Human Biology Newsletter

The Program in Human Biology \mid Stanford University

Spring 2015

Emily Witt (HB '15), Rhodes Scholar

Rhodes Scholars are chosen not only for their outstanding scholarly achievements, but for their character, commitment to others and to the common good, and for their potential for leadership in whatever career domain they may enter.

A native Coloradan, Emily's sage green eyes are a window into a young woman wise beyond her years. Unassuming, hard working, and gentle, Emily was also a 2014 recipient of the Kirsten Frohnmayer Research Prize for Juniors in Human Biology, which recognizes qualities similar to the Rhodes Scholarship: altruism, high academic achievement, and a potential to make a difference in the world through original research. Emily has proven herself worthy of both awards in her research at Stanford and during her service projects to research and promote health care for impoverished popula-



tions in Panama, Nicaragua and Guatemala. She volunteers as a Spanish interpreter for the Arbor Free Clinic, and as the president of Stanford's Amnesty International chapter, where Emily advocates for human rights. With a post-Oxford goal of becoming a doctor, Emily plans to continue

I'm interested in studying any way that the brain or the nervous system can go awry.

traveling to Central America and to other nations to help develop sustainable health solutions by promoting the advancement of technical medical services.

Emily's Area of Concentration within Human Biology is neuropathology, and she is minoring in psychology. With an interest in studying the many ways that the brain or the nervous system can go awry, Emily wants to combine an understanding of psychology with clini-

cal applications of neuroscience. Emily conducted her honors research project in the lab of neurologist Lawrence Steinman, M.D., George A. Zimmerman Professor, on the immunomodulatory mechanisms of vitamin D in multiple sclerosis. She is also involved in research projects at the Center for Interdisciplinary Brain Sciences Research that seeks to

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DIRECTOR'S MESSAGE

One needs only to glance at the following pages to realize how mature Human Biology has become. Our Program is a mainstay of Stanford University, a draw to both talented faculty and students. But, if you reflect more fully upon these stories and achievements, another message becomes evident: the importance of service to others and our planet.

Alumni will remember lectures about diversity and unity, lactose, hominids, culture, bonding, environmental and health policy, human sexuality, and more. When was that lecture on service? Well, there never was one. Human Biology's mission has always been to provide an interdisciplinary approach to understanding the human being from biological, behavioral, social, and cultural perspectives. Implicit to that understanding is a desire by our faculty, students, and alumni to effect positive changes on the human condition. This passion and our approach is more timely than ever with looming challenges such as sustainability, climate change, health care reform, global diseases, racial divisions nationally, and world revolutions.

HumBio grads are uniquely poised to address world problems. Older alumni will remember HumBio 6, the "Workshop" major requirement that transitioned to our current HumBio 197 "Internship," which may evolve as we make plans for "Capstones." These student experiences aim to



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take our scholarship outside the classroom. Service will continue to be a mainstay as we address the human condition at Stanford and beyond. If you have more thoughts about what we do, email me at pfisher@stanford.edu.

EMILY WITT

(cont.) investigate the potential of hyperscaning as a tool to study social cognitions and neurofeedback as a therapeutic intervention in autism.

In an interview with Stanford Medicine's SCOPE Blog, Emily shared her inspirations and motivations for her studies. On a personal level, she has seen the devastating impact that multiple sclerosis has had on her uncle and on his family. On an intellectual level, she is fascinated by the interaction between the immune system and the brain.

At Oxford Emily will pursue two degrees. First, she will work toward a M.Sc. in Neuroscience and then she will work toward a M.Sc. in Experimental Psychology. These studies will help Emily to solidify her theoretical understanding of neuroscience and the methodologies of brain research, with a goal of finding real world solutions to psychiatric disorders, which lie in the gap between the two disciplines.

Emily is looking forward to studying (via examining cognitive biases and resilience) the nature of human emotions - why people react so differently to the good and the bad things in life - and the psychological mechanisms of anti-depressant drug action by exploring drug effects on human models of emotional processing.

In an interview for the HumBio newsletter, Emily shared her enthusiasm for HumBio, for Oxford, and for life.

On HumBio...

Emily: Human Biology was unlike anything else I'd seen at other universities. The Core is my favorite thing in the entire world. I am fascinated by humans and the humanities, and love that I can look at them through many different lenses. HumBio is the reason I chose Stanford.

On the Rhodes and Oxford...

Emily: I am honored and humbled to be a part of the Rhodes tradition at Stanford and deeply appreciative of all the exceptional opportunities I have had here.



I'm excited to be living in the Rhodes House. It will be a fertile community of students and scholars from around the world. This will be a particularly special environment for cross-pollinating ideas.

On England...

Emily: I'm also looking forward to attending sports events: golf, soccer, and tennis at Wimbledon, and going for "tea."

On Life...

Emily confesses a passion for the Spanish "football" team, and loves breakfast food (scones anyone?).

A native Coloradan, Emily loves anything and everything outdoors: hiking, biking, fishing, kayaking and running.

Emily, a quintessential HumBio scholar!

Wonder what TED talks and authors fuel the good mind of a Rhodes Scholar? Here are Emily's favorites:

TED Talks:

Ben Goldacre on Battling Bad Science,

Daniel Wolpert on The Real Reason for Brains,

Abraham Verghese on A Doctor's Touch.

Authors: Jane Austen, Gabriel Garcia Marquez,

Atul Gawande, and Oliver Sacks.

Human Biology, the Road to Rhodes for eight

Emily joins seven fellow Human Biology alumni (to our knowledge) in being selected as one of just 32 students nationwide each year for the prestigious Rhodes Scholarship:

Stewart Patrick '88,

Alvan Ikoku '96

Tess Bridgeman '04

Sarah Schulman '05

Tanya Ali Haj-Hassan '06,

Margaret Hayden '12

Rachel Kolb (HumBio minor) '12

Emily Witt '15

We would love to hear how your Human Biology and Rhodes Scholar experiences have shaped your life work, and your advice for current HumBio students.

Meet the Student Advisors: Guides for an incredible journey

Chosen because they are strong academically, and empathetically, the Human Biology Student Advisors (SAs) are

the navigational stars who guide fellow Hum-Bio students on the many and varied course pathways that lead to a Human Biology degree. Students at any stage or with any question are welcome to drop by the SA's office simply to chat, or to roll up their sleeves and work together on breaking through an academic stumbling block. At Human Biology's inception in 1971, "student



members" David Coleman, Lu Ann Hall, Rod Levine, and Nickolas Waser, later joined by Vincent Siciliano, were invited to be consultants on the "committee in charge." Since then the student advisors have been an essential resource for students, faculty and administrators. As Katherine Preston, Associate Director, put it, "The SAs make my job possible."

When the Curriculum Committee convenes quarterly to review courses for adoption and renewal, at least two SAs are in attendance. They are encouraged to speak their minds, and to offer feedback from the student perspective. The SAs always know the nitty gritty and are crucial to steering course offerings. In addition to their invaluable input on courses, the SAs organize checkpoint events throughout the year, including Declaration Workshops,

It's exciting to see how much thought and care goes into every course we offer. Karina Liker

where SAs guide sophomores (mostly) through developing their personalized course of study; the fall Internship Fair, where representatives from nearly 20 campus and community organizations are on hand to answer questions; the spring Faculty Advisor lunches, where students get to know Human Biology professors in a small group setting; and the Beyond HumBio alumni panel, where

students hear great advice on finding first jobs, and learn how an incredibly diverse range of professionals have found their callings.

Letting no moss grow under their feet between events, the SAs also manage The Buzz, a bi-weekly e-newsletter that alerts students and faculty to important administrative deadlines, course changes, internships, research, and job opportunities. At their weekly meetings with Student Services Officer, Lia Cacciari, and faculty liaisons, Katherine Preston, and Professor Cathy Heaney the SAs examine a declaration-in-progress against a finished declaration and discuss which elements of the latter would help to polish up any rough edges on the newly submitted declarations.

> Each day the founders' vision of empowering Human Biology undergraduates with the responsibility of designing their own focused course of study endures, thanks to the support of the stellar student advisor team. From the beginning, the SAs have helped their fellow students map out their intellectual journey beyond the center of the core,

through their upper division courses, and ultimately across the graduation stage.

The SAs come to their weekly office hours with dirt on their boots from many biological and social ecosystems. Charlotte has hiked Mt. Kilimanjaro, with an AC in cognitive neuroscience. Lisa has snorkeled the reefs of Australia.

I want HumBio students to realize how to design our own [areas of concentration and to have so much agency over our learning. It's truly a special part of the Human Biology experience, and I hope everyone can appreciate that! **Charlotte Martin**

with an AC in adolescent development and behavior. Karina has explored taco shops throughout lucky we are to be able San Diego, and her AC is genetic counseling and diseases. Steven plays the Great Highland bagpipes at Lake Lag, and his AC relates to exploring the role of a novel gene in cell polarity of the inner ear. Costner has been involved in student government, the Arbor Free Clinic, and Stanford Sierra Camp, and has an AC in the social determinants of childhood development. Emily has travelled from Nicaragua to Panama to research

and promote health care, and her AC is neuropathology.

Visit HumBio's "Wall of Fame" listing SAs from 1971.

Current ranking of popular Areas of Concentration (ACs):

- I) Health and Health Policy
- 2) Brain and Behavior
- 3) Human Performance & Human Development (tied)
- 4) Environment and Environmental Policy

STUDENT NEWS & PROJECTS

Congratulations Alfred Delena, Truman Scholar, and Bingham Innovation Fund recipient

Alfred Delena (HB '16) was selected as a 2015 Harry S. Truman Scholar, and was a recipient of the Bingham Fund for Stu-



dent Innovation in Human Biology. For Alfred's Bingham project, he created and taught a course that sought to improve the happiness and wellbeing of incoming freshmen at Stanford. His course entitled, "Your Stanford Experience: Understanding the Science of Happiness and Exploring Opportunities at Stanford," included an emotional well-being component that highlighted research in the field of positive psychology, and provided research-based, practical strategies to help students tackle stress and increase their self-compassion and mindfulness. Another important and synergistic component of his course was to affiliate students with the many resources on campus in a small, and manageable setting.

Alfred's Truman scholarship will support his post-graduate work to improve the educational and health outcomes for Native people. Alfred's winning policy proposal entitled, "Valuing the Importance of Character, Culture, and Connection for American Indian communities: Promoting

Social and Emotional Learning (SEL) for Elementary Students," will provide the focus for his studies. The prestigious Truman scholarship is awarded to students committed to careers in public service and leadership. Of the 688 national applicants, Alfred was one of four Stanford endorsed candidates, and he became one of 58 national scholars to receive this award. Congratulations, Alfred!

Understanding the Science of Happiness

Give your world weary synapses a spa day by diving into a few selected books from Alfred's course reading list:

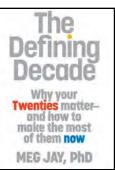
How We Choose to be Happy, The 9 Choices of Extremely Happy People, by Rick Foster & Greg Hicks

Flourish: A Visionary New Understanding of Happiness and Well-being, by Martin E.P. Seligman

Hardwiring Happiness, by Rick Hanson,

Twenty something HumBio students read, The Defining Decade

in the student initiated course led by HumBio Storey House academic theme associates. For a 15 minute preview of the book, check out Meg Jay's TED Talk This is a great read for parents of 20-somethings too.



Congratulations Tanvi Jayaraman, Strauss Scholar, and Bingham Innovation Fund recipient

Tanvi (HB '16), was selected as a 2015 Donald A. Strauss Scholar, and was a recipient of the Bingham Fund for Student Innovation Projects in Human Biology. With her Bingham funds, Tanvi organized an "It's On Us" campaign on campus, which

brought the interACT theatrical group from Cal State Long Beach to Stanford to present "We Will Not Stand By." This interactive performance sought to empower students with tools and resources to combat sexual harassment.

Tanvi's Strauss project, "Creating a Better Stanford: the Stand Up Coalition," continues her efforts to cultivate a proactive campus community that will take a stand in the face of sexual violence and harassment. The Strauss Foundation selects young leaders from 15 California colleges and universities to undertake high-impact projects in public service or social change that are innovative and timely. In addition to the Bingham and Strauss awards, Tanvi was recently selected as a 2015 Newman Civic Fellow by President Hennessy, and she was a presenter at Stanford's TEDx 2015. Read her letter to fellow students in the Huff Post. (Bonus! the Huff Post photo shows the HumBio CAs returning from a morning in the Core.) Congratulations, Tanvi!



Merry Lee Eilers, American Women for International Understanding delegate to Myanmar

Merry Lee (HB '84), as part of a 12-member delegation, met with prominent civic leaders and activists for democracy in Myanmar, among the poorest nations in the world. "Most of the activists have been political prisoners, often subjected to mental torture and solitary confinement for 10 to 20 years," Merry Lee said in a recent article, "Undaunted, their current focus is on democratic reform of the government and teaching citizens their rights and responsibilities to make changes." As national secretary to the American Women for International Understanding (AWIU), Merry Lee is instrumental in organizing and providing hospitality for women from around the world who are brought to the White House each year to be recognized at the annual International Women of Courage event. The AWIU supports and advocates for the work that women leaders are doing around the world to build more just, economically sound, and humane societies.



Bill Elder, representative of precision medicine, at State of the Union

Bill (HB '09), a third year medical student at Wright State University, was invited as a State of the Union address guest of Michelle Obama to bring attention to precision medicine. This is the kind of research that the president hopes to expand. When he was diagnosed with cystic fibrosis at the age of eight, Bill was not expected to live beyond early adulthood. Thanks to innovative treatment that targets the underlying cause of CF, in a subset of patients, Bill is now expected to live a long, full life. In addition to being a guest at the White House, he gave congressional testimony in 2013. Read more about Bill in the Stanford Report, on the White House website, and in the Boston Globe. You can also watch a NY Times video interview with Bill during his Stanford days.





Angela Buenning Filo, committed to education, civil liberties, and the environment, elected to Stanford's Board of Trustees

Angela (HB '93), photographer and educator, was elected to the Stanford Board of Trustees. for a five year term, beginning on April I. The Board is a custodian of the endowment and all of Stanford University's properties. It sets Stanford's budget, oversees investments, and has the power to hire Stanford's presidents. Angela established and leads the day-to-day operations of the Yellow Chair Foundation, a family foundation based in Palo Alto that awards grants to organizations focused on education, civil liberties, gender equity, and the environment.

Angela earned her M.A. in journalism at UC Berkeley, and has taught photography and journalism at the Eastside College Preparatory School in East Palo Alto. Enjoy Angela's photography and public

art installations at the City of San Jose, and the San Francisco Museum of Modern Art, She also created the Palo Alto Forest community photography project.

Paul Kalanithi, neurosurgeon, dies at 37

Paul (HB '00) wrote movingly about facing mortality after being diagnosed with lung cancer. He died of the disease on March 9. Paul had recently completed his neurosurgery residency at the Stanford University School of Medicine and become a first-time father. He was also an instructor in the Department of Neurosurgery and fellow at the Stanford Neurosciences Institute. His essays, "How Long Have I Got Left?" for The New York Times and "Before I Go" for Stanford Medicine, reflect his insights on grappling with mortality, his changing perception of time and the meaning he continued to experience despite his illness.



Watch, A Strange Relativity: Altered Time for Surgeon-Turned Patient. Read more "Inside Stanford Magazine."

Jennifer Siebel Newsom screened her new Sundance documentary film at Stanford

lennifer (HB '96, minor), writer, director, producer, and CEO of The Representation Project, screened her new film, The Mask You Live In, to a packed Cubberley Auditorium on March 31. Co-sponsored by Human Biology, the film was followed by a discussion with Dr. Judy Chu (HB '94), HumBio lecturer and author, who teaches HB 144, "Boys Psychosocial Development," and wrote, "When Boys become Boys."

> Siebel's earlier film, "Miss Representation," looked at how the media's misrepresentations of women contribute to their under-representation in positions of power and influence. "The Mask You Live In" Explores the way our culture's narrow definition of masculinity is harming boys, men and society at large. It was hoped that conversations sparked by the film would help Stanford students find safe and

supportive spaces in which to experiment with notions of masculinity that allow for a broader range of self expression. The film provoked thoughtful questions from students on how to bring the film's message to a larger audience, and how to incorporate programming about stereotypes and gender issues more seamlessly into everyday discussions on campus. Students also wanted to know how to reach and support boys who are most susceptible to the influence and constraints of mainstream culture.

FACULTY NEWS

HumBio Founder Paul Ehrlich urges Stanford to divest from fossil fuel

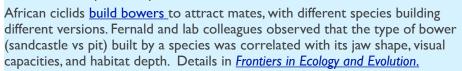


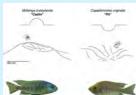
Profs Mark Jacobson, Elizabeth Tallent, and Paul Ehrlich presented their argument in favor of fossil fuel divestment in a meeting with President Hennessy. Ehrlich, Bing Professor of Population Studies, Senior Fellow at the Woods Institute for the Environment, and one of HumBio's seven founders, has asked President Hennessy and the Board of Trustees to divest from fossil fuel. Along with many Human Biology faculty and students, Ehrlich has added his weight to the Fossil Free Stanford movement, by joining over 300 faculty who have signed this divestment letter, which is posted in The Guardian, along with comments from Ehrlich. More comments can be read in the Stanford Daily.

"The urgency and magnitude of climate change call not for partial solutions, however admirable; they demand the more profound and thorough commitment embodied in divestment from all fossil-fuel companies." [letter excerpt]

Russ Fernald's bower-building fish attract mates, and a potential framework for observing biological influences on behavioral evolution

<u>Fernald</u>, Benjamin Scott Crocker Professor in Human Biology, uses the African cichlid fish in much of his research because of its rapid speciation, which offers increased opportunities to test the evolution of molecular and physiological traits, and now potentially behavioral traits as well.







Does your misfiring SCN keep you from learning in your sleep?



When Craig Heller's hamsters are put to the test, they give clues about treating memory disorders by fixing circadian rhythms

Heller, Lorry I. Lokey Business Wire Professor in Biology, and co-director of Stanford's Center for Research and Treatment of Down Syndrome, along with Norman Ruby, Fabian Fernandez, and four former undergraduate students, co-authored research that was published in *Science* this fall. When the suprachiasmatic nucleus (SCN), the part of the brain that houses the <u>circadian clock</u>, is <u>misfiring</u>, <u>memory deficits show up</u>. Enjoy Heller's <u>webinar</u> slides on Sleep, Circadian Rhythms, and Down Syndrome Cognition.

Will Talbot named fellow of American Association for the Advancement of Science

Talbot, Professor of Developmental Biology, and Kennedy Grossman Fellow in Human Biology, was elected to the AAAS this fall. The honor is bestowed by peers for meritorious efforts to advance science or its applications. Talbot was elected for his work using zebrafish to understand the development of myelinated axons in the vertebrate nervous system. For further explanation, just ask the sophomores after fall and winter quarters when they will have taken an intellectual journey into the Core with Talbot guiding them through HB2A: Genetics, Evolution, and Ecology, and HB3A: Cell and Developmental Biology. Congratulations, Will!



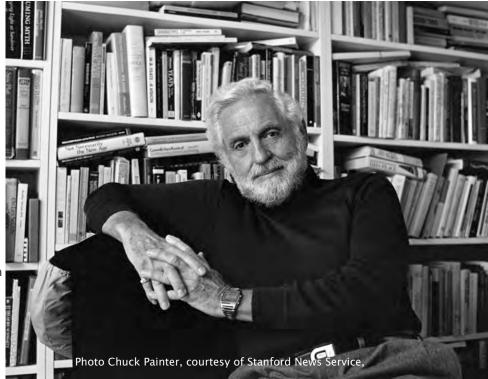
Larry Zaroff, M.D., in memoriam



Human Biology lost a beloved and valued teacher on April 20. Zaroff, who insisted on being called-Larry, was a Consulting Professor in Human Biology, and Anesthesia. Larry had a special niche in the medical humanities, and he touched dozens and dozens of Stanford students, alumni, staff, and faculty over many years in Human Biology. He was a thoughtful and enthusiastic teacher, mentor, advisor, and colleague. He was known always to challenge a student, make each individual think, and then ask that person to speak and engage strongly. His tireless dedication to Human Biology and its students was beyond measure. Larry will be greatly missed. His creativity lives on in his NYTimes articles.

In Memoriam: Innovative Teacher, and Father of the Pill, Carl Djerassi

Carl Djerassi, Stanford Professor Emeritus, died at the age of 91 in his San Francisco home on January 30. Widely considered the father of the birth control pill, he led the team in 1951 that cooked up the synthetic molecule which became the essential ingredient of the birth control pill. Teaching innovative upper division Human Biology courses was part of Djerassi's long career at Stanford, which began in 1959. In the early days of HumBio he taught courses on health and human ecology alongside HumBio legends Sandy Dornbusch, Shirley Feldman, David Hamburg, Joshua Lederberg, Herant Katchadourian, Don Kennedy and others. Beginning in the 1970s, and almost every year until



2000, Djerassi taught "Biosocial Aspects of Birth Control." In the 1980s, he added "Feminist Perspectives of Birth Control and Pest Control: Technical and Policy Aspects" to his slate of course offerings. In 2001 he continued with a course that discussed gender issues in birth control. Finally, in February 2002, after 42 years at Stanford, he bid adieu to Human Biology with a skit in the Core. Together with Belinda Fu, M.D., HB '00, then Core Coordinator, they performed an excerpt from one of his plays "An Immaculate Misconception" to the applause and laughter of 200 students. Read more about Djerassi's HumBio theatrical swan song in the Stanford Daily.

A world-renowned chemist who produced over 1,200 scientific papers, and developed the first commercial antihistamine, Djerassi was also prolific in his creative pursuits. These were motivated in part by a desire to bring science to the arts. As reported in Newsweek, he called this "science-in-theater" and "science-in-fiction," and saw this as an effort to "smuggle science to the masses."

In Human Biology's <u>History book</u> (made in celebration of the program's 30th anniversary), Djerassi is remembered for making discussions lively, and for often coming up with challeng-



1970s-2000

Bio-social Aspects of Birth Control

1980s

Feminist Perspectives of Birth Control

and

Pest Control:Technical and Policy Aspects



ing and innovative ideas in committee meetings. In the Stanford Report, his university colleagues remember him as being incredibly generous, supportive of young colleagues, and an elegant man, who enjoyed being a provocateur.

Covered by a wide range of over 20 media sources, the inimitable Carl Djerassi leaves the world a legacy of the highest order.

For more extensive coverage, visit: <u>Mashable, International Business Times, Huffington Post, PBS, Guardian</u> (including a <u>I-hour interview</u>, scroll down), <u>LA Times, NY Times Reuters, NBC News, Chemical & Engineering News, <u>Tech Times, Stanford Report</u>, and the <u>Stanford Magazine</u>.</u>

ADVENTURES HUMMIN' HAPPENINGS CONNECT

Where in the World has your HumBio Mug been?



Give us your best shot - mug shot that is! Has your HumBio mug traveled to far away places, or does it sit front and center in your dish cabinet? Alumni who declared HumBio as their major beginning in the late 90's were given a mug. If you still have yours, send us a photo of you and your mug! Photos with any other of your favorite HumBio swag are also welcome!

Travel with HumBio Profs!

William Durham

Sept. 6-20, 2015

Galapagos Field Seminar



July 13-23, 2016
Galapagos Expedition



Sept. 9-25, 2016 <u>Patagonia Field Seminar</u>



Robert Siegel

June 22-30, 2015

Galapagos Family Adventure



Aug. 5-16, 2016 Borneo



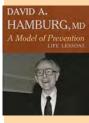
BEYOND HUMBIO

Alumni Panel

To participate in next year's panel, contact Lia: cacciari@stanford.edu

SAVE THE DATE: HumBio Reunion: Friday, October 23 2015

What went into the making of HumBio Founder, David Hamburg, MD?



Hamburg, DeWitt Wallace Distinguished Scholar at Weill Cornell Medical College, and President Emeritus at Carnegie Corporation of New York,

recently published his autobiography, "A Model of Prevention, Life Lessons."

HumBio Profs at Stanford's Child X

Held this spring, Stanford Medicine and Lucile Packard Children's Hospital, co-hosted a <u>Child x</u> conference whose mission is to inspire innovation that will improve child and maternal health. Enjoy talks by HumBio affiliated faculty: Anne Fernald, Michelle Monje-Deisseroth, Tom Robinson, Paul Wise, and Sean Wu.



THANK YOU!

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To discuss HumBio gift opportunities or to make a gift, contact
Denise Ellestad,
Associate Director for External
Relations at (650) 723-0023.

GOT STORIES?! read others' - share yours

https://humanbiology.stanford.edu/ alumni-stories Send alumni news and stories to Robyn: rlduby@stanford.edu

LINK-IN

With HumBio's alumni group:

Stanford Program in Human Biology

(HumBio) Major Alumni LinkedIn

Group.





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