The Program in Human Biology at Stanford University

Fifty Years Strong: Alumni Memories

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Message From The Director

Over the course of the last year, motivated by the Program in Human Biology's 50th anniversary, we have been reflecting back on and celebrating this wonderful enterprise.

What is clear is that at the very heart of our program lies what makes HumBio truly special and unique - the people. Human Biology's success derives from the vision of the founders, the dedicated efforts of faculty and staff to sustain and grow the program, and the enthusiasm hard work of its students. Because the whole purpose of Human Biology is to educate, we thought it was particularly important to include the voices of the students who chose this path.

Thus, to celebrate this major milestone, we invited alumni to share with us some of their favorite HumBio memories. This book is a culmination of the reflections and photographs so generously offered. While these memories vary in topic, they make clear the huge impact Human Biology has made on our students' lives.

For those of you who are alumni, as you read through all of the wonderful memories, I hope that you, too, reminisce of your days in Human Biology and know that on your journey — whenever and wherever it may take you — you will always have a home in the Stanford HumBio community.

— Lianne Kurina, Bing Director of the Program in Human Biology
September 2021

Our professors brought multidisciplinary perspectives to our classrooms as the fundamental anchor of Hum Bio. Each biological science course had its social science counterpart such that we had a broad view of the human experience. This anchor training from HumBio alerted me to the social determinants of disease in parallel with genetic contributions, a balanced vision that reminds me of the statement for most diseases that "it's zip code more than the genetic code". These perspectives were true career gifts as I did my graduate studies, training, and career in infectious disease epidemiology, maternal and child health, and global health. Too many great professors to mention, but I have recounted Colin Pittendrigh's work in malaria control in Trinidad during WWII to my students for decades. (His biology team found that the mosquito vectors were breeding in bromeliads such that insecticides had to be sprayed up into the trees, not down into standing water.) And we were all dazzled by Jane Goodall and her stories of chimpanzee communities and socialization in the Gombe reserve.

- Sten Vermund '74

Claire as a farmer out standing in her field. I wonder how many Stanford grads turned to farming?

I was an English major when Hum Bio classes began in 1970. I took all the courses I could cram into my last two years before graduating still an English major. I will always remember my first class: the professor in his younger years had tried to solve the riddle of mosquitoes in the tropics; the Army was spraying huts with DDT to no avail. He looked up and discovered the biting insects were breeding in tiny ponds formed by bromeliads clinging to the trees. That taught me to be open to answers in unexpected places.

The summer of 1971, I signed on with the U. S. Forest Service, then started a native plant seed collecting company with my husband, growing seeds of sagebrush and wildflowers on 220 acres in Wyoming. Many species had never been cultivated before (and most failed). Neither of us had been raised on a farm (How hard can it be to make irrigation water run downhill?) Nevertheless, we persisted! We reseeded salt-bush onto abandoned mine lands with six inches of annual precipitation and started the re-vegetation of many other disturbed sites.

- Claire Gabriel Dunne '71

Various baboons and chimps, 1972 and 1974

I loved HumBio and immediately became captivated by it in the spring of my freshman year when I heard Colin Pittendrigh's first lecture. That was it - my major, and life long interest. I loved the curriculum, my peers, the professors who I got to know, and my time at the Gombe Stream Research Center in Tanzania which a few of us were luck enough to attend as field research assistants. It became a foundational way for me to think about my profession, life, and interests.

- Grant Heidrich '74

It was a breezy February afternoon, and there were six of us sitting in that stuffy room (you know the one) at the back of the HumBio building. The windows were open, but the air still smelled like dry-erase markers and old "Olives" sandwiches. Our A-side TA, Leigh, was standing at the whiteboard drawing out the details of fruit-fly body segmentation. Ever enthusiastic, she grinned as she sketched Hox genes and told us about fruit flies with legs coming out of their heads. I took halfhearted notes, but I felt so far away. My grandma had died that morning, and the guilt of not being there to say goodbye was overwhelming. I was trying to distract myself with schoolwork, but it wasn't working.

All of a sudden, the guy sitting next to me turned and exclaimed "hey, you look like a fruit fly!" A few of our classmates stifled giggles, unsure whether or not it was okay to laugh. "Excuse me?" I asked, confused and slightly offended. "Your eyes," he said, "look like a fruit fly's." I knew the guy's name was Edan, and I had met him two or three times before at a PSET-check group. But I didn't really know him, and I didn't think he had any place to be telling me that I looked like a fruit fly.

Office hours ended, and everyone filed out to enjoy the last 45 minutes of daylight. As I was packing up my notebook, Edan asked "hey could you explain something really quick?" I sighed internally, tired from the day and wanting nothing more than to head back to my room in Trancos and cry. "Sure," I managed, "What's up?" He explained to me that he had been an English major and had just switched into HumBio a month ago. Without 2A material as a foundation, he was having a hard time contextualizing the cell-signaling pathways that we were learning.

I picked up a black marker and drew crude concentric circles – a cell and its nucleus. Little swiggles for the DNA and mRNA, blobs of enzyme. As I added arrows and labels, I watched Edan's eyes light up. "This is freaking magical," he practically shrieked. I couldn't help but laugh. I had never seen someone so excited about the central dogma. An hour later, we were still laughing. His energy was infectious, and it had grounded me in a way that nothing else had been able to that day.

Now, four years on, Edan is still my best friend. We've supported each other through academics and heartbreak and grief and graduation and the pandemic and medical school applications and expanding processes of self-discovery. We used to ride our longboards through Main Quad at night and talk about how beautiful and how nostalgic it would be to come back to all of this, years and decades later. I'll be forever grateful for the education that HumBio gave me. But more than that, I'll be forever grateful for the friendships.

And Edan still calls me fruit fly :)

- Emma Mathers '19

I am truly thankful for the academic experience Humbio has given me during my time at Stanford. From the dedicated and passionate professors to the thought-provoking classes, I've felt like Humbio helped me grow as a student and a person. My world perspective is forever changed and I couldn't be more excited to go forward and make a difference.

- Mailo Numazu '20

I was blessed to work with Dr. Gail Butterfield on an honors project while studying at Stanford. Gail was extremely intelligent, fun, kind, and encouraged students to work hard in all that they did. Her passion for nutrition drove me to complete my PhD in this field rather than attend medical school. She was truly an amazing woman.

- Karrie Cesario Heneman '99

I had the incredible honor of being a HumBio B-side TA after I graduated and got to work with Donald Kennedy in spring 1994. After all he had accomplished - as a scientist, FDA commissioner, and university president - he constantly demonstrated his love of learning and commitment to teaching his students. His enthusiasm was contagious, and I still try to bring his worldly and interdisciplinary thinking to my classrooms as a faculty member at NC State University.

- Jason (Dell) Delborne '93

I had the great privilege of learning how to conduct research as a Human Biology major under the guidance of Keith Brodie, M.D., who became my mentor. When I first met him, Dr. Brodie was a young psychiatrist on the Stanford Medical School faculty and a popular neuroscience lecturer in the Human Biology program (he later became president of the American Psychiatric Association and president of Duke University). To my great surprise, he accepted my lesbianism and welcomed my interest in studying LGBTQ+ people. He sponsored my first two studies research projects that led to publications and a medical career in which I melded science with social justice advocacy.

In 1971—the year I began working with Dr. Brodie—those of us who identified as LGBTQ+ were considered mentally ill by the medical profession, criminals in the legal system, and sinners in the faith community. There was considerable opposition to nontraditional families. In the absence of empirical data, lesbian parents were denied custody of their own children based on assumptions that they would be psychologically impaired, abused, and grow up to be LGBTQ+. Critics pointed to the lack of prospective, longitudinal data on children raised since birth by sexual minority parents, knowing full well that such data would take decades to collect.

This was still the climate in 1986 when I launched the ongoing U.S. National Longitudinal Lesbian Family Study (NLLFS) to follow the first generation of children conceived through donor insemination by lesbian-identified parents. The NLLFS is now in its 35th year and it has a 92% retention rate. Our findings do not support the predictions of opponents. When they reached the ages of 10, 17, and 25, on standardized assessments of mental health, the offspring scored as well as, or better than, their peers. Nearly all offspring considered their mothers good role models whom they hoped to emulate. At 25, most offspring identified as heterosexual. None of the offspring were physically or sexually abused by their parents, in contrast to 26% of 17-year-olds in the U.S. who report physical and 8% sexual abuse by a parent or other caregiver.

Many of our publications were available for the hearings on marriage equality, which at times focused on the well-being of children in sexual minority parent families. Our findings were cited in numerous briefs filed with the U.S. Supreme Court. It was a great triumph when same-sex couples were guaranteed the right to marry under the Constitution on June 26, 2015.

Fast forward to June 17, 2021. Although Chief Justice Roberts and Justice Barrett signed onto an opinion reaffirming that "our society has come to the recognition that gay persons and gay couples cannot be treated as social outcasts or as inferior in dignity and worth," there are no federal non-discrimination protections for LGBTQ+ prospective parents. More than 400,000 children need foster parents in the United States. Williams Institute research (UCLA School of Law) has shown that same-sex couples are more than seven times more likely to be raising adopted or foster children than different-sex couples. Yet 11 states continue to allow child welfare agencies to discriminate in the placement of children based on the sexual orientation or gender identity of the prospective parent.

Prejudice in the adoption and foster care system is but one of many ongoing hardships faced by LGBTQ+ people, with tragic consequences for children who deserve loving homes. I look forward to the day when LGBTQ+ people will be able to participate fully in our society with federal laws that protect us from discrimination.

- Nanette Gartrell '71

Nanette Gartrell presenting on the NLLFS at Duke in 2013.
From left to right: Keith Brodie MD, Nanette Gartrell MD, Dr. J. Long

Graduating future co-CAs class of 2013! About to embark on one of the most experience filled teaching and learning year of being course associates.

I loved the HumBio Core classes so much that I aspired to be a Human Biology Course Associate. When I got to do that (HumBio A-team, 2013-2014), it was such an amazing experience going through the core classes again and learning so much with my co-CAs and students. Overall, it was just wonderful!

- Tracy Makuvire '13

I am forever grateful for HumBio. As I reflect back at my time at Stanford, I truly appreciated the opportunities that Hum Bio provided me. Firstly, the ability to choose and design an area of concentration taught me what it means to be an adult learner and to take charge of my own education. This has certainly continued to have a lasting impact in my own career and something I emphasize to my students and fellows at UC Davis. Secondly, I am so appreciative of the fantastic mentorship I found in Drs. Mary Jacobson and Carol Hutner-Winograd. Both were instrumental in my pursuit of a medical career but they also were influential in helping me shape what I wanted out of my career as a clinician-educator and woman in medicine.

- Florence Chau-Etchpare '07

The class "Parasites and Pestilence" was so fascinating (and gross), students didn't mind attending it on a Friday afternoon!

- Tiffany Neal '02

My mom and I wanted to submit to the 50th Hum Bio reunion a special shared memory of our mother-daughter trip to the Galapagos as well as a memory of Professor Katchadourian...

She (Olga Hajek) was Stanford class of 1969 originally and graduated in 1970. She says, "I took the extra year for a degree in anthropology because I had one more obtuse math class to finish in Biology!!" In other words, she did a Do It Yourself version of Hum Bio as it did not exist formally in time for her.

I (Anne Haack) graduated with a Hum Bio degree in 1996. Mom and I each find microevolution fascinating and also understand there to be a Creator. Along with Galapagos: A Different View, I reread Darwin's book on the trip and resonated particularly with this quote: "[Some naturalists] believe that many structures have been created for the sake of beauty, to delight man or the Creator.... Such doctrines, if true, would be absolutely fatal to my theory." - Charles Darwin.

Our other favorite memory is of Herant Katchadourian, my advisor, whom we all met as a family. His wife Stina wrote a book called Efronia: An Armenian Love Story which inspired me later to write Petal and Poultice a Czech love story involving my mom Olga's escape from Czechoslovakia and subsequent time at Stanford.

- Anne Haack '96 and Olga Hajek '70

To me, HumBio was about understanding the many connections between the molecules and cells we're made of, the cultures we're steeped in, the physical environments we live in, and much more. If I were to go back, I would tell myself that what you can ask or learn or do in HumBio is limited only by your curiosities—about food, music, data, immigration, genomics—and your ability to understand their connections to what it means to be human.

- Edric Zeng '19

From Top to Bottom: Class of 2019 HumBio SA's with Dr. Preston, From my summer HB-REX internship supervised by Professor Christopher Gardner: the four camp counselors/ researchers holding some of the farm chickens; Hand-painted sign for row of kale; Dr. Preston as commonly seen eating a salad for lunch as she was explaining the morphology of a component of her salad.

In the spring of 1972, I was deciding on Bio vs HumBio and attended both classes. The lecture on the mosquitoes in the bromeliads of Trinidad by Dr Colin Pittendrigh enthralled me and I was hooked on Hum Bio. I never looked back. All the classes were great preparation for med school and my life as a cardiologist. I'm spending the twilight of my career as a clinical professor at Stanford, teaching fellows seeing patients and assisting the pre-med advisors. A full circle!

- Eleanor Gwen Levin '75

HumBio was like home to me at Stanford. I have such happy memories of working with my fellow CA's and brilliant professors like Bill Durham, who was also my academic advisor. I wish I could come back and do the Core all over again!

- Coco Ballantyne '98

As one of the students selected to speak at graduation, I decided to keep it a surprise for my family. Robyn Duby from HumBio even helped me create fake pamphlets without my name in them, which were then distributed to my unwitting family members. They had no idea until I walked on stage for the speech!

- Sandro Luna '18

There are many influences from the Human Biology Program that have led me to a medical career but the one that stands out is Sanford or Sandy Dornbusch. Sandy was an incredible influence on my life. He took this shy, young individual from Tucson, Arizona and helped me onto my medical career. He was very insightful and just a wonderful human being. There's so many more people in the Human Biology Program that were very excellent and influential in my life but the one that truly stands out is Sandy Dornbusch.

- Carl Lopez '74

During the HumBio Core in 85-86, I remember one of our midterms had this horrific question regarding the mighty mitochondria. First you had to turn the poor little mitochondria inside out, add some compound that changed the typical behavior, and on and on it continued. The question was so convoluted and complicated that there was a terrible uproar. To the professor's credit, they ended up throwing that question out but I will never forget the mighty mitochondria after that!

Another quarter we had a paper due by 5pm. I arrived about 5 minutes to 5 and dropped my paper in the box outside the HumBio office. I decided to wait and watch what the next 5 minutes would bring. Sure enough, there were many last minute sprints to turn in papers. But the best one was the last one. This one guy was biking across the Quad when the bell tower started to chime 5 o'clock. He pedaled faster and then jumped off his bike and ran the last part to drop his paper in the box as the last bell chimed. His bike had kept going until it ran out of steam and tipped over. He had this huge, self-satisfied look as we smiled at each other. But less than a minute later, a TA emerged from the HumBio office, picked up the box and took it into the office. Both of us were quite stunned at the efficiency of the staff and the finality of the deadline.

I loved every minute of the HumBio Core. It was everything I thought college would be - intriguing, challenging and opening my eyes to new knowledge. It included spraying water into the audience during a demo of the heart pumping, lectures by some of the best and discovering that my stomach pains were a result of being lactose intolerant. It was during the beginning of the AIDS epidemic which provided a powerful, relevant example of how multiple disciplines (biology, sociology, political science and psychology) are all vital in solving complex, social issues. That interdisciplinary approach and value of different perspectives has continued throughout my career whenever I am trying to solve global, complex problems in my work.

Thank you HumBio for the enduring lessons!

- Angela Arvizu Szymusiak '88

Hum Bio had a late afternoon coffee hour that featured professors speaking on topics of interest. I will never forget the "debate" between Nobel prize winners Linus Pauling (chemistry and peace) and William B. Shockley (physics) on the "nature vs. nurture" debate on human traits, specifically intelligence. Shockley maintained that Blacks were intellectually inferior to Whites based on their genetics, citing a twin study as the scientific basis for his opinion. Linus Pauling disagreed on the racial aspect and stressed environmental factors having an important role in human intelligence. The debate was heated, and many of us missed dinner to stay to its conclusion. Some years later, I recall that the twin study Shockley relied on was discredited. Hum Bio had warned us not to base any theory on just one study!

- Susan Gail Hootkins '73

When the email came from Lianne Kurina about the Alumni Memory Book I wrote to ask if I could submit a posthumous offering from my daughter Mallory Smith (class of 2014), who wrote prolifically and loved the major. I combed through her computer and found the following, written as part of an application. These are her words:

"Many things about being a HumBio major at Stanford make me feel happy and grateful but most important is the close-knit community, with a supportive network of peers and faculty. The culture is distinct and unique, filled with active, laid-back (driven but not competitive), passionate, outdoorsy people who are eager to experience life and leave their mark. I love being surrounded by some of the most interesting students, the future leaders of our generation. The issues we address are fascinating and relevant."

This got me curious. What made her love HumBio so much? Fortunately, Mallory was meticulous with her work, creating folders for every class. Reading her assignments made clear why she loved the major and found the topics so compelling.

One particular entry was about neighborhood SES, biological 'wear and tear,' and socio-economic differentials. Mallory wrote that studying cumulative biological risk, and not incidence of specific diseases, was a good way to examine the relationship between life experience and overall health.

Another was about the reading assignment, "The Practitioner's Dilemma: Can We Use a Patient's Race to Predict Genetics, Ancestry, and the Expected Outcomes of Treatment?" Mallory was passionate about healthcare disparities, how the race of a patient is used to infer information about their genetic makeup, and then used to make important decisions about the patient's care.

So important, still relevant. Thank you for enriching Mallory's life.

- Diane Shader Smith, on behalf of her daughter Mallory Smith (Class of 2014)

I remember how I teamed up with classmates whose expertise ranged from anthropology to engineering for a final project in several HumBio classes. While I focused on carrying out experiments on the biological side, the various input from my HumBio teammates were nothing I could have come up on my own. Those memories are some of the fondest I have in my academic career.

- Maimi Higuchi '20

I really thrived as a Hum Bio major, especially after the Core when I could design a curriculum focused on health policy and other topics I found interesting and challenging. I am grateful to Audrey Bernfield (who at the time was a student counselor in the program, can't remember her official title/role!) really stuck up for me and my self-designed summer internship experience. It was the first time I realized the power of ally-ship, a term we use regularly today but that was not so well described back then. My famous professor advisor did not want to give me credit, and Audrey went to bat - explaining how impressed she was that a shy quiet student like me had shown initiative, reached out, created a summer internship from scratch and completed it. The "technicality" I'd violated was not getting permission in advance, but Audrey made it happen retroactively! Often when I stick up for someone or something, I think of Audrey and am grateful for the example she set.

- Cathy Garzio '79

Memory 1: A team teaching in HumBio - Linus Pauling, Joshua Lederberg, and Paul Ehrlich. I can remember sitting in the class and being electrified by their interaction with each other and their openness to the students, even though I certainly didn't get the courage to ask a question. It was an amazing experience and one which I will never forget. I then had a chance to visit Linus Pauling's house, through another student who worked with him, after the Rose Bowl in '72. It was a house in Big Sur, his wife played the violin while we had tea, as the waves crashed ten feet away from his house in the windows.

Memory 2: Doing my senior project with Mark Leighton, my fellow student and classmate. He's now a professor at the Peabody Museum at Harvard, in Ecology I believe, having done his PhD in primatology and spending 6 months with Jane Goodall. The two of us decided to map the biosystem of the San Francisquito Creek. In the process, we found that one of the local businesses, the gas station, was dumping pollutants into the creek. We did a 60-minute style assessment, taking pictures, working our skulduggery, and questioning people at the gas station. It was amazingly fun and interesting and I believe did some good as we made sure that the pollution stopped.

I just finished a 40-year career in family medicine in San Diego and have the greatest memories of my time in HumBio. I've had a chance in my neighborhood practice to participate in a number of different activities including being a doctor for the U.S. rugby team, the America's cup, ship's doctor in Cal Maritime, and being involved in a lot of forensics work. I must say that it all started with HumBio. I have only phenomenal memories and feel blessed to be a part of this period.

- Ned Chambers, MD '73

—Daily photo by Mark Funk

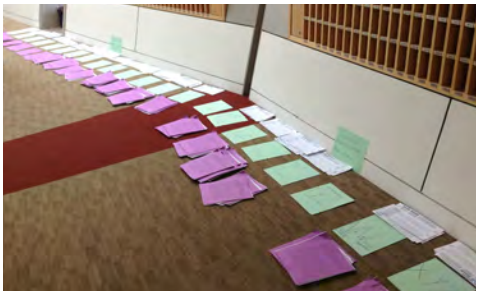
FROM TANZANIA—Emily Polis, one of the students at the Gombe found who escaped when three Stanford students and a Dutch researcher kidnaped, returned to campus Monday with descriptions of the raid. One student captives, Barbara Smuts, was released Sunday, but students Jane Hunter and Kenneth Stephen Smith and Emilie Bergman of the rlands are still being held.

Stanford Daily on 1975 Gombe kidnapping

Human Biology became my home away from home: inspiring teachers, wonderful students, the opportunity to be a student advisor, teaching assistant, design and teach my own class, and to do research with Jane Goodall on the wild chimpanzees in Gombe, Tanzania. I could not have asked for a richer, fuller, more challenging undergraduate major that prepared me well for my 40+ years as a family physician and farmer, wife and mother.

- Emily Polis Gibson '76

"Dress Like Jill" Day



Test Return Piles

My B-Side Buddies

Many of my most enduring HumBio memories are from my time as a B-side CA, in particular because I was serving in that role alongside my partner, Autumn Albers, who was an A-side CA. She and I would leave our off-campus co-op and ride in on a decorated tandem bicycle. If we were lucky, we'd make it to building 20 and then morning core classes with our smoothies intact. This was our routine. The students took notice, of course, and I remember seeing mention on one of the exam "fun pages" from a student of Autumn and Steven's "fancy green juice." It was an amazing year in the core, and I'll always remember my fellow CAs and Annette fondly as my first real colleagues in my first real job. Here's to you, Molly, Adrian, Jill, Autumn, Sonia, Grace, Rahael, and Annette!

- Steven Michael Crane '12

Even as a naive freshman you could sense the excitement and energy about creating a new major program in Human Biology. Just being in small groups with "icons" such as Paul Ehrlich or Colin Pittendrigh or Joshua Lederberg or Sandy Dornbusch, and of course Donald Kennedy, is still amazing to contemplate. I was privileged to be one of the first 2 undergrad teaching assistants in the program. I remember fascinating discussions about the purpose and goals of an interdisciplinary program, and what the founding faculty wanted its graduates to explore and accomplish. Big personalities, somehow kept in check with tact and skill by Sophie Alway and Tibby Simon; it took years for me to realize how tough those two were. And it took years into my various careers to fully understand how an interdisciplinary course of study positively shapes your approach to problem solving and policy making.

It is so appropriate to reflect back upon those early formative years, both for the program and for me, as we address current issues. We are so caught up in narrow thinking, reinforced by algorithm defined information and social "bubbles". Yet so many of our major current problems such as systemic bias, climate change immigration, infrastructure modernization and societal inequality cannot be addressed with narrow thinking. How can you address immigration without compassion and an understanding of the factors driving migration? How can you address climate change without appreciating the economic and social impacts during a transition to cleaner energy?

In many ways Human Biology epitomizes the sentiment attributed to General Dwight Eisenhower: "Whenever I run into a problem I can't solve, I always make it bigger. I can never solve it by trying to make it smaller, but if I make it big enough, I can begin to see the outlines of a solution." This useful advice encourages us to expand perspectives to discover innovative solutions and unexpected synergies among issues and other problem solvers. For me this was the essence of the Human Biology philosophy.

This approach is hard and takes so much more work. I do remember early criticisms of the program as being the "easy" biology major, but I have found the principles I was taught so much more useful than the formulas I memorized in organic chemistry.

I graduated Human Biology in 1974 and was one of the first two undergraduate teaching assistants in the program. I used my HumBio training in my work as an environmental attorney and Chair of the Sacramento Environmental Commission, as an appointee in the Clinton Administration as Principal Deputy Assistant Secretary of the Army for Installations and Environment, and later as Deputy Undersecretary of Defense for Installations, responsible for defense infrastructure worldwide. I was awarded the DOD Medal for Distinguished Public Service, its highest civilian honor.

I've found the Human Biology perspective to be critically useful in addressing homeland security issues following 9-11 as a managing director of Homeland Security and Justice at the US Government Accountability Office, while working with the 9-11 Commission and providing expert testimony before Congress, and later as Director of a congressionally chartered think tank on homeland security. I am particularly proud of my work to improve the lives of military families.

Thank you Human Biology, its founders and past and current faculty and students. Not only have you made the world a better place with more innovative and sustainable solutions, but also you have made life a whole lot more interesting.

- Randall Yim '74

When I think of HumBio there are so many great memories that come to mind. Many of them include my HumBio advisor, Dr. Robert Siegel.

From our Stanford trip to Madagascar, to Sophomore College, to hugging him on stage at my graduation, Dr. Siegel made a huge impact on my academic journey. He made it a point to always push students to be the best form of themselves, encouraged them to document their education and share it with others, and have fun learning.

I think the HumBio department does an amazing job of finding professors who are really dedicated to the success of their students and who care a lot about the program. I finished the HumBio major with so many friends and a lot of knowledge I use not only in my work, but my every day life.

Thank you HumBio!

- Joanna Langner '19

HumBio has taught me power of caring deeply for others and the world around me, and it has empowered me to use my passion and drive to work to make the world a better place. HumBio has taught me to see, hear, and empathize with others with vastly different lived experiences from my own. HumBio has taught me to believe in the power of myself and of those around me.

- Shravya Gurrapu '20

I recall hungrily reading and re-reading the HumBio section of the Stanford course catalog (circa 1973) asking "why would I go anywhere else?" Don Kennedy explaining physiologic feedback loops in terms of why his post-run sweats always happened after he put on his good shirt. Jane Goodall teaching an entire lecture hall how to pant-hoot. Getting a decent intro to the labor theory of value (along with the orthodox capitalist alternative) from John Hurley. TAing with Susan Wickes on the 1975-6 policy-oriented Core revision, which had us describing the entire Federal healthcare apparatus in a single casebook chapter (!) Our anxiety for the Gombe research station kidnapping victims. Mind-stretching work as teaching assistant and librarian (with Tim Cullinane) for Joshua Lederberg and his amazing range (from microbial genetics to interplanetary ecology) and ultra-dry sense of humor. (Surprised he recalled me 30 years later, he remarked "That must seem like a long time to you.") A tiny sample from 3 short years of HumBio that prepared me for lifelong professional adventure.

- Seth Foldy '77

Most of my best friends from Stanford were also HumBio students! We loved the breadth and depth of areas of study, as well as the ability to be flexible with classes to create our own concentrations. I've recently had multiple Hum Bio alum recognition moments with key policy and educational leaders and it's such a time of mutual joy. Thank you HumBio!

- Aimee Grace '04

HumBio rocks! It is always so much fun running into HumBio alums in all spheres of life. I want to recognize Ellen Porzig for her amazing mentorship during my time at Stanford. She was such a thoughtful and grounded professor who pushed me to think critically about course material and approach research questions creatively. I could tell she really cared about my learning and growth.

- Karen Kim '98

It was so special to celebrate my 5th year HumBio reunion with my dad, Mark Mooney, at his 35th HumBio reunion in October 2017!

- Kathryn Mooney '11

Congratulations to HumBio for 50 magical years! My reflection expresses gratitude to HumBio faculty, advisors, staff, and students for inspiring my interest in health and spawning a meaningful career for three decades in healthcare consulting.

Whereas the A-side of the Core taught me to appreciate science that allows me to work more effectively with scientists and clinicians to this day, the B-side reinforced the social context of why healthcare is vital to society. As a program and not a department, HumBio afforded me the opportunity to take healthcare electives in other departments and schools as an undergraduate.

With HumBio as a foundation. I traveled overseas and studied alternative approaches to healthcare in other countries and then concentrated on healthcare financing and delivery at Harvard Business School. For a multi-state health system, I helped them earn the first Malcolm Baldrige National Quality Award in Healthcare. For the largest bankruptcy in American healthcare, I served as the lead expert witness earning my client two favorable summary judgments. Multiple healthcare delivery systems in major metropolitan markets around the country formed with my assistance to improve access and lower costs. None of this could have happened without the spark that HumBio ignited in me. The gratitude for HumBio runs so deep that when our family witnesses a tremendous accomplishment by someone, my dad often remarks, "must be a HumBio major."

For the Class of 1986 35th Reunion, we look forward to joining our undergraduate daughter for Dinner on the Quad and celebrating 50 years of HumBio during Reunion Weekend. Thank you HumBio!

- Robert A. Dickinson '86

My two years as an A-side CA overlapped with Annette's hire and her first year as Core Coordinator. I still remember sitting in on her interview and hoping that she would be chosen for the role! Since then, Annette has put down roots in the Core and worked tirelessly towards making it the best it can be. Her passion for keeping curriculum current in the context of ever-changing methods, biotechnology, and world events have undoubtedly driven the Core Coordinator's role—and the Core itself—in new and exciting directions. Moreover, her uniquely humble, thoughtful, and empathetic approach to mentorship is one that I aim to model in my own life. My time as a CA remains a highlight of my time at Stanford, and I'm grateful to Annette and all of the other HumBio folks (including my partner, a former B-side CA!) who made it all happen.

- Autumn Albers '12

Human Biology has exposed me to the beauty of interdisciplinary studies and shown me how I can bridge my interest in biology with my passion for education. The faculty and design of the Human Biology major allowed me to explore different areas of concentration before landing on Behavior and Development. I am grateful to the Human Biology department and encourage everyone to consider Human Biology in their academic endeavors!

- Sesha McMinn '20

Saniya and classmates at the HumBio Diploma Ceremony Reception

- Saniya Kishnani '16

Freshman year on the Farm, I walked in to try out the first lecture of Bill Durham's CoEvolution course in order to satisfy my science distribution requirement. The class was fabulous and fascinating from the very first lecture so I stayed. I asked Bill towards the end of the quarter, "where can I learn more of this stuff?" and he sent me off to sign up for the the Hum Bio core in sophomore year. Ultimately, I switched from Political Science to Hum Bio and from a life in government or law to a career in biomedical science, neurosurgery, surgical education, and medical policy. I use my Hum Bio taught skills every day and, if I needed to describe myself in a single phrase, it would be "Human Biologist!".

- Nathan R. Selden, MD, PhD '86

During my HumBio internship, I worked with a group of middle school students for a summer science camp and tutoring program. Years later, I worked with several of those students as college students in a faith-based non-profit I started on their campus.

- Brennan Takayama '06

I am now a Professor at the University of British Columbia in Vancouver, Canada - and I still regularly apply and teach the lessons that I learned all those years ago! Thank you.

- Kiran Soma '92

I graduated from Stanford in 1981 with a degree in Human Biology. My first job was as a research assistant at a genetic engineering company in Palo Alto working on cures for breast and ovarian cancer. I worked with other scientists hoping to cure disease by understanding the human genome. I never dreamed that 40 years later a new biology would prove we are not our genes. "Only 5% of disease related genetic mutations are fully penetrant—meaning they are incurable. The other 95% of disease coded in our genes is determined by the choices we make." - Deepak Chopra

Our thoughts, feelings, words, beliefs, the food we eat, the friends we share time with, the amount of exercise we participate in, and our sense of purpose determine our well being. New cells form each day. Those cells can replicate without the expression of disease. Neuroplasticity allows our brain to change shape, neural connections, and function. We can literally become intoxicated by wellness through our body's natural opiates of emotion.

How do I know? I live it.

I'm grateful for my degree in Human Biology. I am grateful our professors encourage us to question and think, unattached to a text book. That skill changed the course of my life. While textbooks still treated organs as separate entities, professors showed us that they were intricately connected instruments in the same orchestra.

- Leigh Scalapino Myers '81

Need to do add # in sec part
↳ 31

October 26, 1977

Schoeppel

Sandy's Suggestions for Honor Students in HB

1. If you are interested in a topic, be sure you cut it to manageable proportions.
2. If something bores you, it will get more interesting as you work at it.
3. Read widely before you begin to develop hypotheses.
4. Before you begin, draw up tables of imaginary results that would make you happy. Are they convincing? Writing. Makes you define what looking for.
5. Be able to state your central hypotheses and methods in a short paragraph. that is true.
6. Set your sights high in terms of the quality of your work. You'll fail to meet your standards and learn a lot trying. State ma le gueir
7. Your advisor has other concerns. It's up to you to bug him so he can help you early.
8. Originality is the product of a faulty memory. Cite your predecessors.
9. Every scientist has to be willing to do drudgery.
10. In gathering data, try to be aware of your biases and guard against them.
11. Make sure your data is reliable. Reliability is necessary and not sufficient for good science.
12. Good science is a collective activity. Don't hesitate to talk over your ideas with your friends and enemies.
13. Interpret your data in ways that hurt.
14. Are there alternative explanations of those pleasant results? Be the first to criticize your own work.
15. Can you gather data or do analyses that will test alternative exlanations? You get extra plaudits for being self-critical.
16. It's hard to write celarly. Vague writing reflects sloppy thinking.
17. Write your first drafts quickly. Write with verve and enthusiasm. Then revise and revise.
18. Never say, "Obviously." It often isn't true.
19. Writing clearly is your goal, not impressive use of language. Use a thesaurus or dictionary of synonyms to say what you mean and mean what you say.
20. Don't tell the reader everything you know; just express what the reader must know to evaluate your effort.
21. Be excited at the beginning, cool during the study, and thoughtful during analysis and writing.

I had the good fortune of finding the Human Biology major at Stanford. A top Human Biology memory is taking a course that sounded interesting called "The Biosocial Aspects of Cancer" given by Dr. Henry S. Kaplan in 1976. From his first lecture, it was obvious he was no ordinary person. He was soft-spoken, authoritative and very clear with concepts. I later found out he was a world renowned Radiation Oncologist who pioneered the curative treatment of Hodgkin's Disease. People came from around the world for him to treat them after being told there was no hope. He and his Stanford colleagues were early adapters of the gold standard "randomized controlled trials" used today. Little did I know that I would have the good fortune to become a physician and do my residency in Radiation Oncology at Stanford while he was still there. I did an Honors thesis as part of my degree. Dr. Sandy Dornbush would meet with us and gave us this list of "suggestions" (left) for doing research and a thesis. I find them delightful.

- Sonja Schoeppel, MD '78

My favorite classes were Katherine Preston's plants class and Marcia Stefanick's women's health class. I use what I learned in them literally all the time.

- Julie Campbell '11

A couple photos of the 2010-2011 HumBio SAs at our 2011 HumBio Abnormal Formal! We all dressed up as the food pyramid for maximum nerdiness factor.

Human Biology's Connections to Saving Mono Lake in California

The Human Biology program had some connections to saving Mono Lake. Mono Lake sits on the east side of the Sierra Nevada, just east of Yosemite National Park. Supposedly John Muir included Mono Lake in his initial proposal for the creation of Yosemite National Park. Mono Lake is currently the second largest lake in California (only smaller than Lake Tahoe). Geologically, Mono Lake is second oldest continuously existing lake in North America (recall the Long Live Mono Lake bumper stickers). Freshwater flows into Mono Lake but the lake has no outlet to the sea. The freshwater flows in. Water leaves by evaporation. The salts in the water remain in lake water causing it to be a saline lake. As a saline lake it has a unique ecosystem. It is known for its migrating birds, a breeding colony California of California Gulls on volcanic islands, brine flies, brine shrimp, volcanic features, tufa towers, etc. Mark Twain described a 1800's visit to Mono Lake in his book Roughing It. In the 1970s, Mono Lake was on a path to being dried up and destroyed like some other California lakes (e.g. Owens Lake – the subject of the movie Chinatown and Tulare Lake). Los Angeles had permits to divert all the freshwater streams that flowed into the saline Mono Lake, and had constructed dams, an aqueduct, tunnels, and hydroelectric facilities to remove all the surface water from the Mono Lake basin.

In the 1970s Craig Heller (Human Biology director 1985-1992) had a chipmunk physiology study taking place at a few elevations in the Sierra Nevada. As the students camped out and did their field work on the east side of the Sierra Nevada, they looked out on Mono Lake to the east, and some learned anecdotally about the water diversions and the potential threats to the Mono Lake basin ecosystem. A couple Stanford biology undergraduate students, Jefferson Burch and Christine Weigen, along with a couple other students, wrote their own grant proposal, as part of the National Science Foundation Student Originated Studies Program (a program that funded research projects initiated by undergraduates). Their grant proposal was funded. The project officially included a total of twelve undergraduates from Stanford, University of California of Davis, University of California at Santa Cruz, and Earlham College. Jeff Robins, a Human Biology major, who counted participation in this project as his Human Biology Workshop project (plant succession on the exposed lake bottom), was one of the official original core of twelve students. The twelve undergraduates conducted a full field ecological study of the lake in the summer of 1976 considering hydrology, limnology, ornithology, entomology, and botany, and predicted the future of the lake ecosystem if freshwater diversions continued. The study, *An Ecological Study of Mono Lake,* was published in 1977 by the Institute of Ecology at the University of California at Davis.

A volunteer participant from the 1976 study started a nonprofit environmental group, The Mono Lake Committee, in 1978. The Mono Lake Committee initiated a legal fight to save Mono Lake and won a landmark California Supreme Court decision in 1983 to save Mono Lake. The decision was based on a legal argument called the Public Trust Doctrine. The decision put forth that it did not matter that Los Angeles had permits to divert every drop of surface water from the Mono Lake basin. The Court found that the State of California had a higher obligation to protect the Mono Lake ecosystem. The Mono Lake case was the first time the Public Trust Doctrine was successfully argued in a modern environmental dispute. Environmental groups now often use this approach to argue environmental cases. For more detail see the video, *The Battle for Mono Lake*, the Mono Lake Committee website; and the book *Storm Over Mono* by John Hart.

In 1984, Martha Davis, a Human Biology alumnus from the 1970s, was hired as the Executive Director of the Mono Lake Committee. Martha was Executive Director from 1984 to 1997. During her time there was another major legal dispute as Los Angeles and the Mono Lake Committee fought over the details of implementing the 1983 California Supreme Court decision. The result was another major decision by the State Water Board in 1994 which solidified the implementation of the 1983 court decision. Martha received many accolades for her work leading up to the 1994 State Water Board decision and her tenure as the Mono Lake Committee Executive Director. Martha continues as Chair of Board of Directors of the Mono Lake Committee to this day.

- Jeff Robins '78

Herb Dengler leading a natural history class field trip on Jasper Ridge

As a refugee from 1970s NYC, I was immediately enchanted by the open space and natural beauty of the Stanford campus and its environs. Taking the "Natural History of the San Francisco Bay Area" taught by Herb Dengler really made the region home for me. Herb knew the landscape - from the bay to the ridgeline and down to the sea - like the back of his hand. On the weekly outings, Herb would share his encyclopedic scientific knowledge and endless anthology of stories about what came before Silicon Valley, familiarizing us students with the names and characteristics of all the fauna, flora, and hamlets that make this part of the world so special. TAing his class reinforced that knowledge to the point that I can still name many of the plants I see as I hike along the trails today. Thanks to Herb and HumBio 103 for giving me this sense of place.

- Jack Chin '83

I am so thankful HumBio allowed me to explore my interests in health from both a macro and micro level. I learned that our health is inextricably linked to the systems in place around us and I look forward to using my HumBio degree as a launching pad to a career in pushing the needle forward, so that more people can have a fair chance at achieving "good health." I will fondly remember classes like Global Public Health, The American Healthcare System and Health Policy, and Cancer Epidemiology for opening my eyes to the work that needs to be done in order to make the concept of good health more equitable for all.

- Neha Sidhu '21

I'm grateful for the interdisciplinary approach that HumBio has that allowed me to learn the intricacies of biology while exploring lifestyle and policy changes that can shift a system's focus from fixing disease to improving overall health. This made learning biology applicable to the world around us and more exciting!

- Megan Hirsch '21

I can still remember the enchantment and engagement provided by Professor Pittendrigh's opening lecture as a Human Biology major. I gained problem solving skills from my time at Hopkin's Marine Station under Stuart Thompson that provided me the confidence to move forward in a challenging area of medicine which I continue to practice today.

- Marisa Klein-Gitelman '80

Lactose intolerance! 30 years later, most of the details have faded away, but I'll never forget that first module on lactose intolerance to demonstrate the interplay of biological, behavioral, social, and cultural influences on human evolution. I love Hum Bio! I'm biased, of course, but I think it is one of the greatest majors ever invented. The need is greater than ever for this type of interdisciplinary degree that allows students to customize a focus catered to their strengths and interests. My area of concentration was "communication and disease prevention" and that is the work I've been doing over the past quarter century in various forms.

- Kathleen (Phillips) Hagan '95




Matt Sullivan, Don Kennedy and I at 1978 graduation; Saying thank you and farewell to HumBio den mother extraordinaire, Tibby Simon; The Cloud Contingent (Billy H, Mark W, Dwight D, and Jay G with lucky me in the middle)

TA Mac Knight and Don Kennedy entertained with a skit at Frost Amphitheatre

In each evolution of career post-Stanford - from the US FDA (visiting biologist internship under DK's commissionership), to sports commentary (including 25 years advocacy around sports medicine and sex/gender testing of women athletes) to environmental health organizing (leading work groups of scientists, doctors, policymakers) and philanthropy (safe chemistry) - I have drawn on my HumBio degree. Striking how much that training has informed my work, thinking and choices. I miss the enlivenment of The Farm - much of which derived from my HumBio experience. I cherish memories of Don Kennedy, Jeanne, Tibby and our core professors and TAs. Speaking of which, I remain grateful to Dwight Donovan and Matt Sullivan for saving my arse when I wasn't cutting it as a Science and Public Policy TA (thanks, guys). And I am continually impressed by the creativity and incisive intelligence of current Hum Bio students, more recent grads and program directors with whom I have had the pleasure of connecting! Alum events and reunions have been terrific...

- Alison Carlson '78

I worked in Russ Fernald's lab for my HB-REX internship. Russ embodied so much of the spirit of HumBio: he cared about the whole person and had many different interests. I have a vivid memory of sitting in Russ' office and sharing segments of a clementine as he asked me about my goals in life. He shared with me about how he used to be a diver, had lived all over the world, and had finally gone into research. He took each of those paths because in that moment he was excited and passionate about it. That life lesson of not following a straight and narrow path, but rather taking a winding path through life, has stuck with me. Russ Fernald. Russ made me feel seen as a person, and I think about his guidance almost every day!

- Haley Herring '15

What I will hold on to most from HumBio will not necessarily be all the material that I memorized for exams. Rather, it will be the experiences I had and the people that I had supporting me through both my successes and failures as a student that I hold close to my heart. Thank you, HumBio!

- Derek Waldeck '20

Some of my favorite memories from HumBio - I am sure that many others will recognize these: Jane Goodall imitating chimpanzees during her lectures; Don Kennedy, standing and holding out his arms "I am a uterus". Colin Pittendrigh teaching about circadian rhythms. I also learned how to castrate mice and feed them grasshoppers while working in Seymour Kessler's lab. I later reconnected with Seymour when we both lived in Berkeley and attended the same synagogue. He was a good teacher and friend. Studying Hum Bio taught me how to live at the boundaries - and led to my career at the boundaries of medicine and social sciences as a developmental behavioral pediatrician.

- Joan Bradus '75

HumBio enabled me to pursue independent research with world-class faculty members. My HumBio years culminated in a senior honors thesis investigating pharmacological approaches to restore cognitive deficits in a Down syndrome mouse model.

I am grateful that HumBio gave me the skills and resources to merge my passion for neuroscience and clinical research. Thank you to my research mentors, advisors, and friends in HumBio for supporting me as an undergrad!

- Michelle Chin '17

Thanks Derek Lee and Kinjal Vasavada '17 for attending my talk at the 2017 Honors Symposium!

Are you kidding me? Don Kennedy and Jane Goodall teaching class in the same year? Two of the most interesting and finest lecturers ever! Both classes were flooded with non-majors who simply wanted to hear them lecture. It was the same year that Stanford students were kidnapped at Jane's reserve and ultimately freed a few harrowing months later.

What an amazing opportunity and rich curriculum, HumBio provided. THE BEST!

- Bruce Dines '76

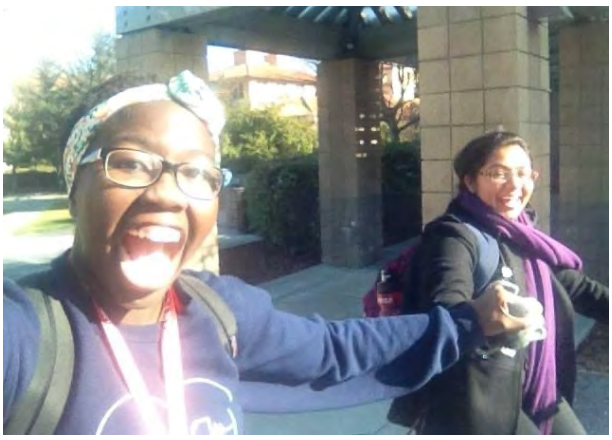
One of my favorite memories of HumBio was the two-quarter course taught literally "in the field" by Herb Dengler at the Jasper Ridge Biological Preserve. Herb not only had us identify and memorize the genus and species of flora and fauna there, it was also a darned good workout! Herb must have been in his late 60's at the time, and small-framed, but he could would always race through the slopes of Riperian Woodland faster than any of us. For the many years, I kept that small notebook with leaf samples of oaks with the common and Latin names I had scribbled on the pages. I was so inspired by his knowledge and the beauty of that place that I remained a volunteer docent at Jasper Ridge after that class and enjoyed every minute of it!

- Dave Newmark '79

When studying for the HumBio Core 4A final I believe, my best friend Saniya and I decided to go get Krispy Kreme donuts as a study break. To make it educational, we made each other describe the processes of glycolysis, glycogenolysis, the gastro-intestinal system, diabetes, and more. The next day, on the final, one of the questions asked us to describe what happens in the body when someone eats a donut. It was a serendipitous and fun moment.

To this day, when given the chance to talk about "anything I find interesting for 5 minutes" I use the space to explain lactose malabsorption and the Calcium Absorption Hypothesis. Thanks Professor Durham!

- Jemima Oso '16



Saniya and I after finishing our first set of HumBio finals sophomore year; Celebrating our impending HumBio degrees senior year

Andrea Weatherhead ('82) and I wrote "The Hum Bio Song" and performed it for the Core on the last class of spring 1980; it was then published on the cover of our final exams. Fun! Wish we had cell phones then to have videos now!

- Tim Duane '82

"The Hum Bio Song"

We've got cell biology, anthropology
Physiology, a little psychology
Who ever said the core was a bore
You couldn't really ask for more

You've got Merton in the morning
Redman in the evening
Hum Bio all day long
Don't bother taking other classes
You'll fail them all except for ping-pong

But we have our brave T.A.'s
Some in B and some in A
They give a pretty good review
Of all those things you didn't do

We've got pop biology, plant ecology
POPSIM with the help of Tuck
It took so much of my time
I didn't really give a darn about it

You've got classes in the morning
Sections in the evening
Midterms are everywhere
I don't know why I do it
Eight units just isn't fair

But we all stuck it out
And now we're ready for the final bout
Just one more week to go
To show them all what we don't know

We've sure had some great professors
Some low key and some high pressure
They each had a special flair
Think how Arthur flicks his hair

Hoogenrad took us at quite a pace
Through deoxyribonuclease
Fox gave us a thrilling glance
At the parts of the waggle dance

Great slides we've seen a lot
Upon the screen with the yellow spot
Standing by, his hand on switch
Was the ever ready fearless Mitch

We'd like to give a sincere apology
To those professors of Human Biology
Whom we didn't have time to mention
We hope that they aren't paying attention

We hope that you've enjoyed this time with us
From malnutrition to photosynthesis
We hope you get what you deserve
But please don't try to raise the curve

This year has sure been fine
Seeing all of you hear at nine
It hasn't changed your personality
Just your congnitive construction of reality
reality
reality
reality

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