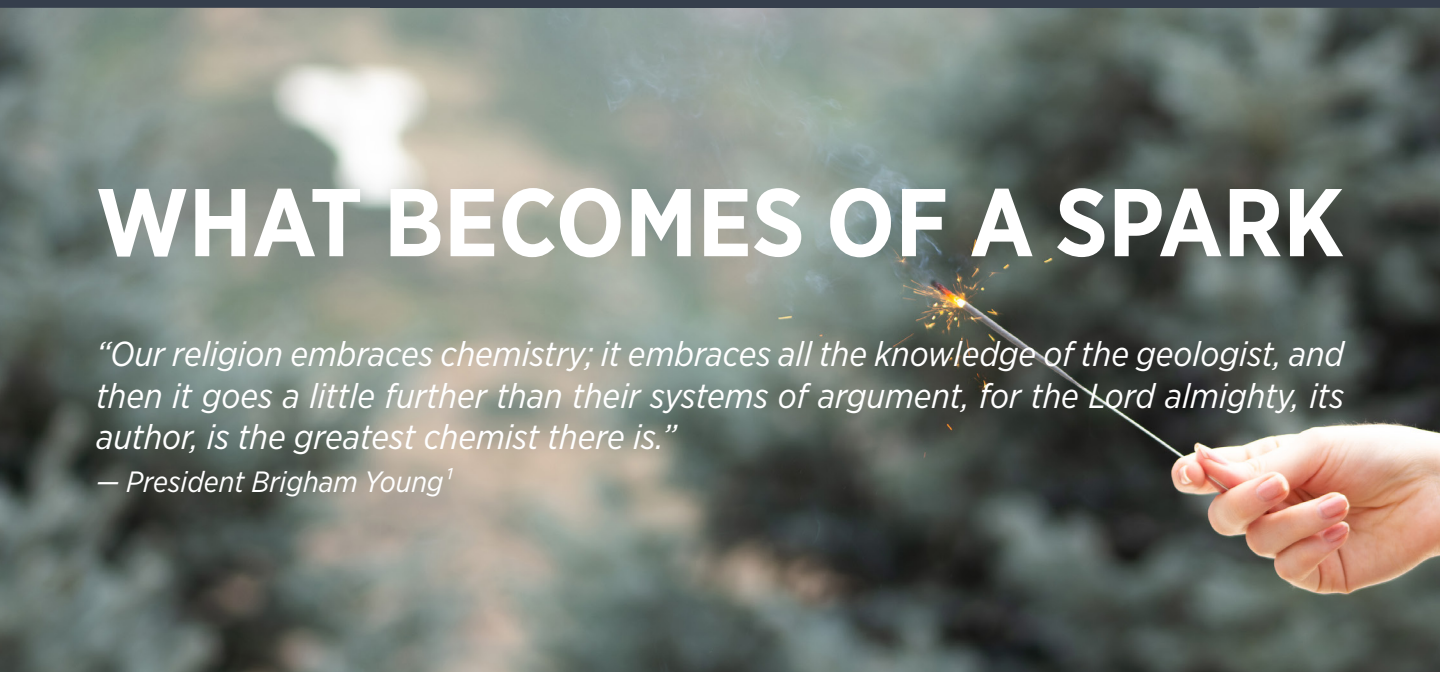
We are working diligently to ensure our programs remain competitive and sustainable. Recently, we updated our graduate student stipend policy to better align with peer institutions and have committed to annual increases to maintain that competitiveness. At the undergraduate level, we continue to expand research opportunities. Last year, the department provided mentored research experiences for 342 undergraduate students, totaling 130,283 hours at a cost of $2.25 million to the college and department. These experiences are helping students gain valuable skills and mentorship.

Thank you for being part of the BYU Chemistry and Biochemistry family. We look forward to another year of discovery, faith, and impact.

Warm regards,

Jaron Hansen

Professor and Chair



WHAT BECOMES OF A SPARK

"Our religion embraces chemistry; it embraces all the knowledge of the geologist, and then it goes a little further than their systems of argument, for the Lord almighty, its author, is the greatest chemist there is."

— President Brigham Young[1]

At its most fundamental level, light is electromagnetic radiation visible to the human eye.[2] It lets us see inside our universities and homes, allows us to explore dark spaces, covers our machines and buildings, separates into vast swathes of color, and illuminates our planet. Without light, life as we understand it today would be inoperable. But as scientists and disciples, we also understand light in its Divine sense. Through Heavenly Father and Christ, light becomes a source of truth, inspiration, guidance, life, stewardship, and goodness.[3] Furthermore, Christ teaches that we ourselves are sources of light: "Ye are the light of the world. A city that is set on a hill cannot be hid. Let your light so shine before men, that they may see your good works, and glorify your Father which is in heaven."[4] Our light, whether shown through world-changing research or simple everyday behaviors, is a magnification of goodness, able to shape and change the world around us for the better.

But where does this light come from?

While much of our artificial light today turns instantly on with a flip of a switch, many light sources first begin with a spark, or a gradual increase of light. Fires ember before they spout into flames, lightning crackles within clouds before stretching across the sky, and some lightbulbs and machines sputter out small hints of light before turning on. Even sunlight slowly returns to the sky with each sunrise before fully illuminating our days. These sparks and their functions are true of us as well. Our work, research, passions, desires, and impacts—our light—came from an initial spark, whether through inspiration, discovery of a loved subject, or a better grasp of personal purpose. Sparks are the origins and precursors of our light: not just what we do, but why we chose to do it, how we ended up where we are today, and how our light has brightened. Our sparks, our inspirations, have tremendous abilities to help us grow, inspire others, and come together to create communities of light.

THE INDIVIDUAL SPARK

Described as a "brilliant star of light… known to all as the most beautiful light that man can produce by art," sparks attract our eyes with the beginnings of energy.[5] They are visible to humans just as light is, but in smaller, most often sudden and fleeting, bursts. Within ourselves, these sparks manifest as inspiration, ideas, passion, or newly received understanding. Unlike our hobbies or more casual interests, our sparks resonate uniquely within us and help shape our identities. These sparks are

found and generated throughout our lives as we learn and experience, helping us better understand who we are and the goals we long to achieve.

When examining our own sparks and where we first became inspired, we may run into numerous questions: Why do specific fields of research bring us more joy than other disciplines? What did we envision our lives to be by choosing to pursue what we did? Did we consciously choose our fields of study, or did we feel called by something beyond ourselves? Why do others understand ideas and subjects differently than we do?

The beauty of the individual spark lies within its reminder of human uniqueness and agency. It is a fundamental part of our human nature to be inspired, to feel, and to change. Each of us possesses our own interests, desires, and passions, and recognizing this uniqueness within ourselves gives us a deeper understanding of what impact our sparks can have on ourselves and others. Further, as Children of God, we are called to live our lives with joy. One of the ways we achieve this joy is by gravitating towards ideas, activities, studies, and experiences that we love and cause our sparks to grow and kindle. This process is different for everyone, but the role of our inspiration remains the same: it is the fuel that allow us to pursue the things we love with determination and passion.

So, with this individual power and inspiration, what can we do? One of the largest impacts of our individual spark is action and creation. We do not passively take in the influences around us but want to make something of our own, whether through research, art, or simply living our lives in ways that remain true to ourselves as disciples and scholars.

SHARING OUR SPARK

Whether or not we recognize it, following our sparks can have profound impacts on others. But how do we share our spark, and can one spark actually make a difference?

One way we can share our spark is actively participating in environments and atmospheres dedicated to learning and teaching. Teachers and mentors are often sources of inspiration for many, providing guidance and an introduction to a subject or idea in formative parts of our lives. We can look back and recognize people, not just moments that inspired us to begin our own journeys. Their influence, whether from parents, mentors, teachers, peers, family members, or a larger community, helped us find the light within ourselves. Without their sparks, we wouldn't be where we are today.

President J. Ruben Clark described our sparks with utmost importance in relation to individuality and teaching:

"Every human being is born with the light of faith kindled in his heart as on an altar, and that light burns and the Lord sees that it burns… It is my hope and my belief that the Lord never permits the light of faith wholly to be extinguished in any human heart, however faint the light may glow. The Lord has provided that there shall still be

there a spark which, with teaching, with the spirit of righteousness, with love, with tenderness, with example, with living the Gospel, shall brighten and glow again, however darkened the mind may have been."[6]

Even if we feel that our sparks are inadequate or small, the light of others can cause us to grow. And, as President Clark reminds us, we can also be the force that helps kindle others' sparks and inspirations back to life.

Another way we can share our spark is by bearing our personal witness to truths we encounter in our lives, both spiritual and scientific. This means living or pursuing passions that bring us joy not solely connected through our work or research. Rather than dedicated teaching moments, sharing our sparks through personal truths can work outside of a classroom setting or can operate unseen, such as in the home or with friends. These moments of sharing sparks, however small or fleeting, still create a great impact on people around us.

How can this be?

Our focus on the things we care about brightens our spark, creating a passion which others see and are inspired by. Centering ourselves on Christlike love and appreciation can create an even greater impact towards others. President Eyring expressed that it is only through the Atonement that we are able to help others in their journeys through this life. He says,

"What we can do to help—teaching, and doing it with the spirit of righteousness, with love, with tenderness, with example—centers on the Savior and His Atonement... The Atonement working in our lives will produce in us the love and tenderness we need. And by remembering Him and His gift, which we promise to do as we take the sacrament each week, we can put a light of hope in our faces which those we love need so much to see."[7]

It is only through Heavenly Father and Christ's power that we have our individual sparks, and, through the Spirit, we are able to help others find and grow their own light.

Sharing our sparks also isn't always a conscious effort. Living our lives, following our passions, and looking for joy can inspire others in quiet ways. We could pass by a fellow mentor and be uplifted by their example. Or pass by someone with their light radiating all around them, never speaking but being

inspired all the same. The same is true of us as well; how many unseen lives have we touched just by living true to ourselves? The influence of our sparks is ever-reaching, far beyond what we will ever know or imagine.

COMMUNITIES OF LIGHT

Despite the great power of sharing our sparks, it can sometimes feel small or unimpactful. One spark doesn't attract much light on its own. But gathered together with other sparks, the light can become breathtaking.

We each have our individual sparks that drive us to action and the recognized (and unseen) influences our light has on others. That influence of our excitement and ideas, gathered together in one place, creates communities united in light. Even if our sparks are unique, gathering in our differences and passions creates a more empathetic, more creative, and richer community. Embracing our unique sparks should not isolate us from others but allow us to gather together with others' perspectives to tackle problems and research otherwise unsolvable.

There is also unparalleled energy and vitality gathered with a community of light. Inspiration abounds as we constantly learn from each other, approach problems together, and move forward towards new questions and new understandings.

Is this light limited to just our department? Outside Chemistry and Biochemistry, there are numerous other fields, jobs, and places to learn. Even at BYU, there are thousands of students not studying in our department. However, it is as Richard M. Houseman reminds us:

"We can have life changing moments in our lives when we share light, by loving and serving others…

It is such a blessing to be at BYU where our motto reminds us to love and serve others. We enter to learn so we can go forth to serve in many ways. Please don't wait until you go forth at the end of your time at BYU to serve others as Christ did. I invite you to be like fireflies and share light with each other as you go forth from your classrooms every day, by giving, forgiving, and loving each other."[8]

All of our sparks, big or small, contribute to a campus—and a world—filled with light.

We look forward to continuing celebrating our sparks, and watching them grow brighter, as we move into BYU's 150th anniversary in August 2025.

NOTES

[1] Journal of Discourses, 15:127, 1873.

[2] CIE, International Lighting Vocabulary, 2nd edition. Number 17.21.12.

[3] See D&C 88:6-13.

[4] KJV Matthew 5:14, 16. (emphasis added).

[5] Michael Faraday, Experimental Researches in Electricity, vol 1.

[6] President J. Ruben Clark, Afternoon Address, Conference Report, October 1936.

[7] President [then Bishop] Henry B. Eyring, "The Spark of Faith," October 1986 General Conference.

[8] Richard M. Houseman, "Go to Light, Be Filled with Light, and Share Light," BYU Devotional, June 10, 2025.

Dr. Stowers:

Lighting Sustainability

For Dr. Kara Stowers, the sparks of light she finds come from following her interests, inspiring her students, and a desire to bring about environmental changes to help preserve our planet. Pursuing these interests and passions has allowed her to share her light with her students, who bring their own excitement and desires into the world. This chain of inspiration began when Dr. Stowers started receiving the light of her first Chemistry mentors.

While receiving her undergraduate degree from the University of Utah, Dr. Stowers was invited to do more involved research in organic chemistry and encouraged to pursue graduate studies. After graduating, she went to the University of Michigan to receive her PhD, where she worked with homogeneous catalysis in the Stanford Lab. Afterwards, she switched her research to heterogeneous catalysis, leading her to work at a surface science lab at Harvard University until 2014. With the conclusion of her work, she began teaching at Brigham Young University.

Today, the Stowers Lab focuses on heterogeneous catalysis in a myriad of ways: making, characterizing, and creating greener, more environmentally friendly reactions. They examine processes like ethane to ethylene transformation with a nickel catalyst and CO2 capture and conversion to methanol through a copper-based catalyst. They also use metal organic frameworks as a template for finding and gathering materials for their catalysts.

While a minor adjustment in terminology, Dr. Stowers's switch from homogenous to heterogeneous catalysis research was a large, important research change. Homogeneous catalysis involves catalysts and reactants in the same phase, while heterogeneous catalysis uses different phases for the catalyst and reactant. This change in research focus led her to where she is today.

"At the end of my PhD, I wanted something different," Dr. Stowers shares. "[But] heterogeneous catalysis is really hard. It's really complicated, and the materials are statistically diverse. The selectivity and control aren't quite as modular as using a homogeneous catalyst."

Despite the challenges presented by switching the focus of her research, Dr. Stowers pressed forward because she knew this was the area of research where she could tackle the problems she wanted to solve. She wanted to work on larger scale pollution, abatement, and environmental problems and challenges.

Dr. Stowers continues, "One of the things that made me want to think about going into

[heterogeneous catalysis] was: How can I do reactions that would interact with CO2 in ways that would kind of close the loop on CO2 or use CO2 to pull it out of our atmosphere?"

Her lab at BYU gives her the chance to answer these questions, inspiring her students to tackle these problems alongside her. The Stowers lab has published a paper on metal organic framework thin films, spearheaded by an undergraduate student, which expanded the scope of materials and element composition methods of these thin films. One of her graduate students is working on the bimetallic components of the same thin films, looking at different compositions and their properties with a group of undergraduate students. A different graduate student is working to put the thin films onto powders, which the Lab has been able to use in collaboration with other catalysis groups around and outside of the country. Lastly, the Lab is analyzing the nickel catalyst for the ethane to ethylene transformation, trying to create a better, more efficient catalyst.

All of these projects and topics of research came from Dr. Stowers's initial spark of interest in heterogeneous catalysis, which has now fueled the passions and sparks of her students. Mentoring her students' interests and channeling excitement in her lab is one of Dr. Stowers' priorities. The Stowers Lab hosts weekly group meetings to check on the projects and students' well-being, and Dr. Stowers meets both with the subgroups and the graduate students individually as well.

"The students are fantastic," she says. "They're really fun to work with. They're very curious, intelligent, and hardworking. They tend to get a lot done and follow the different milestones that are required for them to become independent. They can creatively design a project and carry on a project. There's a lot of opportunities to work with undergraduates, and [the graduate students] do a really good job learning those leadership qualities and then also developing younger students to be good scientists as well."

It is this student-centered environment that allows for Dr. Stowers to share her sparks of interests with her students, which they then give back to both the Lab and the world of Chemistry as a whole.

"I would love for BYU to be known for having these bigger solutions to global problems," Dr. Stowers says. "I feel like my lab could be a part of that in [creating a] catalyst designed to solve this environmental problem or this environmental challenge. I think we've got a little bit of that; we're starting to do a little bit more and more as more papers come out and as more students work on things."

Because of Dr. Stowers' initial spark of passion and interest in both Chemistry and teaching, the Stowers Lab has become a pioneer in lighting the way for both BYU and the greater Chemistry community.

Dr. Gassaway:

Illuminating Protein Regulation

Dr. Brandon Gassaway fuels his spark of interest through several aspects of his work. He examines protein functions, teaches and learns alongside his students, and pursues projects that aid research areas such as the immune system, neurodevelopment, and cancer. All of these goals are made possible by Dr. Gassaway's choices to follow his earliest sparks of interest, chasing answers to the things he needed to know. His passion for asking questions about the world started at a young age.

"Growing up, I was always the kid that was like asking questions and wouldn't take 'because' for an answer," Dr. Gassaway shares. "Like, why is the grass green? And I actually had to know. The whole asking questions, being curious thing has been a long time coming."

Dr. Gassaway's questions and searching for answers followed him throughout his adolescent life. When finishing high school and beginning to think about what he wanted to pursue, Dr. Gassaway turned to his family.

"Three out of four of my grandparents were Type 2 diabetic," Dr. Gassaway says. "So, my first thought was, well, somebody's gotta work on this before I get it, because chances are that's coming along the lines."

Because of the influence of his family and his desire to better understand diabetes, Dr. Gassaway entered Brigham Young University as an undergraduate in Chemistry. During his time as an undergraduate, he found that little research was focused on diabetes. He ended up working in the Bates Lab studying potassium channels and development, but his goal remained focused on diabetes-related research. It wasn't until his time as a graduate student at Yale University where he found someone who shared his same spark. With Dr. Jesse Rinehart, Dr. Gassaway was able to delve into the process of insulin resistance using phosphoproteomic analysis. This work was crucial to shaping Dr. Gassaway's current projects, transitioning out of diabetes-related research into something more fundamental: protein phosphorylation. Now in his own lab at BYU, Dr. Gassaway studies how protein phosphorylation alters protein function with his students.

"Graduate students in my lab get hands-on training in cutting edge master mass spectrometry-based proteomics and phosphoproteomic methods," Dr. Gassaway shares. "The experience in my lab is getting a thorough training in these modern, cutting-edge proteomics methods. Undergraduates usually will work for one of the graduate students on an aspect of one of their projects."

Using these machines and instruments, Dr. Gassaway's work sheds light on how adding

phosphates to a protein can alter its functionality. The main method he uses to examine proteins involves phosphoproteomics: identifying, cataloging, and characterizing proteins containing a phosphate group.

"Using proteomics and phosphoproteomics, we're looking at as many proteins in the cell as we can at once," Dr. Gassaway says. "We can see how, not just one thing changes at a time, but how eight-thousand things change at a time. And you get a much broader perspective of what's going on in a cell or a tissue at a given time."

There are challenges that come with using a broader perspective over a smaller one, however. Dr. Gassaway explained how difficult it is to deal with eight thousand proteins or cells rather than just one or a small group. Phosphoproteomics is also an instrument-dependent field, and the Gassaway lab has to rely heavily on BYU's mass spectrometer instruments, hoping they recieve accurate data.

Another challenge Dr. Gassaway faced was his transition to BYU. Because he was hired at the beginning of a winter semester instead of a fall semester, he was worried about not having enough students to fully begin his lab when he arrived on campus. Instead, he had two eager graduate students waiting for him, making his love of what he does all the brighter.

"[The graduate students] have been so awesome in helping me get the lab up and running," Dr. Gassaway says. "Having people to be in the lab to set things up, work through methods, and troubleshooting mass specs and instruments has been so helpful and a jump start to the research that I've wanted to do."

While Dr. Gassaway received eager graduate students right away, he wasn't able to add undergraduates to his lab until a few months later. But now, with a great team of students and his lab being established, Dr. Gassaway's lab is in full swing. Both students' and Dr. Gassaway's sparks are fueled by the work they do together.

"It's fun working with some of the younger students in the program and seeing their excitement when we start cloning and manipulating DNA," Dr. Gassaway says. "They start making connections about what they're learning in lecture and what they're doing in lab and they're like, 'Oh, I get it!' It's always really rewarding as a teacher when [those] light bulbs turn on."

Because Dr. Gassaway followed his initial sparks of interest, he is now able to share his light with his students and help them grow their own creativity and research.

Dr. Savage:

Sparks Within the Human Body

Dr. Paul Savage sparks his interests and inspiration through his research, connecting with his students, and seeking a greater understanding of molecular processes, specifically within the human body. Through the sparks of light of his family and forebears, he was first introduced to chemistry at a young age and has been interested in it ever since.

"My father was a professor of Biochemistry at Northern Arizona University," Dr. Savage says. "And his father was also trained as a chemist. So, I've always been interested in science. It was just an issue of whether I was going to be a chemist or a chemical engineer."

When Dr. Savage entered BYU's chemistry department as an undergraduate student, his life forever changed: he knew at once that organic chemistry was what he wanted to dedicate his education to.

"I was invited by Gerald Bradshaw, who was a very well-known professor, to come work in his lab," Dr. Savage shares. "And it was just one of those situations where, as I walked in the lab, I thought, 'Okay, this is home.' My interest started out with the idea that we could manipulate matter, that you could make molecules. Being able to control what's happening, how to make molecules, being able to, in essence, and see them using some of the analytical techniques was always really exciting to me, and that's what drew me in."

After finishing his work with Dr. Bradshaw, Dr. Savage worked with Dr. Samuel Gellman at the University of Wisconsin during his Ph.D. and completed his post-doctoral work at the Ohio State University. Immediately following his post-doctoral work, Dr. Savage began his tenure at BYU. Today, the Savage Lab researches innate immune function, specifically natural killer T cells, and a new class of antibiotics.

"What we're interested in is being able to specifically target pathogenic bacteria," Dr. Savage says. "And by that, we really mean bacteria that are causing infection. The long-term approach on this is not to generate vaccines. What we want to be able to do is have very highly potent therapeutic antibodies. You can use these antibodies and target just the infectious organism without changing the rest of the microbiome in the patient. We also think that this approach will allow us to get around some of the problems with drug resistant bacteria."

The primary goals for Dr. Savage's research are to better understand and improve bacteria immunization in humans and advancing medicine and medical research.

"I know synthetic organic chemistry well, but it's why you're making the compounds that becomes

critical to me," Dr. Savage says. "It goes far beyond just being able to make molecules, but then just to use them potentially as drugs and also as tools to understand biological processes."

Because of his spark of interest within organic chemistry, Dr. Savage prioritizes his students and their involvement in helping advance research. He and his students collaborate with other institutions across the country, including the Scripps Research Institute, to help create, generate, and map their new class of antibodies. Using world-class equipment and the help of brilliant scholars and researchers, students in the Savage Lab have a front-row seat in helping bring about great changes in the world of medicine. These collaborations and levels of research are the results of Dr. Savage sharing his spark with those around him, creating results of research and advancement that go much further than what he initially expected.

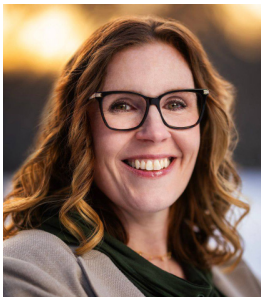
"If you were to take [me], that assistant professor that was just starting in 1995, and if you were to let that person see what we've been fortunate to be able to do, it would go so far beyond any expectation, any hope or dream," Dr. Savage shares. "We've been able to do things that are far, far beyond what I ever anticipated. When I say 'we', I'm talking about a large group of people. I'm talking about postdocs, graduate students, technicians, undergraduates here at BYU, but also, we've collaborated and continue to collaborate with researchers all over the world, and they've all contributed to this."

Another aid to Dr. Savage's spark of light is the atmosphere of BYU. Because of BYU's religious and academic atmosphere, Dr. Savage is able to integrate his beliefs alongside his research, creating a classroom where he can be his full, authentic self, and the students respond in kind.

"I get to teach [the students] things I'm passionate about," Dr. Savage says. "I tell them, 'This is how this all fits into God's plan, at least how I think it does. This is what's important to me as a scientist and as a disciple of Christ.' And I never have to worry about someone [being upset] that I brought religion into the classroom or anything like that. I can be just as authentic as I possibly can be. I can really share everything with the students, and I couldn't do that anywhere else. I look forward every day to what I'm going to teach."

Dr. Savage's passion for what he teaches and researches is shared with his students, who move forward with their own sparks of inspiration to help improve the world. Without Dr. Savage following his own initial sparks of light, combined with all his students and fellow researchers chasing their own interests and sparks into great light, the Savage Lab would not be where it is today.

New Faces



Erin McPhee recently joined as the department secretary. She received her BS in communication from Dixie State College and her master's in communication and leadership from Gonzaga University. She grew up in Boston, MA and Camarillo, CA. She has lived in both Utah and Iowa over the last twenty years (with Utah being her favorite). Her favorite hobbies include reading, crafts, hiking, and watching sports.

Erin has had a variety of job experience, but her favorite always involved helping others learn and grow into their potential. The highlight of her job now is working with students and problem solving on the go. She also shared that enjoying herself here at BYU is a testimony to the power of change. In her younger years, she spent time in the periphery of BYU judging what she saw and experienced. She explained that choosing to learn from the gospel and grow as a person led her here, and it is no coincidence. Divine timing is real and always perfect.

Erin lives with her husband Bryce Giesmann, an artist and photographer, and they have five kids between them: Gavin, Ella, Hadley, Regan and Bryer. They love to hike, play with Legos, and throw late night dance parties (often with glow sticks!).

Nancy Griggs recently joined as part of the purchasing team for Chem Stores. She received her BS in recreation therapy from BYU. She grew up in Edmonton, Alberta, Canada, and moved to Macomb, IL when she was fourteen, and Bangor, Maine when she was sixteen. Since then, she has lived in Provo, Salt Lake, Oregon, New York City, Durham, North Carolina, and Macon, Georgia before moving to Lehi in 2023. She served a mission on Temple Square, as well as in Louisville, Kentucky. She likes to cook and bake, camp, hike, run, travel, and spend time with her family. After receiving her degree from BYU, Nancy was the Program Coordinator at a non-profit organization in Provo called Recreation and Habilitation Services (RAH), doing recreational programs for adults with developmental disabilities. She also worked at a TV and movie tour company in NYC doing reservations and bookkeeping. Before taking her current position, she hadn't worked in nine years and is happy to work with such a great group of people.

Nancy has three children: two boys, ages twelve and seven, and a nine-year-old girl. Her husband, Adam, is the European Studies and Linguistics Librarian at BYU.

Faculty Awards

David Michaelis
Faculty Service Teaching Award

James Patterson
Faculty Citizenship Award

Alena Allred
Staff Citizenship Award

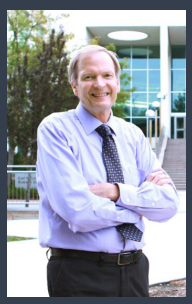
Dan Ess
Graduate Teaching and Mentoring Award

Daniel Austin
Faculty Majors Teaching Award

Eric Sevy
Faculty Spiritually Strengthening Award

Grant Jensen
President Elect Microscopic Society of America

Faculty Updates



Dr. Steven Wood is retiring from the BYU Chemistry and Biochemistry faculty. After teaching at BYU for thirty years, he loves being able to lay out functions and fundamental aspects of chemistry for students, helping them learn and become empowered through knowledge. We thank Dr. Wood for inspiring students through decades of teaching and wish him the best as he continues onward.

The Department of Chemistry and Biochemistry wishes to express our condolences for the passing of Melinda Graves, wife of emeritus professor Steven Graves, who passed away on February 24th, 2025.

To read Melinda's complete obituary, please visit https://www.warenski.com/obituary/Melinda-Graves.

Sharing Light in Uganda

In Spring of 2025, Dr. Jennifer B. Nielsen and a team of students and faculty visited Makerere University's campus in Kampala, Uganda. Dr. Nielsen's team and Makerere's faculty co-led a three-day workshop focused on scientific teaching, active learning, and designs that instructors can use when teaching their courses. This program is a partnership between BYU and Makerere University to help improve scientific teaching methods, and it offers both universities a chance to kindle their sparks and grow together.

Jared Roth, one of the instructors, helped lead and teach two of the twelve courses offered over the three-day event. The professors taught all came from different fields, including physics, economics, computer sciences, humanities, and more, creating a unique classroom setting.

"The principles we taught in the workshop were universally applicable to education," Jared explains. "Some examples we used corresponded more with some of the professor's fields more than others. This was an excellent opportunity for us to invite all the participants to think about what common misconceptions a student may have about [unfamiliar] topics. We then discussed how the principle of constructivism can help overcome those misconceptions and other obstacles."

Jared also emphasized the trip's importance to the Chemistry department as a whole. Its teaching opportunities for both students and faculty allows a sharing of sparks across countries.

"It has given several students the opportunity to study and teach principles of educational psychology," he explains. "Additionally, the collaboration between BYU and the University of Makerere is ongoing and will continue to enable students and faculty at both institutions to learn and help one another."

The partnership has allowed students to teach educational principles and share their light and learning with others, and we hope that continuing collaboration with Makerere University will keep leading to a brighter world.

Shining at ACS Conference

The American Chemical Society held their Spring 2025 Conference in San Diego, CA, from March 23rd through the 27th. The conference included general workshops, poster sessions with awards, career fairs, networking events, and keynote speakers.

Brayden Wehrli, an undergraduate researcher in the J.C. Price Lab, was a third-time presenter at ACS.

"As usual, it was a fulfilling and inspiring experience," Brayden shares. "It was a great opportunity to meet new people and learn about their chemistry. I also appreciated getting to know my peers at BYU better as we traveled together and supported one another at the conference."

As a presenter, Brayden had the opportunity to share his research with students and scholars gathered from many different facets of chemistry. The most difficult part was managing and presenting his research in a way that was accessible to everyone.

"I wanted to make sure that I could explain each facet of my research as well as possible," Brayden explains. "In preparation for ACS, I involved myself more with the mass spec side of the project and tried to learn as much as I could about the underlying theory. This helped me to understand my research more holistically and made me able to have discussions about my research at ACS that I wouldn't have been able to have otherwise."

During ACS, our students were also able to tour the world-renowned Scripps Research Institute. Today, they collaborate with researchers across the world—including BYU—to foster highly collaborative multidisciplinary research.

Dr. Jatinder Singh, a BYU alumni, helped organize the students' tour of the Scripps Institute.

"As a former student and now an alumnus, I believe that tours like these are invaluable for current students," Dr. Singh shares. "They provide a unique opportunity to observe cutting-edge research in action and to network with professionals in the field. Their visits to the labs and talking with Scripps lab students helped answer questions about research work, research facilities, competitiveness, and work-life balance. This experience can be incredibly motivating and can help students better understand the potential career paths available to them."

Attending ACS Spring 2025 offered our students a unique opportunity to deepen their understanding of current research, connect with leading scientists and scholars, and explore future opportunities.

Student Poster Session

On March 28th, 2025, Dr. Patterson hosted a poster session for several students across many of the department's labs. Students were invited to present their posters to their peers and visit other presenters around the room.

Caleb Potter, a student in the Woolley lab, presented a poster on designs for multistep microfluidic devices meant to extract biomolecules that have been associated with pre-term birth. The poster session allows Caleb to explain his research.

"Preterm birth happens about ten percent of births, and [defects from preterm births are] the leading cause of death for kids," Caleb shares. "We want find a way to easily detect preterm birth before it happens."

The poster session allowed Caleb to effectively explain his research but also expound on all the effort and time put into turning the research into what it is today.

"This work has been built upon for the past five or ten years," Caleb explains. "It's a group effort, and none of this [presentation] is stuff that I can take full credit for. Everything we do is collaborative with each other. When you work together, that's how you solve problems."

Taytum Stratton, a student in the Michaelis Lab, shared a similar experience. Her poster explained the process of raising the reactivity of monometallic and bimetallic complexes using transition metal and inorganic ligands for the goal of creating highly active catalysts suitable for organic synthesis. Much of the research and creation of the poster came from the team she worked with.

"It's been a very collaborative process," Taytum shares. "We each have our own individual parts of the project, but then we come together on what we're all working on and create a whole story."

Spencer Ricks, a student within the Ess lab, also felt that his poster came from many sources of inspiration. His poster showcased molecular graphs, how they're represented in graph neural networks, and how those both have shaped modern chemical machine learning. For him, the largest influence on his poster and his research was others' research and papers on the subject.

"The biggest benefit [of this project] has been getting into the literature," he shares. "Really reading the mathematical derivation of a lot of these algorithms, tracing them from the paper where they were introduced to all the papers where they were developed, and understanding how that affects the chemistry."

The poster session highlighted both the expansive research happening across the department's labs and the collaborative efforts behind each project. Events like these serve as a valuable space for students to refine their communication skills, celebrate shared progress, and step more confidently into the world of research.

Three Minute Thesis Winners

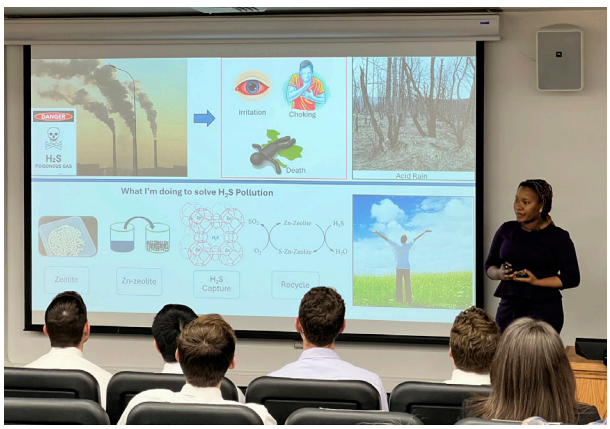
Adeyemi Ojaide, Rebekah Stanley, and Aubri Saxton won BYU's Chemistry Department 3MT Competition on February 14, 2025. They advanced to represent the department at the College of Computational, Mathematical, and Physical Sciences competition on February 28. At the college level, Rebekah earned first place, Adeyemi earned second, and Aubri received an Honorable Mention Award. Rebekah went on to represent both the Chemistry and Biochemistry department and the College as a whole at the university-wide competition on March 7.

Adeyemi's research focuses on creating a zinc-zeolite catalyst that captures hydrogen sulfide pollution without degrading the catalyst to help prevent and remove toxic hydrogen sulfide pollution. Combining zinc with zeolites and exposing the zinc-zeolites to hydrogen sulfide gas helps facilitate its reduction to sulfur. For creating an effective and efficient presentation of her work, Adeyemi said preparation was key, identifying the most important details of her thesis and creating a clear narrative to share.

Rebekah's research focuses on producing electricity from carbohydrates. Carbohydrate fuel cells create electricity using gold or platinum electrodes, and she hopes to create a more effective alternative by modifying the electrodes to release more energy from the carbohydrates. She shared her presentation with friends and peers before the competition to understand where details could be simplified and how an audience could understand her thesis without becoming confused.

Aubri's research examines cellular crosstalk with their environment using tissue engineering, then using those techniques to learn more about lung diseases and the effect the interstitium has on them. She practiced her presentation with her family to hone in on staying within the three-minute mark.

We commend these three students for their hard work and dedication, not just to their research, but their goals to improve the world around them.



Student Awards

HPLC Conference 2024

Best Poster Award:

Michael Haggard

American Chemical Society

2025 ACS Future Pharma Innovator:

Jude-Kelly Osasere

American Crystallographic Association

Margaret C. Etter Award:

Wisdom Abiodun

Industrial Special Interest Group:

Wisdom Abiodun

Crystal Growth and Design Poster Prize:

Wisdom Abiodun, Blake Averett

RCSB Protein Data Bank Poster Prize:

Kyle Ludlow

MiTeGen-Society of Physics Students Poster Prize:

Alihi Keliiliki

National Human Proteome Conference:

Best Lightning Talk:

Coleman Nielsen

Lightning Talk Honorable Mention:

Noah Earls, Martin Sorensen

Webinar Guest Speaker:

Coleman Nielsen, Noah Earls, Chad Hyer

Oral Presentation:

Wej Daouhai, Ben Turley

Poster Awards:

Ariel Denos, Esteban Colman, Coleman Nielsen, Brian Hayes, Jason Wells, Ben Driggs, Brayden Wehrli, Noah Earls, Chad Hyer, Christian Garrard

Keith P. Anderson Awards For Outstanding Performance:

Outstanding Freshman Chem non-major:
Andie Aagard

Outstanding Freshman Chem major:
Chase Kesner

Outstanding Organic Chem non-major:
Matthew Steed

Outstanding Organic Chem major:
Alyssa Merrill

Outstanding Analytical Sophomore:
Russell Mercer

Chemistry Literature Award:
Michael Haggard

Outstanding Biochemistry Student non-major:
Acelan Obray

Outstanding Biochemistry Student (junior/senior):
Kyle Nielson

Outstanding Physical Chemistry Student:
James Corey

Outstanding Inorganic Chemistry Student:
Caleb Potter

Outstanding Senior Analytical Chemistry Student:
Aaron Tibbitts

Outstanding Biochemistry Lab Student:
Stephen Crawford

Outstanding Biochemistry Lab Student:
Ethan Hardy

Eliot Butler Service Award:
Eliza Crowley

Outstanding Graduating Senior – CHEM:
Kirt Noble

Outstanding Graduating Senior – Biochem:
Luke Westhoff

Ida Tanner Hamblin — outstanding female junior:
Abigail Banks

Ida Tanner Hamblin — outstanding female junior:
Emily Richards

American Society for Mass Spectrometry

ASMS 2025 Graduate Award:
Sudam Mane

Student Spotlight:

Garrett Haynie

Garrett Haynie, a member of the Kelly Lab, works closely with ultrasensitive biochemical analysis. The Kelly Lab focuses on developing methods, instrumentation and applications for in-depth bioanalyses of trace samples. Garrett's current project is improving methods for low sample volume proteomics via mass spectrometry down to the single cell level. His work involves improving the workflow for low sample volume plasma proteomics. While working in the lab, he hopes to publish research and one day be accepted into medical school.

For Garrett, one of the highlights of his time in the Kelly Lab is the people he gets to conduct research with. As an undergraduate research assistant, he has the opportunity to work in the lab with other undergraduate students and graduates as they tackle problems together.

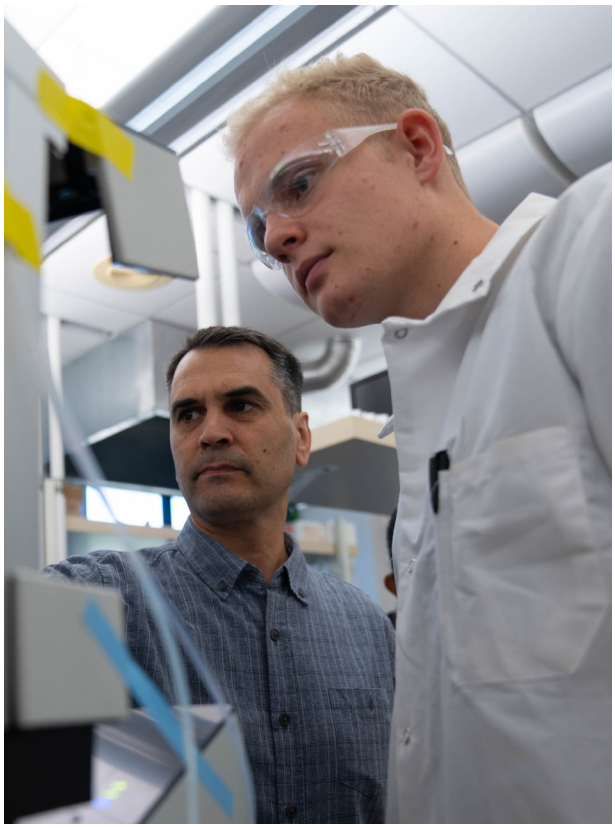
"The team I work with is an incredible one with different backgrounds and where everyone knows everyone well, both the undergrads and the grads," he shares. "I have had many opportunities to work with members from other labs as well as a couple of opportunities to present [research]. It has been an amazing opportunity to actively be part of learning in a way that is also expanding current knowledge."

Another part of the collaborative nature of the lab is being mentored by Dr. Kelly. While Garrett has individual goals he wishes to follow, he is still inspired by Dr. Kelly's spark and all the work done within the lab.

"Dr. Kelly is passionate about what he researches and teaches," Garret shares. "He is excellent at finding ways to teach various topics, whether they be five-minute tutorials before diving into grad-level data or explaining why a certain solution is added to another."

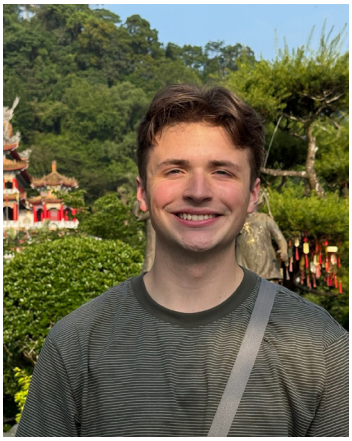
Garrett's own spark was fueled by his work as a URA. After he concludes his time at BYU, we hope he continues to go forward with what brings him joy, sharing his spark with others who will be inspired by his light and work.

Garrett is a pre-med student majoring in Neuroscience. He is originally from Mapleton, Utah, and enjoys hiking, tennis, pickleball, and playing the piano.



Student Spotlight:

Jackson Mattingley



Jackson Mattingley works as a member of the Christensen Lab trypanosome team. They use Trypanosoma brucei—a type of extracellular parasite—as a model organism to screen metabolic inhibitors in kinetoplastids. The team is working to identify potent metabolic inhibitors within the parasite from a small compound library. After selecting the most promising compounds, the team calculates effective concentrations with the goal of identifying which compounds significantly inhibit metabolic processes in T. brucei. These concentrations and results would be used in laboratory and clinical settings. Jackson is most interested in the drug design aspects of the project and the implications of finding a potent metabolic inhibitor that can be used by other researchers to better understand the parasites.

As a URA, Jackson has unique opportunities to learn and develop his skills as a researcher and assistant, gaining skills to help him grow his spark and pursue his interests as he continues his education. He has also been able to spend more dedicated time towards his research, aiding him in thinking about his future after his degree.

"Working in the lab has helped me excel in my courses and think like a scientist," Jackson shares. "I can leave lecture, apply what I learned in a research setting, and make meaningful contributions to my team. Working as a research assistant has also been a huge help in deciding what steps I want to take after graduation. I am fortunate to be able to put more time towards my research through my URA."

Another opportunity Jackson has as a URA is being taught by Dr. Christensen. Working closely with Dr. Christensen as a mentor has helped Jackson fuel his own spark and pursue aspects of their research that interest him the most.

"Dr. Christensen has been an incredible mentor in all aspects, educational, professional, social, and spiritual," Jackson shares. "Any time I've had a question or idea he's been available to help and encourage me."

Because of Dr. Christensen's encouragement and own spark, Jackson is able to pursue the research he loves and inspire others students to do the same.

Jackson is entering his senior year of the Biochemistry program. He grew up in Washington, D.C. and majored in Cell Biology and Physiology before becoming a part of the Biochemistry program. He enjoys being outdoors and going to the gym.

Student Spotlight:

Emma Richardson

As a long-time member of the Michaelis Lab, Emma Richardson has worked on several different projects, including creating complexes using platinum and a project for the Chevron Phillips Chemical company. Now, she works on synthesizing compounds for brain cancer and testing them in cells. Her ultimate goal is to be accepted into medical school to become a physician.

Emma's spark of pursuing medicine started from her own desire to help others. But as she learned more about potential paths her education might take her on, she was led to the Michaelis Lab, where she enjoyed research she did not originally anticipate pursuing.

"That desire to be a physician is actually what led me to start working in the Michaelis lab," Emma explains. "Originally, it was just because I wanted to go to medical school, and I needed research hours. But as I worked here, I learned a lot about science, how to figure things out, and really get down into the deep bones of science. It became something that I really love. I hope as a physician, I can still do research."

Although part of the Michaelis Lab's research was outside Emma's expectations, the personal impact of working closely with Dr. Michaelis and the other researchers has helped Emma's spark to grow.

"[Our research] has definitely changed the course of my life," Emma shares. "It has helped me understand why I do the things that I do and how I can do them better. It has also taught me that it's okay to fail and that I'm going to fail all the time, but that I can keep going and great things will happen. And it has also got me excited about my work, and the potential that I have in research and also as a physician."

Although Emma does not know what greater impacts her and the lab's research will have, her hope is that others will see their work and be inspired to follow their own sparks.

"My biggest hope is that this research will actually just impact the undergraduates that I get to mentor under Dr. Michaelis," Emma shares. "And that they will be able to develop that same love of research that I did through being able to work on it."

With her work paving the way for others to follow and being mentored by Dr. Michaelis, Emma's own spark has grown tremendously, and she is able to move towards what she wants to do.

Emma is a pre-med student hoping to become an oncologist. She grew up in Idaho and is the oldest of seven children.

Student Spotlight:

Jonah Riggs

Jonah Riggs' role in the Harrison lab is a team member of a project led by graduate student Junhan Chen. They are studying a specific water contaminate called per- and polyfluoroalkyl substances, or PFAS. PFAS are known as forever chemicals because of their difficulty breaking down and how pervasive they are. Jackson and the team are using a method developed by the Environmental Protection Agency to test the water within the Provo River to check whether its level of PFAS is acceptable or not.

Although Jonah is a biochemist, he first became invested in this project when he heard the concept from Junhan.

"I had my first chemistry lab class, and Junhan was our TA," Jonah shares. "I talked to him, he told me about his project, and it sounded interesting. So far, it's been great."

While the project takes up a significant amount of Jonah's time as a student, he felt it has all been worth the effort as he develops his own interests and talents.

"I've been able to get more familiar with more high-tech instruments, stuff that I wouldn't normally use in general lab classes," Jonah explains. "It's nice to be able to use stuff that I wouldn't normally be able to use or interact with in my normal day-to-day life."

The project's impact on the local community is almost immediate; if the team finds unacceptable levels of PFAS in the Provo River, they want to take further action to help clean up the environment.

But without Jonah's help and interest in the project, the lab wouldn't be where it is today.

"[Jonah's] been able to think through problems and think through issues," Dr. Harrison, Jonah's mentor, shares. "And that's what I've appreciated about him. That's what I appreciate about all my students. They contribute to how to solve things, how to analyze things, how to, in this case, evaporate and filter and get detection levels that we can understand."

Because of Jonah's interest in the project, choosing to follow his spark, and being mentored by Dr. Harrison, the local community has become a brighter place, inspired by his willingness to act.

Jonah just finished his sophomore year in the Biochemistry program, but his current project is Analytical Chemistry. He is about to leave for a mission for the Church of Jesus Christ of Latter-day Saints to Busan, Korea.

2024 AT - A - GLANCE

$356,366
in Graduate Fellowships

154
Publications

130, 283
Total Undergraduate Research Hours

356
Undergraduate Majors

51
Scholarships

$7.4
Million in Grant Funding

69
Degrees Awarded

$2.05
Million in Undergraduate Research Awards

45,591
Student Credit Hours Taught

49
Fellowships

Graduates going to

21
States

3
International Countries

$112,860
In Undergraduate Scholarships

182
Student Conference Presentations

11,553
Students Served

$20,736
in Gifts for Student Travel

Annual Lectureship

On January 30th and 31st, the Chemistry and Biochemistry department was honored to welcome Dr. Elizabeth Kellogg from St. Jude Children's Research Hospital as the annual Rossiter lecturer. Dr. Kellogg received her bachelor's in Bioengineering from the University of California Berkley, and her PhD in Biochemistry from the University of Washington. She first opened her lab in 2019 at Cornell University and now runs her lab from St. Jude Children's Hospital in Memphis, Tennessee. Her lab's research seeks to understand molecular processes capable of rearranging the genome and potentially harnessing these processes in translational studies. As a friend of Dr. James Moody, Dr. Kellogg was able to meet with the Moody Lab and share her insights with them.

During her two-day lecture series, Dr. Kellogg gave a broad overview of her research, titled "New Genome-editing Tools to Advance Biotechnology and Medicine," and a more specialized lecture of her lab's work, titled "Understanding and Engineering Transposons for Next-generation Genome-editing." The Kellogg lab uses a gene-editing technology known as CRISPR (Clustered Regularly Interspaced Short Palindromic Repeats) to edit genomes and help correct them when needed. It uses RNA-directed integration for a single insertion of DNA into a genome. The transposition systems are highly complex, and the Kellogg Lab seeks to understand the mechanisms of programmable DNA-insertion. The ultimate goal of this research is to engineer new transposon systems for more accurate genome-editing applications. Her lab is developing the next-generation of genome-editing tools, allowing new strategies for treating cancer.

Many thanks to the Bryant E. Rossiter Memorial Endowment for funding these annual lectureships.

In Memoriam

The Department of Chemistry and Biochemistry wishes to express our condolences for the passing of Dr. Bryant William Rossiter. Born March 10, 1931, in Ogden, Utah, Dr. Rossiter passed away on December 22, 2024, in Provo, Utah, at ninety-three years old.

Dr. Rossiter and his wife Betty provided endowed funds for the establishment of the Bryant E. Rossiter Annual Lectureship Series in honor of their son, former BYU Chemistry and Biochemistry faculty member Bryant E. Rossiter, whose life was cut short by cancer.

To read Dr. Rossiter's complete obituary, please visit https://www.wheelermortuaries.com/obituaries/bryant-rossiter.

Advisory Board

The Chemistry and Biochemistry Department's External Advisory Board began in 2022 and currently hosts twelve members. The Board brings together alumni from academia, healthcare, and industry to give the department feedback, plan for future programs, and support during key decisions. Having opinions outside of the faculty and department leadership creates a space for new ideas and approaches.

Board members shared their joy connecting with students and our faculty.

"It's a rare privilege to meet together each six months with the outstanding leadership that directs BYU Chemistry & Biochemistry," Dr. John Fjeldsted shares. "The combination of their vision, dedication and openness to external thought is remarkable."

We thank the Board members for their support and all the hard work they do for our Department.

Dr. L. Naomi Handley received her BS in Biochemistry at BYU and a MS and PhD in Biochemistry at UC San Diego. She has worked at Octant for four years and now leads the Platform Development Team, working with scientists and research associates. She develops assays, scales using semi-automation methods, implements assays, and develops custom software as well as robust analytical pipelines.

Dr. Tom Lowery received his BS in Biochemistry at BYU and a PhD in Chemistry from UC, Berkeley. He works as the Chief Technology Officer at Satellite Bio, leading technological innovation and development. As a graduate student, he developed breakthrough magnetic resonance-based biosensors for molecular imaging.

Dr. John Fjeldsted was Agilent Technologies' senior director for LC/MS Research and Development. With more than forty-eight publications, he became a significant part of the company, helping it operate as one of the world's leaders in technological chemical analysis. Dr. Fjeldsted is now retired, and the Department wishes to thank him for his recent generous gift.

EXTERNAL ADVISORY BOARD MEMBERS:

Ken Westover
Georgi Lukov
John Fjeldsted
Ryan Marshall
Jared Rutter
Hernan Fuentes
Tom Lowery
Phillip Low
Susan Ward
Spencer Jones

Dr. Scott Johnson and Dr. Hector Becerril-Garcia, faculty at BYU-Idaho, have retired from the Advisory Board, and we thank them for their contributions and service.

We welcome the Advisory Board's newest members Dr. Susan Ward, Dean of Faculty Development at BYU-Idaho, and Dr. Spencer Jones, Associate Vice President for Eli Lilly.

BYU CHEMISTRY HOMECOMING

OCTOBER 17, 2025

Ezra Taft Benson Building (BNSN), Brigham Young University, Campus Dr, Provo, UT 84604

4:30 PM

REGISTRATION & FAMILY ACTIVITIES BEGIN

Registration will begin in W170 Benson Building.

DINNER

J-Dawgs and a potato bar will be served 5:00-6:30 PM.

5:00 PM

6:00 PM

Y-CHEM MAGIC SHOW

See chemistry in action!

FAMILY ACTIVITIES

Make your own slime and rockets!

6:30 PM

7:00 PM

Y-CHEM MAGIC SHOW

With a quiz and prizes!

RVSP

Thank you to our clubs: Y-Chem, Women in Chem, & Lecture Prep, for their work in making this event possible!

Please RVSP by Wednesday, October 1, 2025.

Alumni News

Gabriel A. Valdivia-Berroeta

works for Boehringer Ingelheim, a pharmaceutical company in Ridgefield, CT. As Senior Scientist in the Material and Analytical Sciences Department, Dr. Valdivia-Berroeta investigates drug molecules and their structure, especially in the solid state. To accomplish his work, he uses advanced instrumental techniques, including NMR, X-ray, and electron diffraction. He also develops computational chemistry programs to help teach about molecular structure. (Alumni class of 2020)

Phillip Low

is the Presidential Scholar for Drug Discovery and Ralph C. Corley Distinguished Professor of Chemistry at Purdue University in West Lafayette, Indiana. He is the co-founder of Umoja Biopharma and co-chair of the Chemistry and Biochemistry Advisory Board. Over the course of his career, Dr. Low has explored novel methods for targeted drug discovery, published over five-hundred scientific articles, and earned numerous national and international awards. (Alumni class of 1971)

Ryan Marshall

is a Partner with Barnes & Thornburg, LLP in Salt Lake City, Utah. He represents a wide range of clients from Global Fortune 50 companies to start ups, particularly in the biotech and pharmaceutical industries. He also works with innovators and entrepreneurs building IP assets to commercialize their discoveries and solutions. Much of his training in life science-related technologies includes pharmaceutical, biotech, and medical device technologies. (Alumni class of 2002)

Sarah Franklin

is an Associate Professor of Cardiovascular Medicine at the University of Utah in Salt Lake City, Utah. She has a research laboratory in the Nora Eccles Harrison Cardiovascular Research and Training Institute (CVRTI) and works as an Assistant Director with the Rural & Underserved Utah Training Experience (RUUTE) in the School of Medicine. Her research focuses on understanding DNA packaging in relation to gene expression. (Alumni class of 2006)

Career Connections

The Department held our first Career Connections event on March 7th, 2025. Six of our External Advisory board members came to campus representing their fields of work and study, including teaching, law, biotechnology, cancer research, and medical school. Students were able to meet with each alumnus and ask questions about the direction they took in their education and careers. The event was a great success, with both students and advisory board members commenting on the usefulness and fun interacting with each other.

Wyatt Hansen, a student who attended Career Connections, commented that the event was a great opportunity to learn about potential career options.

"I spoke with Ryan Marshall, the representative for patent law," Wyatt shares. "He gave me a lot of great pointers about what patent law is like, what the career path entails and what options are available. I found the event overall to be incredibly useful."

The External Advisory board members also shared their excitement and positive experience with Career Connections. Naomi Handly, one of the board members representing biotechnology, greatly enjoyed the event and the connections she was able to make with students.

"I love interacting with students," she shares. "I deeply believe in BYU's mission and want BYU, and its students, to be successful."

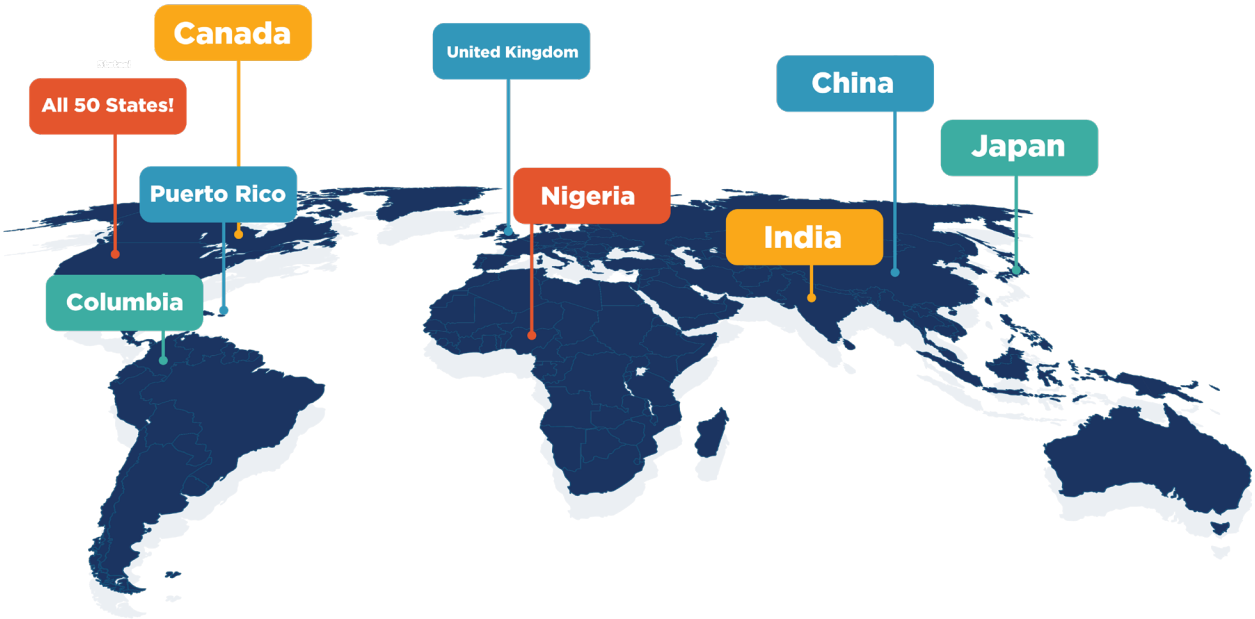
Because of her position on the External Advisory board and the only woman on the panel for Career Connections, Dr. Handly had unique perspectives

and insights for students. "While women in science are increasing, women are still seeking representation in whatever field they're interested in," she says. "In my experience, this seems especially true for women in the church. Female students ask me how I juggled it all—my education, career, marriage, church callings, children, and so on. For me, it was helpful to connect with students to understand how my own perspective can advise the department strategy: What are they worried about? What are their career goals? What are they interested in and excited about?"

Thank you to our External Advisory board members for dedicating their time and efforts to providing help for our students, and for all staff members and students who helped prepare and participated.

Alumni Impact

ALUMNI ARE MAKING A DIFFERENCE IN...



"Our alumni and friends are a vital part of our success. Your generosity has funded scholarships, enhanced instrumentation, and opened doors for students who may not have had such opportunities otherwise. Thank you for your continued support.

I encourage you to stay connected. Whether through alumni events, mentorship opportunities, or visits to the department, your involvement strengthens our community and helps us inspire the next generation of scientists. This year, we are making substantial changes to our Homecoming activities. Details about these exciting events can be found in this Chemigram. We invite you and your family to join us for this year's Homecoming festivities."

— Jaron Hansen, Professor and Chair

You make a difference when you...

Connect with students on BYU Connect

Host workplace visits

Extend intern and job opportunities

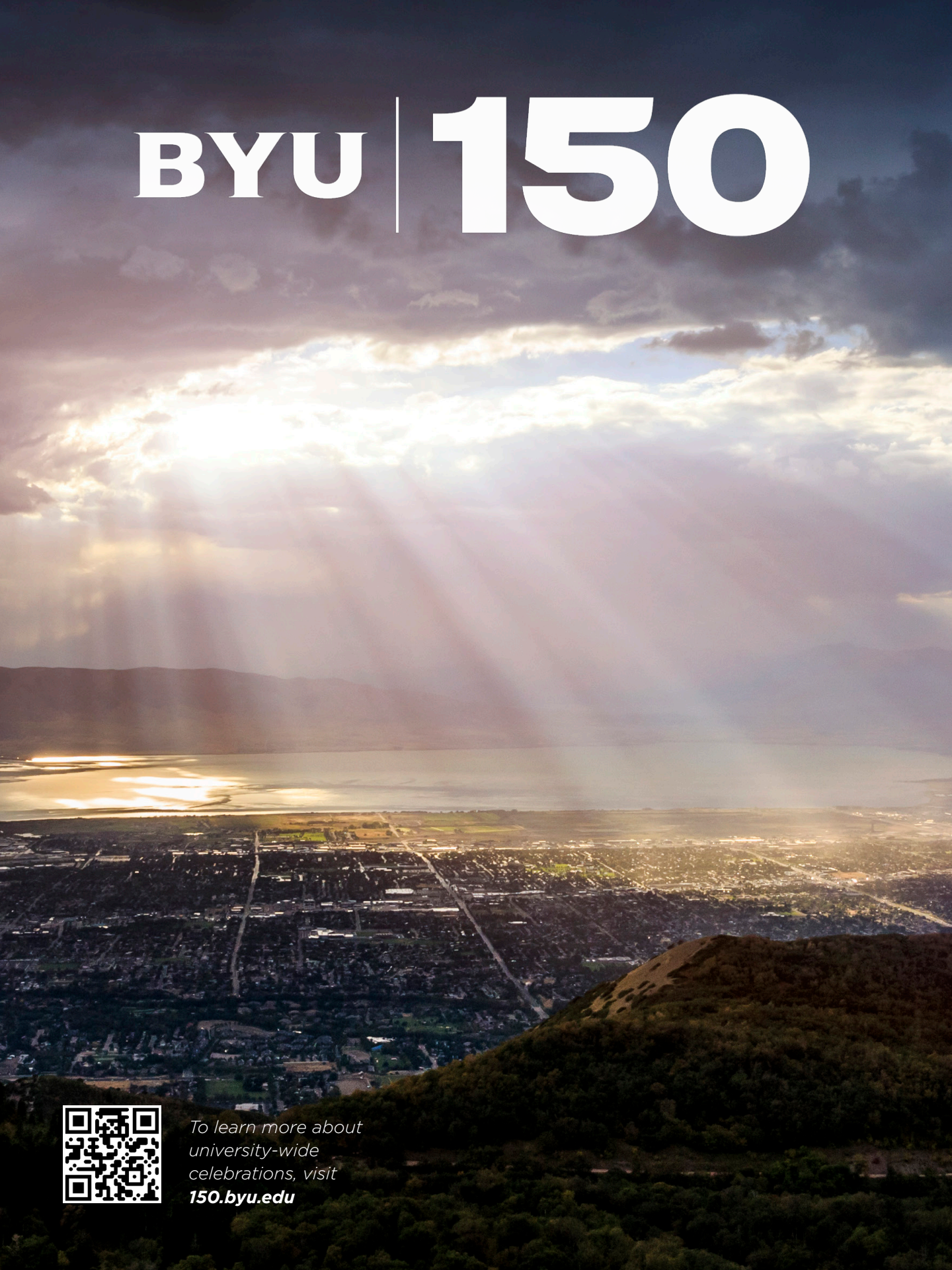
Mentor students

BYU Connect

Get involved!

If you would be interested in participating in a career panel for our students (in person or virtually!), please contact our department secretary; Erin McPhee at erin.mcphee@byu.edu.

If you have job postings or internships, please reach out to anna.kennington@byu.edu.


BYU 150
To learn more about university-wide celebrations, visit
150.byu.edu

HAPPY BIRTHDAY BYU!

Celebrating 150 Years of Light

October 16th, 2025 marks the 150th anniversary of BYU. The celebrations are themed around our connection with divine light, recognizing the light of Christ, remembering the sparks of those that led us to where we are today, and lighting the way to a brighter future. Festivities cover campus through June 2026 and include displays, service projects, scavenger hunts, and much more!

"That light groweth brighter and brighter"—"that all may be edified of all" (D&C 50:24; 88:122)

The Chemistry and Biochemistry Department's Role over 150 Years at BYU

As part of the celebrations, the Chemistry and Biochemistry Department will have a 150th-themed display up in the Benson Building by the West entrance. More displays can be found across campus showcasing how their departments have been uniquely influenced by divine light.

BYU
Chemistry & Biochemistry

To learn more about the history of the Chemistry and Biochemistry Department, please visit ***chemat150.byu.edu***

BYU Department of Chemistry & Biochemistry
Brigham Young University
C-100 BNSN
Provo, UT 84602

BYU Chemistry & Biochemistry

Make a Difference!

Your contributions matter. Visit our giving page at https://chem.byu.edu/donate/.