

The Element

March 2024



◀ The 11th Annual Judi and Jack Johnson BRASS Super Star Day took place at the ALLEY Theatre on October 23. More than 110 guests came to celebrate this philanthropic couple at our 2023 BRASS Scholars Reception, where the curtain went up to welcome our four new Scholars into the BRASS family.

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▲ BRASS welcomed the four 2023-2024 BRASS Scholars Julia Rosales, Paige Hall, Michal Tyrlik and Eric Garcia, at the October 23, Scholars Reception.



▲ Terry Kailo, Carolyn Faulk, Ed McMahon and Edna Meyer Nelson enjoy the 2023 BRASS Holiday party that was hosted and generously underwritten by BRASS member Carolyn Faulk.



▲ Dr. Michael DeBakey with Dr. Sara Shalin in 2002. See I president's letter below.

A Message from the BRASS President

Dear BRASS Members and Friends,

BRASS ended its 28th year with many highlights and fun events.

We selected four new BRASS Scholars and introduced them in October at our Scholars Reception at the Alley Theatre. In December, we had a wonderful Holiday party at the Montebello, and on March 12, we once again got to have some BIG fun at the Rodeo. September through December, BRASS Scholars Kali Deans, Linda Zhang, Vicki Mercado, and Chiraag Kapida defended and will receive their PhDs in May. All of them have returned to medical school to complete their MDs.

With your help and support, BRASS continues to be instrumental in both the personal and professional lives of our scholars. I received a letter from the husband of our former 2001 BRASS Scholar, Sara Shalin, which perfectly illustrates this continued impact.

Hi Elsie, I hope all is well! Kevin Shalin here, Dr. Sara Shalin's husband. I wanted to reach out to you to give an update on Sara's career. We've been in Little Rock, AR, for almost 13 years now, and Sara is a rockstar in the medical community, but as usual, she's as humble and modest as can be. Like many folks in academic medicine, Sara wears many hats. She's a full professor in the Pathology Department and the department chair of dermatology at UAMS, just to name a few of her job titles. She also heads up the MD/PhD program here at UAMS and is just as passionate as can be about building up the program and fighting for those students. The other night, she and I took five of the second-year MD/PhD students out to dinner, and I just can't tell you how much fun I had being around them. Sara and I are in our late 40s now, and seeing that young energy and passion really made me think about BRASS and the positive impact people like you, Les, and so many others from the organization had on beginning doctors. Your support during a very stressful time in a young person's career made a difference. I can tell you that for a fact, as I saw it firsthand. I see the work Sara is doing now with those same "kids," and I know a big part of it has to do with the positive experience she had during her years at Baylor's MD/PhD program and with BRASS. As her husband and someone who got to experience BRASS many years ago, I just wanted to thank you.



▲ Elsie Eckert with Stella

I can't say it often enough, the BRASS Board and I so appreciate all of you and your ongoing support for our exceptional scholars and their research. This year definitely promises to be another exciting year for BRASS. We could not do it without you. Thank you!

~ Elsie

BRASS Welcomes Four New 2023-2024 Scholars



▲ **Eric Joshua Garcia**
Myra Branum Wilson Scholar

Eric was born in the Philippines before moving at a young age to Upper Marlboro, MD. Eric advanced his studies at the University of Maryland Baltimore County where he earned a B.S. in Biological Sciences and graduated as a MARC U*STAR and Meyerhoff Scholar. Conducting research in the laboratory of Dr. Ellen Sidransky at the National Institutes of Health (NIH) for

four years, Eric connected with patients with rare diseases which fueled his passion for genetics and neuroscience. His experiences in Dr. Sidransky's laboratory resulted in Eric being awarded the Young Investigator Award at the WORLDSymposium Conference, a conference for rare lysosomal storage disorders, in both 2019 and 2020.

Following a two-year post-baccalaureate experience at the NIH, Eric was accepted to the Medical Scientist Training Program program at Baylor College of Medicine in 2021 before joining the Genetics & Genomics Ph.D. Program in 2023. His research interests involve using cutting-edge genetic techniques to take discoveries from rare diseases to better understand Alzheimer's Disease and Parkinson's Disease. Eric aspires to combine his research and clinical training to help identify novel and effective treatments for both rare and common neurodegenerative diseases.

Outside of school, Eric enjoys traveling, visiting national parks, and going to concerts. He often goes on hikes at Shenandoah National Park and enjoys soaking up the sun at Cape Henlopen State Park during the summer. His goal is to travel to Europe and hike the Swiss Alps before the end of his training at BCM.

Eric is excited about joining the BRASS family and looks forward to making new connections with its members and supporters and giving back to the Houston community.



▲ **Julia Enterria Rosales**
Don Sykora Scholar

Julia Enterria Rosales was born in Mexico City and grew up in Cabo before moving to Guadalajara for high school and college. She discovered her passion for biomedical research when her sister was diagnosed with a rare genetic disorder and knew she would dedicate her life to improving people's lives through research.

She majored in Biosciences at Tecnológico de Monterrey and fell in love with translational, disease-centered research. She spent two summers in the laboratory of Dr. Carly Filgueira at Houston Methodist where she helped design a hydrogel to deliver nanoparticles to the heart as a treatment for arrhythmias. Further, she spent 6 months at Universidad Complutense de Madrid in the laboratory of Drs. Eva Delpon and Ricardo Caballero investigating the role of heart failure drugs on cardiac electrical activity. She joined the Development, Disease Models and Therapeutics (DDMT) Ph.D. program at Baylor College of Medicine in 2023. As a graduate student, she hopes to do ground-breaking research to understand the mechanisms behind human diseases to discover new therapeutic targets and ultimately improve the standard of care.

Outside of research, Julia enjoys spending time with her family and friends and getting to know Houston. She loves sharing culture through food and enjoys cooking for her friends and family. Travel has been a big part of Julia's life, and although Spain is her favorite country to visit, exploring the U.S. is on her bucket list.

Julia is excited to join the BRASS family and is looking forward to sharing her passion for science with the Houston community.



▲ **Paige Ireland Hall**
Don D. Jordan Scholar

Paige was born and raised in Huntsville, AL, and attended Auburn University where she graduated with a degree in Chemical Engineering. Her interest in biology was sparked when attending a camp in elementary school where she extracted the DNA from a strawberry. She became fascinated with science and pursued several research opportunities before ultimately landing at Baylor College of Medicine.

The first of these was at HudsonAlpha Institute for Biotechnology, where she spent two summers researching projects ranging from characterizing the differentiation of cells to studying BIN1, a gene highly correlated with Alzheimer's Disease. From there, she joined a lab at Auburn, where she helped the lab understand how a treatment they developed for GM1 and GM2, two lysosomal storage disorders, functions within model organisms. Paige is now a Ph.D. student in the Genetics and Genomics program at BCM.

Outside of the lab, Paige enjoys exercising, cooking, and traveling. She says her mom's taco soup is her favorite meal to cook and is a hit among friends. Paige especially enjoys international travel, where her favorite destinations have been Copenhagen, Denmark and Paris, France.

Paige understands just how critical support is for student success and is grateful to BRASS for their unwavering resolve to help student scientists like her succeed.



▲ **Michal Tyrlik**
Sidney Broadfoot Faust Scholar

Michal grew up in Brno, Czech Republic and relocated to the United States when he was 15. He attended the University of Maryland and graduated with high honors in biochemistry and biology. He initially got interested in research working in a mouse lab at the National Institutes of Health campus in Maryland. Michal has worked in diverse areas of science such as synthetic chemistry, biochemistry of bacterial biofilms, mouse behavior, and genetics. He became especially interested in rare disease genetics after spending a summer at an NIH lab following his junior year of college, and after he pursued an opportunity to work as a postbaccalaureate fellow following college graduation.

Michal joined Baylor two years ago in the Medical Scientist Training Program (M.D./Ph.D.) and started his Ph.D. training in the Genetics & Genomics Graduate Program this year. He is mostly interested in rare genetic diseases and what they can tell us about human biology. He hopes to one day integrate his research with a clinical practice to deliver new treatments from the bench to his patients.

Outside of lab, Michal's favorite hobby is sailing. He first got into sailing when he raced dinghies in high school and continued it through college. Since moving to Houston, he has spent many weekends racing boats on Galveston Bay. His other hobbies include tennis and the game of chess.

Michal is honored to be able to join the BRASS family and is very excited to advocate for scientific research.



1. Lisa O'Leary and Bill Harris
2. Debby Leighton, John and Lynn Averett
3. Edna Meyer Nelson and Juliette Baker
4. Stephanie Keeling, Malcolm McDonald and Dr. Ben Deneen
5. Michele Collins, Leisa Holland-Nelson Bowman, Myra Wilson and Jo Ann Petersen
6. Carolyn Faulk and Terry Kailo
7. Chuck Simmons, Ed McMahon, Araly Simmons and Hershey Grace
8. Joni Baird
9. Devin and Laura Owen Pio, Kenny Rogers and Lisa Chandler
10. Myra Wilson, Ed McMahon and Judi Johnson
11. Carl and Linda Kuykendall
12. Lynn Kamin, Janet Hansen and Joesph Zoeller
13. Tamar Klosz Bonar and Dr. James Bonar
14. An evening of great conversations
15. Elsie and Les Eckert



16. Patrick Hunt and Elsie Eckert
17. Vesna and Dr. Jeffrey Southwick
18. Judi and Jack Johnson
19. Amber, Juliette and Dr. Matt Baker
20. Dr. Pedro Piedra
21. Dean Carolyn Smith and Klys Reedyk
22. Robin Simon and Marsha Tucker
23. Kenny Rogers and Dr. David Wright
24. Drs. Coralina Miho and John Gomez
25. Marcia Brown, Celine VanDerlofske and Steve Brown
26. Dr. Geoff Predis
27. Dr. Margaret Goodell

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1. Sharon Bright Amanya gives presentation
2. Dr. Katherine King and Michal Trylik
3. Myra Wilson introduces Scholar Eric Garcia
4. Mariah Berner gives presentation
5. Tamara Klosz Bonar and Dr. James Bonar
6. Edna Meyer Nelson introduces Scholar Michal Trylik
7. Dr. Matthew Baker introduces Scholar Julia Rosales
8. Dr. David Wright, Elsie Eckert and Kenny Rogers
9. Robin Simon introduces Scholar Paige Hall
10. Dr. Pedro Piedra, Emily Shultz and Michele Collins
11. Jody Merritt
12. Francoise and Peter VanDerlofske and Ashley Hayden
13. Les Eckert, Daniel Irion and Kirk Kveton
14. Jennifer Deger, Marcia and Steve Brown
15. Dr. William Decker



2023 BRASS Scholar Reception



BRASS Celebrates 11th Annual Judi & Jack Johnson Day

On October 23, at our annual scholars reception party our four 2023-2024 BRASS Scholars were introduced to the BRASS family by BRASS Scholar selection committee members Robin Simon, Edna Meyer Nelson, Myra Wilson, and Dr. Matthew Baker.

Generous funding from Jack and Judi Johnson through the David and Eula Wintermann Foundation brings grateful hearts to our scholars as they work tirelessly in their labs to achieve their PhDs. Starting in their second year, each of our 16 BRASS scholars receives \$3,000 for their research, lab equipment, computers to enhance their research, or specially bred control mice for their experiments, whatever is needed, they are welcome to use these funds as they see fit. To date, the Wintermann Foundation has given more than \$2 million to help fund the significant accomplishments that are milestones in our BRASS scholars' research success. BRASS scholar funding is a tremendous asset to their mentors, because these extra funds bring much-needed support when there is not adequate funding available to help our scholars and their labs move forward with their research.

PhD candidates Mariah Berner (2020-2021) and Sharon Amany (2021-2022) spoke about the impact of this financial support from the Wintermann Foundation and how profoundly it has advanced their research efforts and results.

Myra Wilson presented a certificate and a \$500 award with congratulations to BRASS scholars Sarah Waldvogel and Malcolm McDonald for being honored as the Houston Livestock Show & Rodeo 2023 Outstanding Community Leaders. Chiraag Kapadia, not in attendance, also received the award.

This award recognizes their outstanding service to the community, society, and humanity through their personal involvement and leadership.



BRASS Highlights

Awards and Research Breakthroughs



▲ Ashley Hayden

There is nothing quite like seeing crazy experiments work, and we had a huge success with a “Hail Mary” experiment solely funded by BRASS. I wanted to share this huge victory with you all because your support has made this possible!

We noticed patients with mutations in YBX genes, which aren’t known to cause any major diseases, have horrible neurological issues – mainly intellectual disability and seizures. However, no studies had connected the neurological problems to these genes, so we devised an experiment to test whether the gene is the cause. We used worms known as *C. elegans* which use the same molecules we do for memory and learning and work as a model to determine which genes control memory.

When we removed the YBX gene in the worm, we found, yes, these genes do control memory. We saw when the worms lose their YBX gene, they can’t remember anything, which mirrors what we see in the human patients with intellectual disability. This was exciting! We also proved having more of the YBX gene helps memory, which was another BRASS funded experiment and is a very important result!

Then, we wanted to do the crazy, “Hail Mary” experiment – we made worms which have a mutation in their YBX gene that is the same as the human patients to determine if the mutation is the cause of the issues.

I tested to see whether these worms with the human mutation have bad memory, and just like the patients, they do!!! This means the mutations in the YBX genes in human patients are likely causing some, if not all, of their neurological issues. This is the first time anyone has ever showed that the YBX genes are involved in anything neurological. We want to help patients and their families, who have likely never had any answers about their neurological issues find closure.

This entire project from implementation to findings of these experiments were exclusively performed with BRASS funds. The project wasn’t always so human-focused, but you always supported it. I can’t thank you enough for your help, time, effort, and all the work you do for research. You make a difference!

A BIG BRASS Congratulations to Ashley, she recently won the Rush and Helen Record Fellow Award for the Department of Neuroscience. It is the highest award a graduate student in the Department of Neuroscience can receive. The award itself is named for Rush and Helen Record, who had a daughter with schizophrenia when little was known about the disease.

BRASS Scholars Receive Awards

▼ Myra Wilson presented BRASS Scholar Sarah Waldvogel (2020-2021) MD/PhD candidate and Malcolm McDonald (2021-2022) MD/PhD candidate with framed certificates and a \$500 award for being selected as the 2023 HLS&R Outstanding Community BRASS Scholars of the year. This award is in recognition of their outstanding service to the community, society, and humanity through their personal involvement and leadership.



◀ BRASS Scholars Vicki Mercado, Linda Zhang and Kali Deans PhD candidates all defended this fall and will receive their PhDs in May. BRASS members Les and Elsie Eckert, Doc and Tamara Bonar, Peter VanDerlofske, Michele Collins and Craig Moffatt were proudly in attendance to hear their brilliant defenses.



◀ Kat Koboyanski MD/PhD candidate received the Society for Neuroscience Trainee Professional Development Award (TDPA) by the Burroughs Wellcome Fund. The Society for Neuroscience TDPA award, funded by the Burroughs Wellcome Fund, recognizes graduate students and postdoctoral scholars who demonstrate scientific merit and excellence in research.

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