

HUMAN BIOLOGY

STANFORD UNIVERSITY

SUMMER 2022

HUMBIO GRADUATION CELEBRATING THE INCREDIBLE CLASSES OF 2020, 2021, & 2022!

After two years apart and two virtual graduation celebrations, the Program in Human Biology was thrilled to celebrate the accomplishments of the Classes of 2020, 2021, and 2022 at the in-person graduation ceremony this June. More than two hundred graduates and over one thousand guests joined us for the special occasion.

Congratulations to all of our wonderful graduates! We cannot wait to see what your futures hold.



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TAKING ACTION: HUMBIO EFFORTS AMIDST A GROWING MENTAL HEALTH CRISIS

Content Warning: *This story contains sensitive material on mental health including mentions of suicide that may be triggering to some readers. If you or someone you know is at risk, you can call the National Suicide Prevention Lifeline by dialing 988. Additional resources are available [here](#).*

Nearly one in five adults in the United States lives with a mental illness ([National Alliance on Mental Illness](#)) and roughly 75% of lifetime mental health conditions develop by age 24, making the college years a critical period for providing resources and open dialogue about mental health.

The transition to college is a time of change that brings a multitude of new stressors. Students live independently from their loved ones and need to take charge of their physical and mental health, all while contending with the rigorous demands and expectations of academic and university life.

Stanford students are not immune to the physical and psychological pressures of the college experience. The university brings together exceptional students from across the globe in a high-pressure and high-stakes environment; allusions to imposter syndrome* and duck syndrome** are very common on campus.

“It is interesting that ‘being busy’ is seen as a badge of honor and success, but being overwhelmed or distressed by how busy you are is not socially appropriate. This is not a good combination,” Dr. Catherine Heaney, Associate Professor of Psychology and of Medicine explained.

Add to this the challenges brought about by a pandemic. In the blink of an eye, students felt they were being pushed out of their dorms, isolated from their friends, and forced to navigate a new college experience made up of remote or hybrid learning. “I had to re-learn how to learn under these new conditions and circumstances, but my bandwidth had decreased significantly,” Sierra Porter ‘22 shared. “Staying at home meant I had a responsibility as a student, but also as a daughter with three generations in my household. I struggled to manage taking care of my family while also excelling in my classes.”

Mental health issues facing students have come to the fore in the wake of several student deaths over the last year. These heartbreaking losses have put a microscope on Stanford’s culture and have had profound effects on the greater community. “These suicides have greatly affected the well-being of my students,” Human Biology lecturer Dr. Judy Chu said. “Even those who didn’t know these students personally felt the sting and sadness of losing someone like themselves – young, smart, trying to find their place and purpose in the world, wanting to be hopeful but frequently daunted and disappointed by our current reality.”

In April 2022, The Stanford Daily published a [special edition](#) focused on mental health at Stanford, which highlighted just how many people were struggling in silence. The article listed issues such as a lack of diverse providers, long wait times, the stigmas associated with seeking help, and an unprecedented demand for support to manage emotional distress. University administrators have acknowledged the rising need for additional support and are actively working to address students’ mental health needs. But what else can be done?

Human Biology students and faculty have long been active in building healthy communities and addressing mental health needs, at Stanford and beyond, in diverse ways.

* *Imposter Syndrome is the state of feeling inadequate, like a fraud, and unworthy of accomplishments. One may attribute success to luck and circumstance rather than competence, abilities, and intelligence. (Clance & Imes, 1978; Clance & O’Toole, 1987; Langford & Clance, 1993)*

** *Duck Syndrome describes students struggling to survive the pressures of a competitive environment while presenting the image of relaxed California. A calm and happy duck floating on the surface but paddling furiously underneath to stay afloat (KQED, 2019). Learn more about Duck Syndrome at Stanford in this [Stanford Daily opinion piece](#).*

Human Biology Students Mobilize to Improve Mental Health on Campus and Beyond

Recent Human Biology graduate Aneeqa Abid '22 has been an active mental health advocate for the Muslim community at Stanford and beyond after witnessing the struggles of her family and friends and their disregard for the importance of mental health and well-being. The dearth of mental health resources and support for the Muslim community became apparent to Abid in her work as a community leader for the Muslim Student Union, staff member for the Markaz Resource Center, and lab member of the Stanford Muslim Mental Health and Islamic Psychology Lab (MMHIP). "My Muslim peers often confided in me with their struggles. They did not seem to think that seeking professional help would be beneficial and were hesitant about how a professional who did not understand their background or struggles could help them."

In 2020, after a conversation with her freshman dorm mate and good friend, Mahnoor Hyat '22, Abid and Hyat decided it was time to act. "We shared our ideas with community leaders Dr. Rania Awaad, the Director of the MMHIP Lab, and Dr. Abiya Ahmed, the Director of the Markaz Resource Center, both of whom knew the Stanford Muslim community well. Their guidance, ideas, and mentorship helped solidify the idea of a research-based advocacy project," Abid said. "We wanted to ensure that whatever services we advocated for would actually be responding to the needs that students themselves highlighted." And thus, the Stanford Muslim Mental Health Initiative was born.

Abid and Hyat conducted a series of small focus groups and interviews with students from the Muslim student community. Their [research](#)

concluded that "mental health stigma, spirituality and religiosity, and navigating Muslim identity on campus, all play a role in students' mental health wellness" and that the majority of students wanted more diversity in wellness program offerings and counseling services (*Understanding Stanford Muslim Student Mental Health Challenges & Needs, 2021*).

"It's interesting that 'being busy' is seen as a badge of honor and success, but being overwhelmed or distressed by how busy you are is not socially appropriate. This is not a good combination."

Abid and Hyat submitted a detailed report to the Stanford administration with their findings and suggested areas for improvement. The result? A fully-funded pilot program with free drop-in consultation sessions with Muslim-identifying therapists and an agreement with university administrators that they would hire a Muslim-identifying therapist for Counseling and Psychological Services (CAPs) to meet Stanford Muslim students' mental health needs.

Abid's efforts on behalf of the health, well-being, and academic experience of Muslim students at Stanford will continue. As she begins her co-term program in epidemiology, Abid plans to continue pursuing her passion for community health work, specifically with marginalized groups.

Liz Heckard '22 spent her last

academic year working on a Senior Synthesis project – funded by the Bingham Foundation Fund for Student Innovation – looking specifically at COVID-19 mental health repercussions on Stanford student-athletes. As a retired student-athlete herself, Heckard was concerned about the combined effects of COVID-19 and the announcement that several sports would be eliminated on fellow student-athletes' mental health and well-being.

Throughout her study, Heckard conducted interviews with student-athletes across 27 varsity teams, including athletes who retired during the pandemic and those who were affected by the decision to eliminate their sports.

Heckard found that roughly half of the student-athletes had previously or were experiencing feelings of sadness, depression, and anxiety. A third of students experienced excessive stress, concentration difficulties, or withdrawal from their friends and loved ones. Above all, students were concerned by the administration's perceived disregard for their well-being, the lack of emotional support they received, and the expectation to continue being high-performance athletes during these challenging times.

Heckard met with several key Stanford athletic administrative bodies – the Student-Athlete Advisory Committee (SAAC), Stanford Sports Psychology, Stanford Athletics Administration, and the Athletic Academic Resource Center (AARC) – to share her findings and brainstorm ways to mitigate the highlighted mental health issues and improve tailor-made services for student-athletes. "The support and enthusiasm on the part of the student-athletes has been amazing, [...] and the support from the

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AARC and specifically Sports Psychology has been tremendous,” Heckard noted. “Athletes *want* and *need* change. I hope that [these findings] benefit the undergraduate community by recognizing gaps in mental health care for student-athletes and enhancing the quality and availability of resources. Hopefully, with this information, we can continue to support the health and well-being of student-athletes.”

Abid and Heckard are joined by many other HumBio students, such as Gabrielle Li ‘22, who have actively worked to address the mental health needs of the Stanford community and beyond. An advocate of the benefits of the arts for mental and emotional health, Li founded [Virtual Companions](#), a “national non-profit working to foster acts of intergenerational kindness and meaningful companionship between generations through conversation and the arts.” Founded during the pandemic, a time of extreme isolation, especially for the elderly, the mission of Li’s program is to reduce loneliness and mental health struggles and to increase social support and community. The initiative offers four programs – phone calls, pen-pals, cards and crafts, and virtual concerts – each led by fellow Stanford students, including HumBio recent graduates Ciauna Tran ‘21 and Cameron Lincoln ‘22.

Programmatic Efforts

From an academic perspective, Human Biology offers a variety of

classes that allow students to explore mental health in areas such as addiction, disparities in healthcare access, adolescent development and migration, and community psychology. Instructors and staff alike focus both on exceptional educational opportunities and on treating students with compassion.

One lecturer who has actively incorporated mental health and well-being into her teaching is Dr. Judy Chu. In her popular course, HumBio 144, *Boys’ Psychosocial Development*, students learn about the intrinsic connections between mental and physical health and develop an understanding of what it means for boys to become men in modern society. The course traces how boys’ behaviors are influenced by social constructions of gender, and how boys negotiate their sense of self amidst cultural notions of masculinity and pressures to conform to group norms.

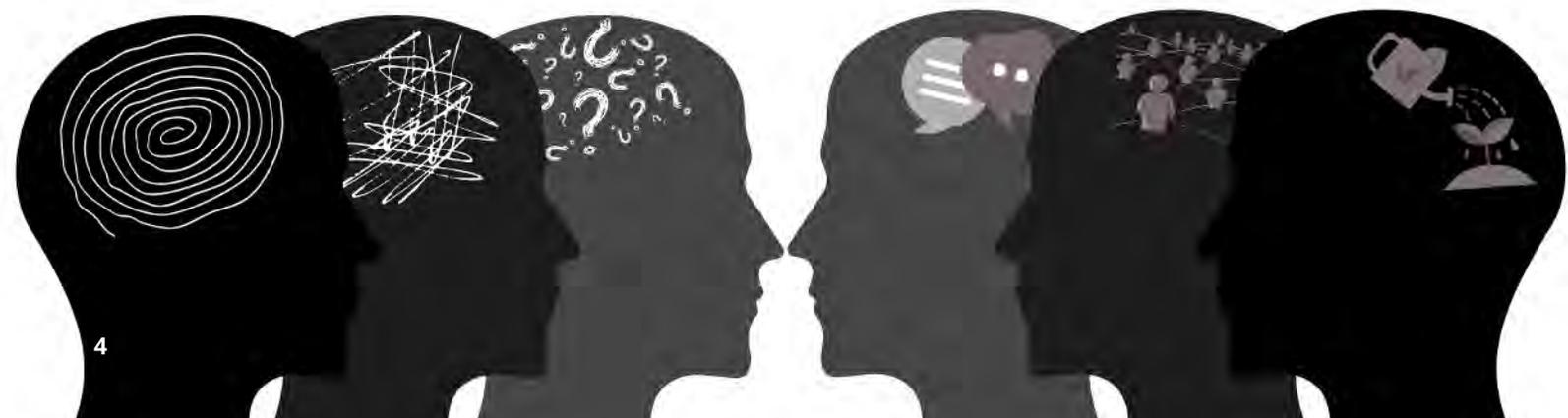
Chu acknowledges that many of these timely topics can be challenging, personal, and, at times, triggering or difficult to process for students. In addition to regular office hours, students are required to check in with Chu twice a quarter, where they are free to discuss assignments and class content or personal interests, goals, and events going on in their lives.

Especially during the last couple of years, Chu has tried to keep a close eye on students who seem distraught or not quite their usual selves and has proactively offered her support. She also made a concerted

effort to check in with her students more frequently than the required two times a quarter. “Of course, I want my students to do and be their best, but I also hope they can define and achieve success in ways that do not preclude their well-being and happiness.”

An expert in community health and psychology, Dr. Catherine Heaney admitted that it is easy for faculty and administrators to fall prey to underestimating the struggles of students when they appear to be effortlessly staying afloat. However, she noted that these assumptions about Stanford students’ abilities can be harmful. Not only can they reinforce stigmas associated with mental health issues and students’ struggles but they may also hinder students’ ability to find necessary resources on campus to express their struggles and have open conversations about mental health.

“In recent years, as campus administrators have made a concerted effort to be more inclusive and equitable, public discussions about the importance of feeling safe and respected have begun helping to reduce the stigmas associated with mental health issues,” she said. In her upper-division course, *Community Health Psychology* (HumBio 128/Psych 101), Heaney introduces students to topics in three key areas – promoting health behavior change, the intrinsic mind and body connection, and the patient in the treatment setting – and emphasizes the importance of exercising



empathy and compassion. Many of the topics discussed in the class can be challenging. In their discussions about the role that stress plays in chronic disease, Heaney and her teaching assistants work to foster a learning environment that is cooperative and mutually supportive and encourages students to feel valued when expressing themselves.

Heaney also co-leads one of Stanford's Bing Overseas Studies classes, *Community Health in Oaxaca* (OSPGEN 259), a month-long course that combines classroom study with cultural immersion, clinical shadowing, and community service. During their most recent program, which ended earlier this month, Heaney and her students noted that "there were psychologists available at all of the community health care centers. Physicians routinely referred patients who were undergoing any major life transitions like pregnancy, to a session with a psychologist." This value of mental health and well-being was also evident at Centro de Esperanza Infantil, a local non-profit organization that supports children from under-resourced communities and provides them with the education and skills they need to be successful and contribute to society. "[The organization] has recently added psychologists to their staff so that the children have the opportunity and space to discuss their emotional issues. Perhaps Stanford should take a page from the books of these Oaxacan organizations."

Since its inception, the Program in Human Biology has been challenging the status quo and helping students gain the interdisciplinary tools required to be the best future leaders. These principles ring true in this small sample of incredible work and efforts of many HumBio community members. "Health can be a comprehensive measure of how one feels mentally, emotionally, socially, and physically – it is not merely just the absence of illness or disease", one student stated in their senior capstone essay. At a time like this, when mental health needs are on the rise and accessibility to mental health care can be fragmented, the dedication and efforts of these individuals are particularly encouraging. ■

Judy Chu: Making Waves Beyond the Classroom



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Outside of the classroom, Dr. Chu is an advisor, author, committee member, and researcher of boys' relationships and development. She is the author of *When Boys Become Boys: Development, Relationships, and Masculinity* (2014) and co-editor of *Adolescent Boys: Exploring Diverse Cultures of Boyhood* (2004). She has published several research papers and articles examining the identity development, behaviors, and relationships of adolescent boys, ways to foster health resistance against societal pressures, and the effects of cultural constructions of masculinity on relationships, interactions, and sense of self and sense of integrity. She has also helped develop curricula for The Representation Project's documentary, *The Mask You Live in*.

Chu currently serves as the Chair of the Global Men's Health Advisory Committee at [Movember](#), a leading global organization that addresses critical health issues facing men including prostate and testicular cancer and mental health and suicide prevention. Through its campaigns and programs, the organization works to "normalize vulnerability and struggles that people of all genders experience but that are especially stigmatized and misunderstood when boys and men admit to them."

Chu also serves on the Board of Directors for [The Partnership for Male Youth](#), a national organization that works to advance the health and well-being of adolescent and young adult males by identifying and addressing unmet health needs, improving public awareness and advocacy, engaging and building partnerships, and developing resources such as podcasts that cover relevant and important issues facing young boys today (body image, suicide, environmental inequities). Together with four of her former students, including HumBio alum Margaret Rosenthal '20, Chu wrote a [research review](#) on unrecognized depression in adolescent and young adult males. She is also actively involved with [Equimundo: Center for Masculinities and Social Justice](#) and the [Boys' Club of New York](#).

"There are a lot of great, smart people working hard to help making things better for everyone, and they have been a constant source of inspiration and hope for me. [...] I hope [the HumBio community] will feel free to contact me if they would like to learn more about scholars, researchers, and activists who are leading the way in raising awareness about the importance of self-care, offering new ways of thinking about mental health, challenging stigmas, and fostering open dialogue about how we can all better support each other." ■

STUDENT NEWS

Zeena Khazendar Awarded Newman Civic Fellowship



© Courtesy of Zeena Khazendar

Earlier this year, Zeena Khazendar '23 was selected as a 2022–23 Newman Civic Fellow by Campus Compact. The award honors student leaders who have demonstrated a commitment to finding solutions for complex social and environmental challenges. Khazendar was recognized for her passionate commitment to improving health access and outcomes for vulnerable people globally.

From research in Stanford's Biobehavioral Pediatric Pain Lab to directing the student-led organization SCOPE, to establishing Virtual Mentorship for Students Abroad, to helping build the Middle East and North Africa (MENA) Health Program at Stanford, Khazendar actively addresses the needs of each community and works to create change and make an impact. She is also a member of Stanford's beach volleyball team and volunteers with Kids with Dreams and Special Olympics. Read the full news announcement [here](#).

A HumBio Student's Journey to Body Positivity

In October of 2021, a former Facebook data scientist testified before a Senate subcommittee, presenting internal company data that revealed the potential for social media platforms to have serious harmful effects on some young people. Days later, amidst national attention on the matter, Jennifer Neda John '23 published an [article on Slate](#), sharing her own experience with anorexia and the toll that social media platforms, and Instagram in particular, can take on body image.

A Bay Area native, John spent much of her childhood on Stanford's campus and aspired to become a Cardinal. "I love learning from others," she shared, "and it was clear to me that the lessons I would learn from my peers and professors at Stanford would far outlast my time as a student."

Human Biology was a natural fit for John who, torn between the pre-med track and a career in technology, was looking for a program where she could explore



© Courtesy of Jennifer John

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Celebrating another HumBio Core cohort crossing the finish line!

CALL FOR HUMBIO ALUMNI MENTORS!

HumBio is looking for alumni who enjoy connecting with small groups of current HumBio students to share career wisdom and your HumBio journey.

We are particularly looking for alumni who are available to participate in our program in person on campus this fall.

If you are interested in participating either this fall or in the future, please fill out this [brief form](#) with your information.

both. “HumBio has created a new lens through which I view my interests while also inspiring me to pursue new interests.”

During her time at Stanford, John has also pursued a minor in Computer Science. Through her work with the [Health Literacy Lab](#), she has developed a keen interest in health literacy—a topic that strongly aligns with her area of concentration in Human Biology: “Biomedical and Social Determinants of Health.”

"My hope is that by sharing my story alongside specific technical recommendations, I can suggest a path forward for social media platforms to support, rather than harm, mental health for many others."

Inspiration for her published article came during her sophomore year when she worked as a research assistant at the Stanford Internet Observatory, a cross-disciplinary program that focuses on social media and the abuse of information technology. While working there, she developed an interest in how social media platforms develop policies about online content. Having struggled with an eating disorder herself and witnessing the struggles of her friends, John began thinking about the impact social media has on mental health, especially for adolescents and young adults.

That summer, the Facebook Files were also leaked, which provided evidence that supported claims of the platform’s harmful mental health effects. She knew at that moment that it was time to share her story with the community and propose recommendations for protecting teenagers from eating disorders.

A few months later, John published her [op-ed piece](#). In the article, John reflects on her experience with

anorexia and how Instagram triggered her disorder and hindered her recovery. With Instagram users often highlighting only the best snapshots of their lives, an individual exposed to this content day-in-day-out can quickly fall down the rabbit hole to chase these ideas of perfection. Interestingly, as John entered recovery, Instagram also became a source of support as she spent hours poring over stories, not unlike her own. It was an outlet

where she wasn’t alone in her struggles but was a part of a larger community.

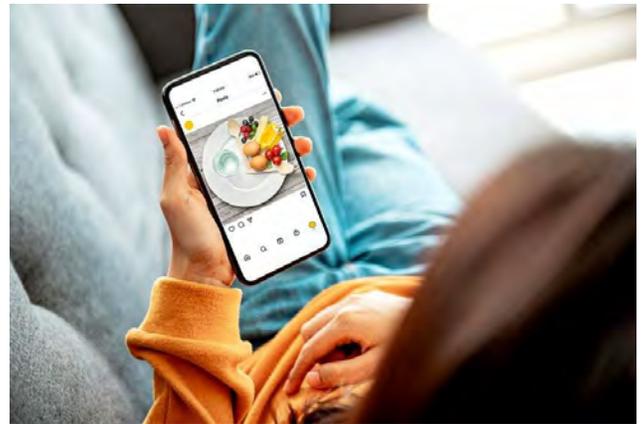
Over the years, researchers have emphasized the strong association between social media platforms and eating disorders. And while these platforms have taken small steps to help protect users from eating disorder-promoting content, John argues that these changes are only the bare minimum and that much more work needs to be done.

“The data show that I am far from alone in my experience,” she explained. “My hope is that by sharing my story alongside specific technical recommendations, I can suggest a path forward for social media platforms to support, rather than harm, mental health for many others.” In coming forward with her struggle with anorexia, she hopes that other teenagers and

young adults will realize that their experiences are not as uncommon as they might think.

Fast forward to today—John is the president of [Stanford’s Students Supporting Body Positivity](#), a student-run advocacy group. The group aims to increase awareness about eating disorders, connect individuals with treatment, and promote body positivity. The group actively educates residential assistants (RAs), resident fellows (RFs), and dining hall staff on eating disorders.

Over the winter break, they also launched peer-led support groups for students with eating disorders. This community creates a physical space for struggling individuals to have conversations instead of becoming isolated and relying on social media to fill the void. As the group grows in visibility and numbers, John and SSBP plan to organize events for students to share their



© Photo Illustration by Slate.

experiences, address eating disorders in athletics, and host a series of body image workshops at local schools.

For anyone struggling with an eating disorder, the [National Eating Disorders Association](#) can be a helpful resource; they have a [guide](#) for those who are interested in sharing their experience with others.

RECENT GRADS NEWS

Carissa Lee '22: 2022 Kennedy Prize in Natural Science Recipient

Congratulations to Carissa Lee '22, who was awarded the 2022 David M. Kennedy Prize in Natural Sciences for her honors thesis, “Multimodal Mapping of Cardiac Cell Types Throughout Mammalian Embryonic Development.”

Lee's thesis was the culmination of three years of research under the direction of Professor Sean Wu and M.D.-Ph.D. student Francisco Galdos. In their nomination letters, Lee's mentors noted that her work has significant implications for our understanding of cardiac development and will provide a powerful resource to other scientists investigating the causes of devastating congenital heart defects. They also commended her for her exceptional analytical skills, her deep scientific curiosity, and her focused dedication and passion for the work.



Lee presenting her research at the 2022 Human Biology Gelles Honors Senior Symposium - Friday, May 13, 2022

After graduating this past June, Lee joined the Stanford Cardiovascular Institute full-time as a research assistant where she will continue to support research on congenital heart disease led by Professor Sean Wu.

The Kennedy Prize is awarded annually to the single best thesis at Stanford in each of the four academic areas: humanities, social sciences, natural sciences, and engineering & applied science. Award recipients have accomplished exceptionally advanced research in their respective fields and have shown strong potential for publication in peer-reviewed scholarly journals.

Samantha Els '22 Receives Caryn Schwartzman Spirit Award

This Spring, Samantha Els '22 was awarded the Caryn Schwartzman Spirit Award at the Autism Science Foundation's "Day of Learning". The award is presented to a family member of a person with autism who has exhibited unwavering dedication and energy in raising awareness about autism and bettering the lives of individuals with autism and their families.

During the COVID-19 pandemic, Els co-founded [Sam's Sibs Stick Together](#) in collaboration with ASF and Els for Autism. Together with other autism siblings, researchers in the field, and leaders of other organizations, Els hosted six webinars where they openly discussed their experiences as autism siblings and highlighted the importance of and latest findings in sibling research. The initiative also aims to provide general resources and support for siblings of individuals with autism spectrum disorder.

[Autism Science Foundation](#) (ASF) is a non-profit organization that raises awareness and provides information on autism spectrum disorders and supports and funds innovative autism research. [Els for Autism Foundation](#) was established by Samantha's parents, Liezl and Ernie Els to support individuals with autism spectrum disorder and their families and offers programs in education, research, global support, recreation services, adult services, and therapy services. Congratulations Samantha! Read the full announcement [here](#).



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HumBio Fulbright Scholars Prepare for Takeoff

This Fall, two Human Biology graduates, Alexa Hui '22 and Alexander Bhatt '22, will pack their bags and head overseas as Fulbright Scholars for the 2022–23 academic year.

Alexa Hui's coursework in HumBio focused on the pathophysiology of chronic and infectious disease, and she minored in political science.

In the coming year, Hui will support a clinical trial evaluating emollient therapy as a prophylactic for preterm birth complications in infants at the Sally Mugabe Central Hospital in Harare, Zimbabwe. Emollient therapy is a massaging technique using natural emollients like vegetable oil or sunflower seed oil on infants, a method that is used across Sub-Saharan Africa, Asia, and the Mediterranean region. In addition to helping with data collection and quality assurance, Hui will survey the parents of infants enrolled in the trial to gather qualitative data on cultural attitudes towards the emollient treatment and the mental health of preterm infants' mothers.

Hui was inspired to pursue a Fulbright opportunity thanks to the encouragement and support of her mentor, Dr. Gary Darmstadt. In Dr. Darmstadt and Dr. Tiffany Chao's course, HumBio 129S, *Global Public Health*, Hui discovered the myriad of health challenges facing populations around the world and that some problems may require non-medical solutions. "I learned that medicine is not always the newest, high-powered research working to solve puzzling chronic diseases," she explained, "but finding a way to move people and supplies from point A to B, to convince communities to adopt vital

daily health practices, and to make the most of the resources available."

Shortly after taking that class, Hui became fascinated with Darmstadt's clinical trial work on emollient therapy in preterm infants. "[This research] exemplifies a low-resource, low-cost solution informed by local and cultural traditions which has the potential to improve many lives in the developing and developed worlds," Hui expressed. She shared that current research on the topic highlights a direct correlation between the massaging technique and improved weight gain, higher chances of survival, and reduced risks of fine motor and hearing disabilities in preterm infants. Hui went on to explain that this will be the first data of its kind from Sub-Saharan Africa and that findings from the trial may be used



© Courtesy of Alexa Hui

to inform the development of the World Health Organization's global recommendation on the use of emollient therapy in preterm infants, a recommendation that Darmstadt is leading. With her dream of someday shaping health solutions on a national and international scale, Hui believes that the experience will teach her valuable skills in patient care,

international collaboration, and working in novel situations.

Hui admits that there are some nerves about being alone in an unfamiliar environment, having never visited the African continent nor lived outside of the US for an extended time. Nevertheless, she is excited to immerse herself in a new culture, try local foods, and explore all that Zimbabwe has to offer. She is especially looking forward to working alongside local clinic physicians and nurses. Hui plans to keep an open mind when faced with new challenges and expresses sincere gratitude for the incredible opportunity. "I am so grateful to my mentor Dr. Darmstadt for connecting me with this opportunity, guiding me throughout the application process and in preparing my travel arrangements. I am also so thankful to my mom, dad, and sister for their help, always encouraging me, providing emotional support, and looking at my essays even during family vacations."

Alexander Bhatt graduated this June with a Master's degree in Epidemiology and Clinical Research and a double major in History and Human Biology (Theory and Practice of Precision Medicine in the US Health System). This Fall, he will head to Fuerteventura in the Canary Islands, where he will teach English and organize an after-school youth soccer league. He also plans to work at local health clinics and explore ways to help detained refugees from North and Northwest Africa.

Like Hui, the motivation for Bhatt's Fulbright came from the mentorship, care, and encouragement he received from his late father and the late Dr. Sanjiv 'Sam' Gambhir. Recognizing what it is like to lose a loved one too early, Gambhir took Bhatt under his

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© Courtesy of Alexander Bhatt

wing after his father's passing and worked hard to support, push, and guide him. Both Bhatt's father and Gambhir had didactic teaching styles, worked hard and were receptive and compassionate to those around them, qualities that Bhatt admired. "My dad worked three jobs to keep food on the table, and Dr. Gambhir was always operating and managing a project targeting a new disease," he reflected. "The beauty of a good teacher is that their knowledge lives on in those they have taught."

His loving relationship with his brother, Steven, who has Down syndrome and autism, has also taught Bhatt to remain bubbly, goofy, and full of life in the face of whatever challenges life brings. With his fun-loving energy and his passion for working with children, Bhatt goes into his Fulbright project with the hope of instilling this same appreciation of learning, kindness, and spirit in the students of Fuerteventura that his father, Gambhir, and Steven instilled in him.

Bhatt never imagined that he would move to a new country, but as he begins preparing for his journey, the excitement for this new adventure grows. And while the weather,

cuisine, and culture of the islands are hard to beat, what he most looks forward to is meeting new people and growing as a Spanish conversationalist. When asked what he would take with him, he said his film camera, a wetsuit and booties, and his journal. He'll also carry with him a quote that one of his Stanford professors wears on a necklace – "When in doubt, do the most beautiful thing."

"The Fulbright opportunity would not have happened if not for HumBio" he shared. "From the encouragement of my advisor Paul Fisher (HumBio '85) to apply to the Fulbright Program, to the late-night Spanish refreshers with Ángel Ortiz (HumBio '22) before my Fulbright interview, and even the recommendation to go to the Canary Islands after hearing about Elyse Lowet's (HumBio '24) time in Morocco, none of this would have been possible without this community. I am a better scholar and will be a better instructor because of my experiences in this program, and these are lessons and skills I am proud to carry with me to the Islands and beyond."

After completing their Fulbright projects, Hui and Bhatt plan to attend medical school. Hui is currently busy applying to schools in the hopes of starting in September 2023. Bhatt will be heading to school on the East Coast where he will further explore his interest in pediatric hematology, oncology, and emergency medicine.

The Fulbright U.S. Student Program provides grants to accomplished graduating college seniors, graduate students, and young professionals to pursue graduate studies, conduct research, and teach English in more than 140 countries. ■

Curran Phillips '22: Gymnastics All-Star

Curran Phillips '22 has been a gymnastics all-star all season! Named to the Senior National



© Stanford Athletics

Team for USA Gymnastics, Phillips placed first on parallel bars and second on high bars at the 2022 Winter Cup in late February. At the DTB Pokal Mixed Cup in Germany in March, Phillips and the US team overpowered the competition and brought home the gold. He and the Stanford men's gymnastic team then dominated the NCAA competition where he was named the 2022 Parallel Bars National Champion and the team won its third consecutive title.

Phillips is not only an NCAA all-American honoree in vault and parallel bars but he has been named a CGA All-America, MPSF All-Academic, and CoSIDA Academic All-District and All-America scholar-athlete several times over the course of his gymnastics career. He was awarded the CGA Specialist of the Year at the College Gymnastics Association Awards and received Stanford Athletics Board's Biff Hoffman Award.

The list of accomplishments goes on and we expect it will only grow longer with each competition. Congratulations on the *many* incredible achievements, Curran!

The Rhetoric of Medicine with Dr. Nate Selden '86

The Human Biology experience has long played a role in Dr. Nathan "Nate" Selden's journey since he graduated in 1986. From his neuroscience research to teaching to patient care, Selden's day-to-day life is always filled with the complex and intricate human experience as it intersects in neurosurgery. Today, he is the Chair of the Department of Neurological Surgery and the Campagna Chair of Pediatric Neurological Surgery at Oregon Health & Science University.

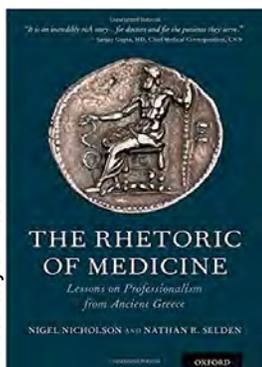
Selden has long been drawn to the idea that an understanding of humans and their problems can be found at the intersection of multiple disciplines, and that is where he discovered the inspiration for his new book. During a casual dinner conversation with his friend and co-author Nigel Nicholson, a classicist, historian, and the Dean of Reed College, Selden brought up an intriguing article on the mythological Greek father of medicine, Asclepius. The tale of Asclepius that Nicholson knew, however, painted him as a greedy god who only served his interests. Nicholson explained that this version was created by individuals in ancient Greece who felt competitive pressure from physicians. Realizing that some of the social dynamics between physicians and the public and the ensuing negative rhetoric reflected in Greek mythology is still present today, their conversation quickly evolved into a 10-year comparative study recently published as *The Rhetoric of Medicine* (2019, Oxford University Press).

The book explores the similarities and differences in the problems faced by medical professionals today and those faced by physicians in ancient Greece. From collaboration and competition amongst healthcare providers to the rift between working for money and connecting with patients to the massive expansion of technological knowledge, Selden and Nicholson illuminate readers on the profound parallels between ancient and modern medicine.

When asked whether HumBio and the interdisciplinary experience played a role in the development of his book, he agreed that it most certainly did. At its very core, the book is multidisciplinary, examining medical care practices and ideals from classical, historical, and medical perspectives. Beyond that, Selden argues that HumBio's practices in mental flexibility and intellectual curiosity allowed him to dive deep into both social and scientific narratives. "The principal influence of HumBio was really the open-mindedness to look around corners, share provocative ideas and questions with experts outside my discipline, and the courage to 'look under the hood' at my own profession to discover errors and vulnerabilities that plague it – in this case for 2500 years."



© Courtesy of Nate Selden



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2 HumBio Alumni Selected as 2022 Knight-Hennessy Scholars

Congratulations to Brandon Hwa-Lin Bergsneider '20 and Ezra Yoseph '21 who were both selected as 2022 Knight-Hennessy Scholars. They are two of the seventy scholars named to this year's cohort. Bergsneider and Yoseph will both pursue their MDs at Stanford School of Medicine this fall.

The Knight-Hennessy Scholars Program cultivates and supports a multidisciplinary and multicultural community of graduate students from across Stanford University, and delivers engaging experiences that prepare graduates to be visionary, courageous, and collaborative leaders who address complex challenges facing the world. Learn more about Bergsneider, Yoseph, and the other 2022 Stanford scholars [here](#).



© Courtesy of Knight-Hennessy Scholars



ALUMNI/FACULTY NEWS

Sara Cody '85 and Yvonne Maldonado Named Co-Recipients of the 2022 Global Impact Award

Congratulations to Dr. Sara Cody '85 and Dr. Yvonne Maldonado, the recipients of the 2022 Global Impact Award by the Palo Alto Chamber of Commerce and Palo Alto Weekly. The award recognizes community members whose work has had a long, significant influence beyond Palo Alto in technology, education, environmental stewardship, medicine, the arts, or other fields. Cody and Maldonado have been working on the front lines of the coronavirus pandemic since January 2020.

Cody is the Public Health Officer and Director of the Santa Clara County Public Health Department, which assesses and reports on community health, provides services, and develops policy and strategy planning. Most recently, she has had the exceptionally challenging task of leading the COVID-19 response for the county. She coordinated successfully with surrounding counties to issue the nation's first shelter-in-place order and helped to lead a unified approach to the pandemic with clear and consistent messaging. Cody's team has also focused on addressing barriers to COVID-19 vaccination to prevent disease and promote health and equity for the county's two million residents. Her efforts earned her the 2020 Shining Stars Award of Excellence from the nonprofit mental health provider Momentum For Health and Stanford Public Policy's Zale Award for Public Service in June 2021. Cody was also one of the panelists for HumBio's 50th virtual event [Leading Communities Forward: Sharing Ideas for Meeting this Moment](#), on July 22, 2021.



© Courtesy of Sara Cody



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Maldonado is the Senior Associate Dean of Faculty Development and Diversity, the Taube Professor of Global Health and Infectious Diseases, and Professor of Pediatrics (Infectious Diseases) and Epidemiology and Population Health. She has spent much of the pandemic in the spotlight, participating in countless interviews on a national scale. She provided insights into Stanford's clinical vaccine trials, sharing her expert opinion as a pediatric infectious disease expert on topics such as transmissibility, long-term effects of COVID-19-related symptoms and vaccines, and vaccine trials and safety.

In November 2021, Maldonado and several Stanford Medicine colleagues working on the NIH's RECOVER (Researching COVID To Enhance Recovery) Initiative received close to \$15 million in funding (to be spread across four years) to study these lingering symptoms of COVID-19. At Stanford School of Medicine's [Winter Honors](#), the team was recognized for their work on the Stanford Medicine Vaccine Governance Committee and the Infection Prevention and Control (IPC)

Collaboration between Stanford Health Care, Stanford Children's Health, and Stanford Health Care - Valley Care. These initiatives streamlined pandemic response work between the various programs, increased vaccine confidence, and provided oversight on the longer-term vaccine strategy to ensure equitable distribution. This July, she also received the highest recognition from the American Academy of Pediatrics, the 2022 Clifford G. Grulee Award for outstanding service to the Academy.

In HumBio, Maldonado teaches the upper-division course HumBio 124C, *Global Child Health*, and advises and mentors students completing research and honors projects.

Cody and Maldonado were recognized for their unparalleled efforts over the last two years at the Tall Tree ceremony on April 21. Read the full announcement [here](#). ■

FACULTY NEWS

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Ethical Dilemmas in the Hospital with Dr. David Magnus

“What happens when miscommunication between a doctor and

patient leads to intractable conflict? What happens when a patient requests an intervention a doctor does not feel ethically comfortable with? In the toughest situations, doctors turn to the clinical ethicist for help.”

Check out this [podcast episode](#) of featuring Dr. David Magnus. Magnus shares his experience as a clinical ethicist and explores the importance of ethical thinking skills. *The Doctor’s Art* is a weekly podcast that explores stories on finding meaning in medicine.

Magnus is the Thomas A. Raffin Professor of Medicine and Biomedical Ethics and Professor of Pediatrics and Medicine (Primary Care & Population Health) and the director of the Stanford Center for Biomedical Ethics and Associate Dean of Research for Stanford School of Medicine. In HumBio, he teaches HumBio 174, *Foundations of Bioethics*.

Listen now [here](#).

Holly Tabor Awarded Faculty Women's Forum Allyship Award

Congratulations to Dr. Holly Tabor who was awarded the Faculty Women’s Forum Allyship Award in June. The award recognizes a faculty member with a strong track record



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of advancing an academic culture that supports equity and inclusion at Stanford, with a particularly positive impact for women faculty members and/or those from groups historically underrepresented at Stanford University.

Dr. Tabor is the Associate Director for Clinical Ethics and Education for SCBE and is Co-Chair of the Ethics Committees at Stanford Hospital and Lucile Packard Children’s Hospital. Her research focuses on ethical issues in genetics and genomics, specifically return of results and translation for exome and whole-genome sequencing. She teaches the popular HumBio course, HUMBIO 171E, *Modern Ethical Challenges in Neuroscience and Organ Transplantation*.

Tanya Luhrmann Elected to American Philosophical Society

This past June, Dr. Tanya Luhrmann was elected to the American Philosophical Society, the oldest learned society in the United States. Founded by Benjamin Franklin in 1743 for the purpose of “promoting useful knowledge,” the American Philosophical Society is composed of scholars from a wide variety of academic disciplines. and has played an important role in American cultural and intellectual life.

Dr. Luhrmann is the Albert Ray Lang Professor in the Department of Anthropology and a medical and psychological anthropologist and anthropologist of religion. In

previous years, she has taught the upper-division course, *Culture and Madness: Anthropological and Psychiatric Approaches to Mental Illness* (Anthro 186/HumBio 146), where she explores how different societies construct the notions of “madness” throughout history and across cultures. Read the full announcement in the Stanford Report [here](#).

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New Knee Injury Research by Geoffrey Abrams

In November 2021, Dr. Geoffrey Abrams and his colleagues published new research in the *Orthopaedic Journal of Sports Medicine* examining the correlation between NBA playing styles and knee injuries. The study revealed that the risk of suffering an ACL tear is 1.4 percentage points higher in players who tend to drive the ball toward the basket to score (5.2%) than players with lower driving tendencies (3.8%).

Anterior Cruciate Ligament (ACL) tears are extremely common knee injuries that affect more than one-hundred-thousand individuals every year. The injury often results in surgical reconstruction of the ligament and months of rehabilitation. For athletes, an ACL tear also brings concerns of being unable to return to normal performance levels post-treatment. In their comparisons of ACL-injured players with uninjured players of similar age and playing styles, however, the investigators concluded that there were no significant changes to the injured player's performance after reconstructive surgery. ACL-injured players also did not have to change their playing style to achieve this same level of performance.

“Our study provides information to players, teams, and medical staff that individuals who return to elite-level competition after undergoing ACL reconstruction surgery are likely able to make a full comeback,” Abrams said ([Stanford Medicine Article](#)).

Abrams is a sports medicine surgeon and Associate Professor of Orthopedic Surgery at Stanford School of Medicine. He is also the medical director of the Lacob Family Sports Medicine



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Center and an assistant team physician for the San Francisco 49ers. He has taught the upper-division Human Biology course, HumBio 139S, *Sport and Exercise Medicine* for several years. Read the full news feature [here](#).

Thank You, Virginia Marchman!

Researcher. Mentor. Teacher. Supporter. Dr. Virginia Marchman has played each of these roles at Stanford. A developmental psychologist, Marchman has been an invaluable member of the Human Biology community serving as a core guest lecturer, advisor, and honors thesis mentor. As she eases into retirement, Marchman contributed more than a decade of her time to the Human Biology program.

With an extensive background in psychology and linguistics, Marchman's main areas of research are language development, language disorders, and early childhood development, in typically developing and late-talking children. Marchman joined Stanford University's Department of Psychology in 2005 as a research scientist. Soon after, she joined the [Language Learning Lab](#), a developmental research laboratory directed by HumBio's very own Dr. Anne Fernald. In 2015, she took on the role of Director of Curriculum and Program Evaluation for the lab's [Habla Conmigo Academy](#). First developed in Spanish in 2012 with a strong focus on Latino cultural values, the program offers workshop sessions to Latino parents and their young children to build the knowledge and tools to strengthen their emotional bonds and develop language proficiency and important life skills. The academy builds on the Learning Lab's pioneering studies on language learning by Latino children from low-income Spanish-speaking families. Fernald valued the great deal of time and effort Marchman put into the lab and in supporting her colleagues. She noted that Marchman has also consistently been an excellent mentor to the students.

Known for her thoughtfulness, her passion for research, and her kind and engaging demeanor, Marchman has been a long-time guest lecturer on the B-side of the HumBio Core in the course currently known as *Behavior, Health, and Development*. Students give enthusiastic reviews of her series of lectures on cognitive, social, and language development, in which Marchman introduces topics such as prenatal development, attachment and attachment theory, and early language development and processing. “Virginia has been an inspiring and committed member of the teaching team,” Core Course Coordinator Dr. Annette Salmeen shared. From delivering lectures with great enthusiasm, humor, and lively interaction, to actively attending Human Biology Core poster days, Salmeen noted that Marchman has been dedicated to engaging and supporting HumBio Core students.

“[Marchman] has helped adapt or bring in new lecture



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content when needed, has supported the Course Associates in thinking about how to lead discussions on challenging topics, and has shared her expertise in data analysis concepts like confounds and main effects in designing problem set and exam questions,” she reflected. “We will deeply miss her participation in the course.”

Marchman has not only shared her expertise on language development in the core but has also been an effective and supportive advisor and mentor to dozens of Human Biology students conducting research throughout the years.

When Laura Jonsson '20 was asked about Marchman's mentorship and guidance on her honors thesis, which earned her the university's Firestone Medal for Excellence in Undergraduate Research, she was effusive in her praise for Marchman's efforts. Even in the face of the

pandemic and the unexpected move to remote learning, Marchman cared deeply about Jonsson's success and worked tirelessly to ensure her final project was of the highest quality. She provided thorough and precise feedback with each virtual meeting.

“Virginia has faith in people, often before they have faith in themselves,” she shared. “She's able to instill confidence in young researchers and ask real questions that challenge someone's assumptions. There are few teachers during my time at Stanford that were able to engage me the way Virginia did.” In her eyes, Marchman is truly a HumBio legend.

Sophia Gamboa '21, a recent Course Associate for the HumBio Core, echoed Jonsson's reflections. “I learned what it means to be a leader and researcher from Virginia.” Gamboa expressed sincere gratitude for Marchman's unwavering support and helpful advice from the very moment she walked into the lab. Gamboa appreciated that Marchman had asked her what she wanted to research for her honors project, a question no one had genuinely asked her before and wanted to know the answer to, and then went beyond

what was expected of her to assist her in completing it.

“The thing about Virginia is she fosters a welcoming and stimulating research environment for every lab member. She ensures that her colleagues are included in every conversation – not out of obligation, but out of respect for her peers. She pushes her team to ask new questions and to attempt new methodologies,” Gamboa reflected. “But even more, Virginia remembers the little things. She is the first person to wish someone happy birthday, and the first person I call whenever I have a problem.”

Marchman has made deep and important contributions to the Human Biology community. The Program would like to thank Virginia for everything that she has done for the program and we wish her the best of luck in her future endeavors! ■



© Courtesy of Laura Jonsson



Lianne Kurina Receives Dean's Award for Distinguished Teaching

Congratulations to Director Lianne Kurina who was selected to receive the 2021–22 Dean's Award for Distinguished Teaching in the School of Humanities and Science in the area of Achievements in Teaching.

Kurina is an Associate Professor (Teaching) of Medicine (Primary Care and Population Health) and by courtesy, of Epidemiology and Population Health at the Stanford School of Medicine,. She is also the Bing Director of the Program in Human Biology.

Kurina has led the program with incredible innovation, poise, and creativity since September 2019. An extraordinary and passionate teacher and mentor, she teaches two of the program's popular courses, HumBio 88, *Introduction to Statistics for the Health Sciences*, and HumBio 154B, *Principles of Epidemiology*.



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Lisa Goldman Rosas Honored by Stanford Medicine

This summer, Dr. Lisa Goldman Rosas was awarded the Society of Behavioral Medicine's Jessie Gruman Award for Health Engagement. The award recognizes individuals who have advanced the understanding of how to initiate and sustain people's engagement in their health and healthcare.

Goldman Rosas and her colleagues were also recognized during Stanford Medicine's Winter Honors for their work on the Stanford Our Voice (OV) Research Initiative: Citizen Science for Health Equity. The initiative empowers individuals in underserved communities across the Bay Area by providing them with the necessary tools to create change and support healthier living.

In the Summer of 2021, she was awarded more than \$11 million in funding from the Patient-Centered Outcomes Research Institute to support her project [Vida Sana y Completa Trial: Treating Obesity and Food Insecurity Among Latina Women](#). The study examines food insecurity and diabetes prevention among Latina women. Recently, Goldman Rosas has also partnered with community health workers (*promotoras*) and the [¡Sí Se Puede! Collective](#) to combat COVID-19 misinformation. They provide training and resources in multiple languages to these workers who then go out into the Latinx communities around the Bay Area to promote COVID-19 vaccine awareness and public health guidelines.

Goldman Rosas is Assistant Professor (Research) of Epidemiology and Population Health and Medicine (Primary Care and Population Health) at Stanford Medicine. She also advises students completing research and honors projects in Human Biology.

Julie Baker and Gavin Sherlock Named Kennedy Grossman Fellows



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This Spring, two new Catherine R. Kennedy and Daniel L. Grossman Fellows in Human Biology were appointed – Dr. Julie Baker and Dr. Gavin Sherlock.

Baker is a professor of genetics at Stanford Medical School who studies the evolution of the placenta, and the impact of the diverse evolutionary trajectories on maternal and fetal health, particularly in human disease. In addition to her research and teaching, Baker is a member of Stanford Bio-X, the Cardiovascular Institute, and the Maternal and Child Health Research Institute. She is also the co-founder of the Stanford Stem Cell Institute and the Stanford March of Dimes Prematurity Center. She has served on the Human Biology Curriculum Committee for several years.

Sherlock is also a professor of genetics at Stanford Medical School who studies evolution and evolutionary processes more specifically the identities of adaptive mutations, their fitness effects, and how those effects are altered in different environments. Sherlock is a member of Stanford Bio-X and the Stanford Cancer Institute and is the faculty co-director of the Stanford Medicine Teaching and Mentoring Academy. He has served on the Human Biology Curriculum Committee for many years and has been recognized for his excellence in teaching and excellence in mentoring and service by Stanford Medicine.

Baker and Sherlock are both outstanding Stanford scholars who share their expertise in the core course, HumBio 2A, *Genetics, Evolution, and Ecology*. Baker covers topics such as CRISPR, viruses, vaccines, somatic and germline mutations, and Mendelian genetics while Sherlock teaches evolution and adaptation, classical genetics, DNA sequencing, and introductory genomics.



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The fellowship was founded in 2003 with the generous support of Catherine Kennedy and Daniel Grossman. Both Stanford alumni, Catherine graduated from Human Biology in 1976 and Daniel from the Graduate School of Business in 1976. The fellowship recognizes the major investment of time and creative energy that the core faculty put into the course's curriculum and the faculty members' continued willingness to serve on Human Biology committees as well as to advise our majors.



HumBio Senior Celebration



HumBio Gelles Senior Symposium

SAVE THE DATE: HumBio Reunion/Open October 21, 2022

Stanford Reunion Homecoming is fast approaching! This year, the Stanford Alumni Association will welcome back alumni from the graduating classes ending in 2 and 7.

Human Biology will be hosting a Reunion/Open House in Building 20 on Friday, October 21, 2022, from 4:30–6:00pm. This will be a wonderful time to catch up with friends, classmates, faculty, and staff over light refreshments, talk to students about their research posters, and check out HumBio's building refresh.

If you are from a graduating class ending in 2 or 7 and are planning to attend, please RSVP at the [following link](#). This will help us see how many alumni and guests we can expect to attend. Thank you in advance for your help with this!

Please view the latest COVID requirements for 2022 Reunion Homecoming [here](#). COVID-19 vaccine checks will be required for anyone who is not registered for the main Reunion Homecoming celebration.

Margaret Fuller Awarded Genetics Society of America Medal

Dr. Margaret (Minx) Fuller was awarded the 2022 Genetics Society of America Medal for outstanding contributions to the field of genetics in the last 15 years earlier this year.

The Genetics Society of America recognizes Fuller's "pioneering work on cellular mechanisms that underlie *Drosophila* spermatogenesis which led to numerous discoveries pertaining to stem cell regulation, germline–soma interactions, and germ cell differentiation. The award also recognizes contributions to training and mentoring of graduate and postdoctoral researchers."

Fuller is the Reed-Hodgson Professor of Human Biology and a Professor of Developmental Biology and Genetics at Stanford's School of Medicine. She has been teaching in the HumBio Core course HumBio 3A, *Cell and Developmental Biology*, since the 2004–2005 academic year and has been an enthusiastic and creative leader of the teaching team. Read the full announcement [here](#).



© Genetics Society of America

Director's Message

Dear HumBio Community,

I hope that this message continues to find you all safe and well and that you are having a wonderful summer.

Another whirlwind of a school year has passed. The 2021–22 academic year had both joys and challenges. We were thrilled to have our HumBio students back for in-person instruction. And our wonderful faculty and staff worked hard, each quarter, to ensure that our students had the exceptional educational opportunities that HumBio is known for – going above and beyond, both with pedagogy and the support of our students.

This summer, we are operating in a virtual format as our home space in Building 20 is being remodeled! But we are available via phone, email, and social media.

As always, please feel free to reach out to any member of our team, myself included – we're always happy to talk with you.

All my best, Lianne



Lianne Kurina, PhD

*The Bing Director in Human Biology
Associate Professor, Primary Care &
Population Health
Director, Stanford Military
Data Repository*



DO YOU HAVE EXCITING NEWS OR STORIES YOU'D LIKE TO SHARE?

DO YOU WANT TO VOLUNTEER FOR A CAREER WORKSHOP ?

HUMBIO WANTS TO HEAR FROM YOU!

JOIN AND POST IN OUR [LINKEDIN](#) GROUP, SHARE YOUR STORIES

ON OUR [WEBSITE](#), OR SEND IT TO [Jessy Frydenberg](#).



Get the latest updates and see what's happening in HumBio with our new and improved Instagram and Facebook pages! Tag [@stanfordhumbio](#) to be featured on our page.

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