



Human Biology Newsletter

The Program in Human Biology | Stanford University

Fall 2014

Fulbright Winners Prepare for Take-off

An Interview with

Kat Lee, Maia Mosse and Jessie Holtzman

Each year, the Fulbright U.S. Student Program offers grants for graduating seniors, graduate students, young professionals, and artists to study abroad for one academic year. The 2014 Fulbright scholars include three HumBio graduates, who will be conducting research in Spain, Argentina, and Honduras during the 2014/15 academic year. Read on to meet the winners and learn about their projects.



Kat Lee (HB '13)

HumBio AC: Women's Health and Women's Health Policy

Project Description: Travels to Spain to investigate the role of Wnt proteins in kidney regeneration.

What motivated this research project and what do you hope to achieve?

Lee: Kidney-related diseases affect 11% of adults but, at present, no cure exists. Wnt proteins are powerful stem cell growth factors that have been studied in the healing and regeneration of many organs, except the kidney. I hope that this research will help pave the way for novel stem cell-based therapies to treat kidney failure.

What are your plans for the future? How might this experience impact your career?

Lee: At present, I plan to pursue MD/PhD studies. I anticipate my work as a Fulbright Fellow will expand my research skills, inform me about how research may be done differently outside the U.S. and, most importantly, be an amazing multicultural experience.

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DIRECTOR'S MESSAGE

Welcome back to the future. You will find in this edition of the newsletter much about Human Biology's past, its evolution, and some exciting new developments. We are constantly refining the HumBio major, but always with close attention to the core values upon which the Program was founded. Our latest initiatives also consider the fundamental skills that any Stanford undergraduate should gain from any major. In 2012, the [Study of Undergraduate Education at Stanford](#) re-endorsed the aims of a Stanford education: owning knowledge; honing skills and capacities; cultivating personal and social responsibility; and adaptive learning. Human Biology has taken that message to heart. We are reviewing our classes from the Core to Upper Division courses to make sure that each not only conveys knowledge, but also reinforces capacities of oral and written communication, data analysis, and scientific literacy. We have already launched three new statistics courses that use examples and data sets relevant to our majors, and we are launching a "Capstone" pilot program this year. These curricular innovations will challenge students to synthesize knowledge and skills from across their courses of study and to reflect on their experiences both



within and outside the classroom. Our goal is to keep the Human Biology approach vibrant and relevant in the 21st century, while ensuring that our students have the fundamental knowledge and skills to lead with responsibility and to improve our world.

Email me your thoughts at pfisher@stanford.edu.

FEATURES

What does it feel like to be getting ready to pack your bags for Spain?

Lee: Crazy! It's a dream come true! Over the summer, I had a few weeks to enjoy with family and friends. I also went on a road trip across the country with my best friend and visited friends along the way.

What (emotionally and physically) will you take on the trip?

Lee: My journal, camera, and an open mind!

Can you tell us one surprising and little-known fact about yourself?

Lee: I can wiggle my ears!

Maia Mosse (HB '14)

HumBio AC: Global Health and Equity

Project Description: Implementing and evaluating a diabetes management program in Honduras.

What are your major goals for this project?

Mosse: I plan to measure the impact of community health workers teaching diabetes self-management on patients' health status, health behaviors, health care utilization, and self-efficacy. At every step in the process it will be of utmost importance to listen to the strengths, needs, and wants of those with whom I'm working. This way I can fully gauge how best to learn from and partner with communities in Roatan.

What are your plans for the future and how might this experience impact your career?

Mosse: I'd like to pursue a career in internal medicine or geriatric medicine, especially for underserved populations. As a future physician, I envision enriching my practice with academic medicine, incorporating teaching and research skills that the Fulbright will help fortify.

What does it feel like to be getting ready for this trip?

Mosse: Given my Latin heritage and interest in global health, serving in Latin America for an extended time is something I have dreamed of for a long time. The fact that I'm going to Honduras for many months still feels surreal, but I'm really excited to contribute in this way. I'm also looking forward to challenging my sense of independence and further honing my medical Spanish.

What (emotionally and physically) will you take on the trip?

Mosse: Emotionally, I have several generations of diabetes in my family, so this particular medical issue is near and dear to me. Physically, there may be some fabulous mosquito pants coming on this journey, thanks to my thoughtful Abuelita!

Can you tell us one surprising and little-known fact about yourself?

Mosse: My first patient was my cat, Merlin, who I gave insulin shots to when I was 9 years-old.



Lee at Holi celebration



Jessie Holtzman (HB '14)

HumBio AC: The Cellular Basis of Human Disease

Project Description: Assessing care utilization with juvenile onset bipolar disorder in Argentina.

What are your major goals for this research project?

Holtzman: This project will largely be a qualitative assessment conducted by performing directed interviews with psychiatrists and bipolar patients. Increased access to mental health care has been strongly linked to better health outcomes in patients diagnosed with bipolar disorder. Because Argentine bipolar patients have superior functional outcomes, understanding the factors that influence Argentine attitudes toward psychiatric treatment may build upon the existing body of literature regarding mental health care utilization.

What are your plans for the future and how might this experience impact your career?

Holtzman: I am currently applying to medical school, with an interest in pediatric neurodevelopmental disorders. My work in Argentina will draw on my longstanding research interests, my more recent affinity for psychological and anthropological exploration, and public policy. In the long-term, I hope to use this experience to build a career in international health research and policy.

What does it feel like to be getting ready for this trip?

Holtzman: I'm definitely excited and look forward to regaining my fluency in Spanish. As I wrap up my research at the Stanford Center for Neuroscience in Women's Health and the Stanford Bipolar Disorders Clinic, I hope to remain close to these research groups in the future!

What (emotionally and physically) will you take on the trip?

Holtzman: Up until now, all that I have needed to conduct research was my computer and a database. So, in terms of physical materials for my project, I won't need to bring much. However, the Program in Human Biology provided me all of the tools necessary to succeed in my project. The freedom that the program gives its students allowed me to explore classes that I might otherwise not have found a way to incorporate. I will miss the incredible support of my Stanford professors and am looking forward to building new relationships with international mentors and teachers.

Can you tell us one surprising and little-known fact about yourself?

Holtzman: I play electric jazz violin!



NEW COURSES - BY ALUMNUS & FACULTY

HumBio welcomes back Herant Katchadourian and Ari Bernstein

Herant Katchadourian M.D., Professor of Psychiatry and Human Biology Emeritus, will be teaching HumBio 168, *Multidisciplinary Perspectives of Guilt*, and [The Psychology of Guilt for Stanford's Continuing Studies](#) in the Winter Quarter. Katchadourian joined the Stanford faculty in 1966 and taught in the School of Medicine and HumBio for more than four decades. In addition to teaching in the Core, he created and taught the wildly popular course *Human Sexuality* (HB 10) to over 20,000 students. He served as Vice Provost and Dean of Undergraduate Studies; received the Dinkelspiel and Lyman awards and the ASSU award for Outstanding Teacher; and was selected by graduating seniors as Outstanding Professor and Class Day speaker seven times.

Alongside his other courses, Katchadourian also offered a seminar on guilt and shame. Its strategy was to examine the phenomena of guilt and shame from various disciplinary perspectives, giving students a set of tools for understanding them from both academic and personal points of view. Beginning this winter, Katchadourian will offer a revised and updated version of the earlier seminar. The first part of this new course will address the psychology of guilt at the individual level by addressing key questions like: What is guilt and how does it differ from shame and regret? What functions does it serve? To what extent is the capacity for guilt part of our evolutionary heritage and to what extent is it socially constructed? What are the behaviors that typically induce guilt? What is the role of guilt in family and intimate relationships? What are healthy and unhealthy forms of guilt and why do we feel guilty even when we have done no wrong? In the second part of the course, students will turn to the broader cultural contexts of guilt: The religious perspectives of guilt in Judaism, Christianity, Islam, Hinduism, Buddhism, and Confucianism; and the secular concept of guilt in the moral philosophy of Aristotle, Kant, J.S. Mill, and Nietzsche. Katchadourian's book, [Guilt: The Bite of Conscience](#) will be the textbook for this course, and his memoir, [The Way it Turned Out](#), which includes his personal experiences with guilt, will be an additional resource.

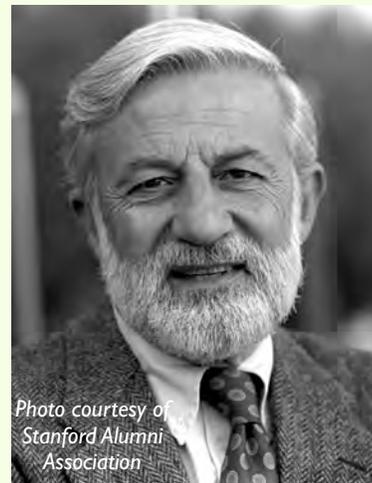


Photo courtesy of Stanford Alumni Association

Aaron Bernstein, M.D., M.P.H., (HB '99) is the Associate Director of the Center for Health and the Global Environment at the Harvard School of Public Health, and a Pediatrician at Boston Children's Hospital. Since his years as a HumBio major, he has investigated the human health dimensions of global environmental changes, such as climate change and the loss of biodiversity. Bernstein will be teaching HumBio 115, *Human Health and Global Environmental Change*, in the Winter Quarter as the Lorry I. Lokey Business Wire Visiting Professor in Human Biology



The course has its roots, much like the HumBio core itself, in the collective vision of forward thinking faculty eager to engage students in problems critical to the welfare of humanity. In the late 1990s a small group of Harvard Medical School faculty identified a gap in the curricula of medical and public health students. Education on climate change, among other forms of global environmental change, was sorely lacking despite the fact that, even as a highly adaptable species, humans still need the right climate and natural resources to survive. In response to that need, they offered a class that explored the health dimensions of global environmental change.

HumBio 115 takes the original mold of the Harvard course and reshapes it to accommodate knowledge gained over the past twenty years, and adds a Stanfordesque drive to think big about solutions. In the class, students will get familiar with biodiversity loss and climate change as two examples of global environmental change and why they matter for health. They will be asked to wade into existing challenges and debate the pros and cons of various proposals to address these issues. In the process, they will be challenged to grapple with obstacles to their ideas. "My interest in these subjects comes directly from the inspiration I got from the teachers I had at Stanford who hooked me on spending my time working on things that matter," says Bernstein. "What excites me most about this new HumBio class is that I know I will have the opportunity to inspire a new generation of Stanford students to apply their talents to these challenges."

At the Core of Innovation: An Educational Team Effort

More than 40 years after the first HumBio Core was delivered to HumBio's earliest students, revisions are still an ongoing part of this dynamic, evolving curriculum. Capacity building efforts are underway yet again under the leadership of **Paul Fisher**, Bing Director of the Program in Human Biology, and Beirne Family Professor of Pediatric Neuro-Oncology at Stanford University Medical Center, and **Katherine Preston**, Associate Director of the Program of Human Biology. Last year, Fisher and Preston worked with Writing Specialist



Shay Brawn and Core Coordinator **Annette Salmeen**, to identify a set of core competencies that all HumBio graduates will need as they take on contemporary challenges in fields as



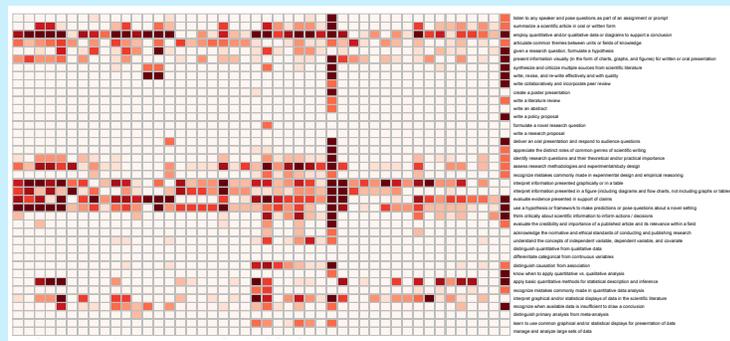
diverse as medicine, public health, psychology, anthropology, and health and environmental policy. These capacities fall into three major categories: (1) oral and written communication, (2) critical scientific literacy, and (3) data analysis. Salmeen, and a team of two Core Course Associates, **Hanna Burch (HB '13)** and **Ruth Marks (HB '13)**, were charged with assessing and mapping gaps and redundancies. The result of their investigations formed the basis of a "skills map" aimed at identifying areas of the core curriculum where these competencies were already being taught, how these areas could be enhanced, and which core courses would be ideal platforms for creating new opportunities for students to practice and acquire the target competencies.

The ongoing assessment phase has been accompanied by some early implementation strategies. Across the core curriculum students are already being challenged with opportunities to think critically about experimental design, and how to interpret scientific research. Preston's lectures in the ecology segment of HumBio 2A: *Genetics, Evolution, and Ecology* provide students with real-world practice in the realm of experimental design. "Some of the most fundamental ecological problems – such as explaining patterns of species diversity, abundance, and coexistence can seem intractably complex,"

explains Preston. "By organizing my lectures around peer-reviewed journal articles, I try to give the class concrete examples of how working ecologists tackle these problems. Along the way, we can talk about scientific literacy, in other words, how to go beyond simply reading a paper for its bottom line. Ultimately, I want students to discover how to evaluate a research paper and use it as a tool or a resource, whether they are developing their own research questions or deciding how to vote on a policy." **Shay Brawn**, Lecturer in the Program in Writing and Rhetoric, and Writing Specialist for Human Biology, has been critical to ongoing efforts to build and strengthen communication capacities. Brawn underscores the importance of these skills: "Strong communication skills are essential for HumBio with its emphasis on interdisciplinarity and applied knowledge," she explains, "I feel genuinely privileged to be working with the program as we develop this new model for writing support in the major. By expanding existing assignments and integrating new ones,

HumBio students will have the opportunity to hone their communication skills, with a strong focus on scientific writing."

The collaboration of dynamic, highly-motivated faculty and staff is certainly the motor driving these curricular innovations. By pooling their knowledge and areas of expertise in this way, this team of educators provides a real-life example of how the whole really is greater than the sum of its parts.



The "skills map" generated to identify opportunities for capacity building

"As a CA, I have reflected a lot on the role the HumBio Core plays in students' time at Stanford. I think the Core inspires a love of learning in its students and helps them develop their abilities to think critically about and communicate scientific information. In my experience, the skills I built in the Core persisted long after I grew fuzzy on the details of the Hedgehog pathway or iron-deficiency anemia. Returning to the Core as a CA has helped me appreciate this. Fostering skill building is one of my main goals as a CA; seeing students develop abilities that will serve them in their future studies and work makes me so excited!"



- Hanna Burch

Returning Core CAs:
Burch (left) and Marks (right)

FEATURE: HUMBIO 3A

The A-Team Gets to the Core of Developmental Biology

Winter quarter 2014 marks the tenth year of collaboration in HumBio for a dynamic teaching trio: [Margaret Fuller](#), Reed-Hodgson Professor in Human Biology and Professor of Genetics; [Will Talbot](#), Professor of Developmental Biology, and newly named Catherine R. Kennedy & Daniel L. Grossman Fellow in Human Biology; and [Roel Nusse](#), Virginia & Daniel K. Ludwig Professor in Cancer Research. The three have been team-teaching HumBio 3A, *Cell and Developmental Biology*, for an unforgettable decade.

(They have also collaborated on teaching other courses at the undergraduate and graduate levels.) Fuller is a developmental biologist, perhaps best known for her ground-breaking research on the male germ line and her work characterizing the importance of the environment in which stem cells reside. Her research focuses on the multiple, complex factors that cause stem cells to either regenerate or differentiate and how developmental programming affects cellular differentiation. In HumBio 3A, Fuller, known as “Minx” by her colleagues, encourages the students to improve their scientific literacy by engaging closely with the experimental design process. She also challenges them to analyze the scientific thinking of others, both fellow students and highly-respected scientists, in an effort to empower the class to really “think like scientists.” When asked about his experiences in 3A, Talbot says he is consistently impressed by how much ground the team is able to cover in just one quarter with the HumBio students. The 3A course traverses basic biochemistry and metabolism, cell biology, understanding the cyto-

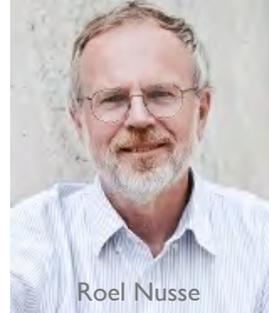
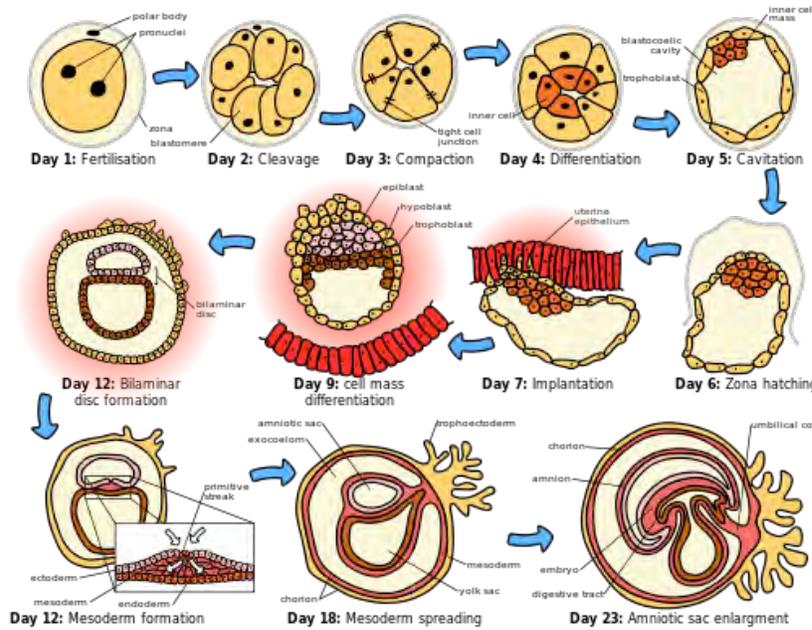


Photo courtesy of UvA, Jeroen Oerlemans



Human Embryogenesis, By Zephyris [CC-BY-SA-3.0 (<http://creativecommons.org/licenses/by-sa/3.0>) via Wikimedia Commons

skeleton and how cells interact to make multi-cellular organisms, all the way to cancer signaling, stem cells and the immune system. And throughout the quarter, the HumBio students seem to enjoy the challenge of staying on board! “The course covers a tremendous breadth of information, and covering a lot of ground makes it exciting for the students. Even though it is a lot of work for them, they can see how far they have come and that makes the quarter incredibly rewarding for the students and for us.” Talbot’s enthusiasm for the course is clearly fueled by that of the students. The number one goal of the course, he says, “is to teach the students to think like scientists.”

When asked how the 3A faculty approach this lofty goal, Talbot’s answer is simple: “We choose relevant, recent scientific literature and then guide the students in analyzing the science. Then, we challenge them to design experimental models of their own so they can get a sense of what types of evidence researchers might be looking for to support a given hypothesis. This leaves students with a much better understanding of how scientists approach their work.” Through these experiences, the students simultaneously learn some of the fundamental biological principles with which the course aims to leave them. In addition to teaching in 3A, this

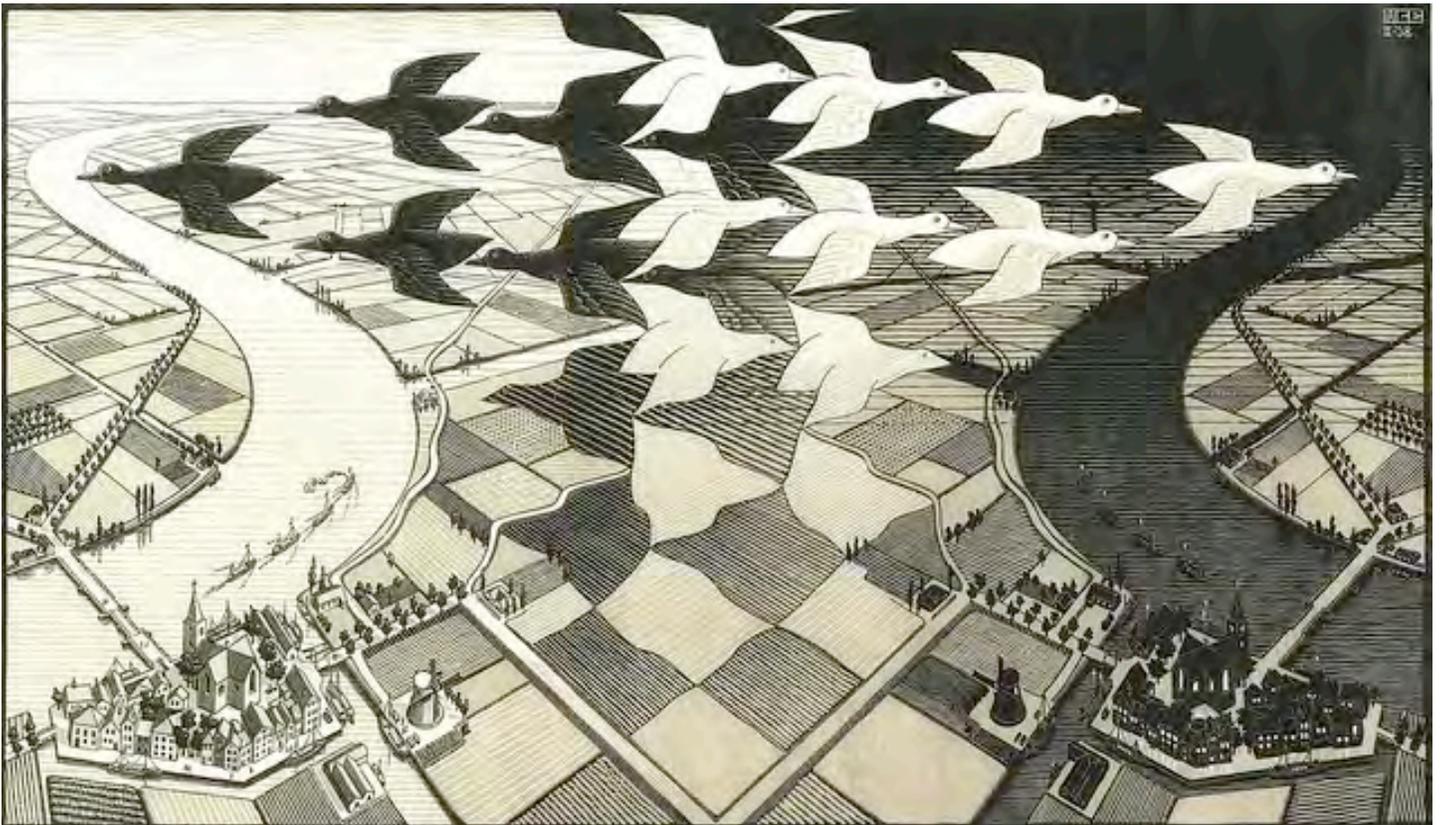
is Talbot’s third year of teaching in HumBio 2A, *Genetics, Evolution, and Ecology*, which supports the goals of the 3A teaching team.

(continued on the next page)

(HumBio 3A Faculty Feature cont.)

Talbot's involvement in 2A ensures that the students' foundational knowledge around molecular genetics (including basic concepts like the central dogma, transcriptional control and the role of chromatin) is adequate to support the learning objectives of 3A. "Taking on those lectures gives me the opportunity to set the stage for 3A and this kind of cohesion allows for more efficient building." An example of one of the key principles taught in 3A is how symmetry is broken in an embryo - what generates the first differences between identical cells destined to fulfill different functions in the human

likely to remember fewer, well-presented messages than the converse!), and (2) to err on the side of a simpler presentation with fewer slides, as too much information presented on each slide can easily become intimidating. Once the fundamentals are learned, Nusse emphasizes the importance of bringing the material to life. "When we find examples from everyday life that relate to the concepts we're teaching, the material becomes more relevant and memorable to the students." In pursuit of this lofty goal, Nusse borrows examples from the great artists of the world, for example, using the art



Jour et nuit 1938, Maurits Cornelis Escher (1898 - 1972)

body? To bring to life fundamental biological concepts like symmetry, cell signaling and cellular organization, Roel Nusse uses impressive innovative teaching tools. "Our challenge," explains Nusse, "is to bring these concepts down to the bare bones – to lay out the general principles as a scaffolding and then to gradually plug in the details." When asked about significant influences on his own teaching style, Nusse remembers some of the most important messages he took away from David Kennedy's online lectures on 'how to teach'. The most important ones, for Nusse were: (1) to aim for only 2-3 take home messages per lecture (the students are more

of M.C. Escher to teach about the importance of pattern recognition by the cells of the innate immune system. Nusse also uses music to bring to life biological concepts that might otherwise seem daunting to the learner. By investing so much time and energy trying to engage students in innovative ways, Fuller, Talbot and Nusse are a real-life A-Team, a 3A Team, that is. These dedicated educators and scientists clearly have one thing in common: Despite distinguished careers in highly specialized areas of their academic fields, they haven't lost touch with the challenges faced by undergraduates tackling these concepts from the ground up.

NEW DIRECTIONS FOR CORE FACULTY

HumBio Says Thank You and Good Luck to Two Core Teaching Icons

[Larry Goulder](#), Shuzo Nishihara Professor of Environmental and Resource Economics and the first Catherine R. Kennedy and Daniel L. Grossman Fellow in Human Biology, has been teaching in the Program in Human Biology for more than a decade. We asked him what lies ahead...



What are your plans for the coming year?

Goulder: In 2014/15, I'll be continuing my research and advising related to climate-change policy. Last June the Obama Administration came up with an initial proposal ("rulemaking") to limit emissions of greenhouse gases from existing power plants. It would especially affect existing coal-fired power plants. Currently I'm working on a paper I'll be submitting to the US EPA with suggestions about how Obama's proposal can be refined to achieve its goals at lower cost and with a more equitable distribution of the costs across regions and sectors. I'm also continuing to provide advice to the California EPA as to the implementation of its climate-change policy.

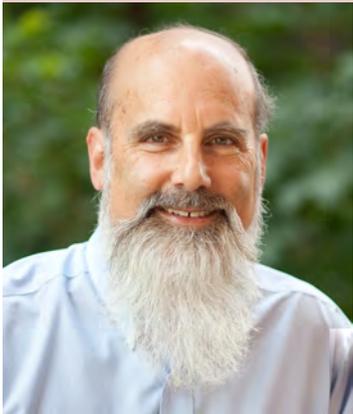
What is your fondest memory of your time teaching the HumBio Sophomores?

Goulder: I've always enjoyed receiving e-mails from students after they graduate, in which they indicate how HumBio 4B has proved very useful to them in their continued career work or has given them valuable insights about environmental policy.

What do you wish for future HumBio students?

Goulder: I think the most valuable lesson is to recognize: (1) that because of external costs (environmental externalities), the current economic system can easily lead to outcomes that seriously threaten our well-being and (especially) the well-being of future generations, (2) that avoiding serious losses of well-being requires that we introduce policies that deal with these external costs, and (3) that the biggest challenge we face to protect future generations is to garner public support for these absolutely critical public policies. This is a matter of educating the public and overcoming special interests. Very difficult challenges.

[Matthew Scott](#), Howard H. and Jessie T. Watkins University Professor and Professor of Genetics, Bioengineering and, by courtesy, of Biology has been appointed the [10th president of the Carnegie Institution for Science](#). Below, he describes his experiences teaching in the HumBio Core:



Scott: I've been teaching HumBio3A for about ten years and I've enjoyed it tremendously. What makes it so special is the curiosity and energy of the students. I recall many times when students came to me to ask in depth about topics that I'd had to keep brief in the lecture.

Can you tell us more about your new appointment and what lies ahead?

Scott: Carnegie Institution for Science was founded in 1902 to pursue a wide range of fascinating exploratory areas of science. Nowadays Carnegie Science is composed of six departments, two of which (Global Ecology and Plant Biology) are located on Stanford land and are places where Stanford students can work. A third department, the Observatories, is in Pasadena; a fourth, Embryology (my field), is in Baltimore. The other two, the Geophysical Lab and the Dept. of Terrestrial Magnetism, are in Washington D.C. which is also where the headquarters is located. More about all this on the [Carnegie Science website](#). What's exciting about Carnegie is the range of science: cosmology to earth science to plant and animal biology to ecology. Another way of describing the interests is: we study the history of the universe, of the earth, and of life. Thus the new job, as Carnegie president, will bring me a chance to learn a lot more about a fascinating breadth of science, while trying as well as I can to foster new directions and explorations that, usually, have no short-term applications. Lots of adventurous people work at Carnegie, and combining learning from them with continued attachments to Stanford makes the job exciting.

What do you wish for future HumBio students?

Scott: I wish for the students to use their curiosity and energy to explore, to have adventures, to try to avoid a predictable life.

CONGRATULATIONS GRADS

Timothy Huang wins 2014 James W. Lyons Award for Service



Timothy Huang (HB '14), [2013 Dalai Lama Fellow](#), was awarded the [James W. Lyons Award for Service](#) for his innovative curriculum design, program development, and mentorship that engages youth and educators in STEM subjects with the aim of increasing student participation throughout K-12 schooling. He was also recognized for establishing a youth-run cafe in Bhutan that empowers youth to train others for employment in the tourism industry.



Jessica Holtzman & Emily Liang win Deans' Award for Academic Achievement



[Jessie](#) (HB '14, left) was recognized for demonstrating outstanding responsibility and resourcefulness in a variety of clinical research projects in the Rasgon lab. Jessie is a tour de force with epidemiological concepts, and she was a presenter at the American Psychiatric Association in May 2014.

[Emily](#) (HB '14, right) was recognized for operating at the level of a senior graduate student. Capable of generating and analyzing complex datasets that will potentially lead to new approaches to HIV treatment, Emily will submit a condensed version of her honors thesis to the Journal of Virology as first author.



Deans Award photos courtesy of Stanford Report



Firestone Medals for Excellence in Undergraduate Research

Emily Liang won for her thesis, "Association between Latent Proviral Characteristics and Immune Activation in Antiretroviral-Treated HIV type 1-Infected Adults."

Louise Lu won for her thesis, "Gut Instincts: Knowledge, Attitudes, and Practices Regarding Parasitic Intestinal Worms in Rural China."

McKenzie Wilson won for her thesis, "Geospatial Patterns of Burn Injury in Cape Town GIS Analysis of Burn-Related Ambulance Dispatches."

Human Bio Grads Move Tassels from Right to Left From a Ship Deck in the Arctic to a Pool Deck in China

[Caroline Ferguson](#) (HB '14) was on board the U.S. Coast Guard Cutter *Healy*, as a member of [Prof. Kevin Arrigo's](#) Arctic research team during Stanford's June 15 graduation, so the crew held a [special ceremony](#) for Ferguson, and her research team-mate Erin Dillon.



Photo courtesy of USA Water Polo

Meanwhile...[Annika Dries](#) (HB '14) kept her post-defending USA Women's Senior National Water Polo team's goal for the GOLD in the [FINA World League Super Final in China](#), joining her classmates by Facetiming into the HumBio graduation ceremony on the Main Quad.



Caroline Ferguson

ALUMNI NEWS

Robert Abrams, Ph.D. Food for Thought in New York City Schools

Abrams, (HB '90) is now working for the New York City Department of Education, researching school food.

Allison Kurian, M.D., M.Sc., Breast Cancer Finding



[Kurian](#) (HB '85), Assistant Professor of Medicine (Oncology) and of Health Research and Policy at the Stanford University Medical Center, showed in a large scale study on women undergoing breast cancer surgery that for the average woman with breast cancer having a double mastectomy does not increase patient survival. Analysis of nearly 190,000 California women, diagnosed with cancer in one breast, compared survival rates among double mastectomy, removal of just the affected breast, and lumpectomy and radiation. Women genetically predisposed to breast cancer might still benefit from having a double mastectomy. Kurian is the developer of an [online tool](#) that helps people with BRCA (BReast CAncer) mutations make preventative care decisions. [Read more.](#)

Ariel Marcy Awarded Fulbright Fellow, Australia

Marcy, HumBio Core Course Associate (CA) '11-12, was awarded a Fulbright to research evolutionary development research in echidnas, and has created an educational card game about evo-devo called, "[Go Extinct!](#)" Congratulations Ariel!



Vicki Moore Cultivates Living Classroom Program



Moore (HB '83) founded the [Living Classroom](#) project to inspire children grades K-7 to learn and value the natural world through garden-based education. With dozens of lesson plans that list the State Standards they meet, Moore's Living Classroom project celebrated in July news that it will be directly funded by the Los Altos School District.

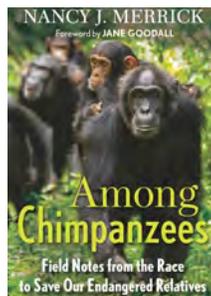
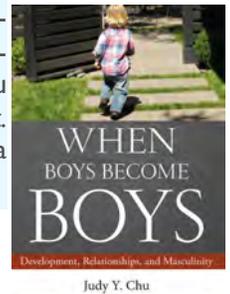
And, the New Biology Teacher of the Year Award goes to..... Helen Snodgrass!



Snodgrass (HB '08), Science Content Specialist/AP Biology Teacher was awarded by the National Association of Biology Teachers. As a Core Course Associate (CA) in 08-09 Snodgrass was always on top of her game when teaching A-side Core sections. Watch a blast from the past as Snodgrass supports her rapping colleague Tom McFadden, about 30 seconds into the [youtube video](#). Congratulations Helen!

Alumni Books for Your Reading List

Judy Chu (HB '94), Lecturer in Human Biology, has published a [book](#) based on a two-year study of gender socialization among boys aged four to six. In HumBio, Chu teaches HumBio 144, *Boys' Psychosocial Development*. Chu will give book talks in the San Francisco Bay Area this winter. Contact HumBio for more information.



[Nancy Merrick](#), M.D., MSPH, (HB '74), former student and colleague of Jane Goodall, [shares stories](#) of chimps and their heroes. Merrick also founded [ChimpSaver.org](#). Visit this interactive website to find out how to help chimps.



Teri Thompson Randall Promoted in King County

Randall (HB '84) was named Executive Director of the nonprofit Dispute Resolution Center of King County, which provides affordable mediation and conflict resolution services and training. Congratulations Teri!

TEDx Stanford Maya Adam & Isabel Stenzel Byrnes

Maya Adam, M.D., (HB '04), Health Educator & Lecturer, gave a talk on "[Why we fight with our food!](#)" Isabel Stenzel Byrnes, (HB '94), Bereavement Social Worker, spoke on "[The art of saying goodbye.](#)"



ALUMNI & FACULTY NEWS



Nathan Wolfe in Wall Street Journal on Ebola

[Wolfe](#), M.A., D.S., (HB '92), Lorry I. Lokey Business Wire Consulting Professor in Human Biology, and CEO and Founder of [Metabiota](#), AKA Virus Hunter, says that Congo got it right in containing their brief and distinct Ebola outbreak in August. Although theirs was a rural outbreak away from major population centers, they had an important advantage over West Africa. With experienced world-class experts, and national-level labs devoted to diagnosing viruses, they were equipped to deploy mobile labs immediately to diagnose and isolate cases quickly. A-stitch-in-time-saves-nine is Wolfe's larger point. It is critical to invest in early detection of outbreaks. Ebola is not the only virulent virus lurking, waiting for an opportune moment to pounce. Wolfe and his Metabiota team, who are stationed around the world, monitor potential outbreaks before they "go viral." [Read his article in Wall Street Journal](#). Wolfe teaches HumBio 152, *Viral Lifestyles*.



Anne Fernald Presents at the White House on Bridging the Word Gap

[Fernald](#), Knotts Knowles Professor of Human Biology, Associate Professor in Psychology, and Director of the [Center on Infant Studies](#), presented her latest results at a White House event called, Federal, State and Local Efforts to Bridge the Word Gap: Sharing best practices and lessons learned with the broader community. This Oct. 16 event was hosted by the Obama administration, [Too Small to Fail](#), and the Urban Institute. Since 2012, in a rare science and service collaboration, Fernald and her research team have worked with Grail Family Services, a nonprofit community service organization in San Jose, to develop a parent-education intervention program for low-income, monolingual Spanish-speaking mothers and their young children - a group particularly at risk for being caught in the word gap. Read her [research on the language gap](#). Fernald helps coordinate the HumBio 3B core course, *Behavior, Health, and Development*. Her lectures cover child development from lactation to perceptual development, to Fetal Alcohol Spectrum Disorders, and of course, language development. [Read more in the Stanford Report](#).



Russ Fernald Fish in the News for Evolutionary Insights

Photo by Vincent J. Musi
Courtesy of Stanford Report



Astatotilapia burtoni,
an African cichlid

[Fernald](#), Benjamin Scott Crocker Professor of Human Biology and Professor of Biology, was published in [Nature](#) this September. In sequencing the genomes of some species of African cichlids Fernald, along with a team of international scientists, found insight into the genetic mechanisms that drive species diversification and adaptation of all vertebrates. Analysis of the genomes show a sixfold rate of gene duplication across the species studied. This results in an expanded genome, which they suspect drives an incredible rate of diversification. Fernald, the Core Coordinator for HumBio 4A, *The Human Organism*, also teaches HumBio 91Q, *Neuroethology: The Neural Control of Behavior*. [Read more in the Stanford Report](#).

Christopher Gardner Inspiration behind Food Summit

[Gardner](#), Professor (Research) of Medicine (Stanford Prevention Research Center), a key force behind the Food Summit team, organized a 5th successful [Food Summit](#) this year in October. This event co-sponsored by HumBio packed McCaw Hall in the Arrillaga Alumni Center. Poster sessions and community tables gave groups and individuals an opportunity to talk about their work, and the afternoon panels sparked fruitful discussions. A screening of "[Occupy the Farm](#)" followed the event. Gardner teaches HumBio 130, *Human Nutrition*, and HumBio 166, *Food and Society*. SAVE THE DATE for Food Summit 6, on Wednesday, October 28, 2015.



Cathy Heaney wins Roland Volunteer Service Prize

Heaney, Associate Professor (Teaching) of Psychology and of Medicine (Stanford Prevention Research Center) was awarded the [Miriam Aaron Roland Volunteer Service Prize](#), recognizing her work in developing long-term community partnerships. In establishing these meaningful partnerships, she has provided life-changing learning opportunities for Stanford students. Heaney said, "If students have this larger sense that we are all in this together, combined with an understanding of the importance of empiricism and scientific inquiry to help us make policy decisions, then I'm doing my job." Heaney teaches the popular HumBio courses, HumBio 127, *Community Health: Assessment and Planning* and HumBio 128, *Community Health Psychology*. Congratulations Cathy!



UPCOMING TRIPS

HUMBIO HAPPENINGS

THANK YOU

Reconnect with HumBio Profs via Stanford Alumni Travel Study

[William Durham](#)

Sept 6-20, 2015

[Galapagos Field Seminar](#)



[Craig Heller](#)

June 25-July 9, 2015

[North Pole Expedition](#)



[Herant Katchadourian](#)

May 24-31, 2015

[Paris Illuminated](#)



[Bob Siegel](#)

June 22-30, 2015

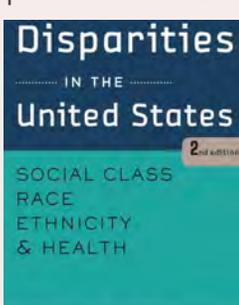
[Galapagos Family Adventure](#)



New Faculty Book:

[Disparities in the United States: Social Class, Race, Ethnicity & Health](#)

By Donald Barr, Professor (Teaching) of General Pediatrics and, by courtesy, of Education, published his second edition.



JAMA's review states, "Disparities in the United States will serve well as a foundational text for courses on the subject and for individuals looking for a well-organized, highly researched text."

And *Choice* describes Barr's book as,

"Clearly written, with an extensive list of references, this book will be useful for all audiences and an important text for professionals in the health field, especially those in medical education."

Barr teaches a robust slate of health care in America courses for HumBio, and a new course HumBio 165, *Early Roots of Human Behavior*.

Welcome Ayuta Padhi

As the class of 2014 were picking up their graduation gowns, Ayuta joined us from University of Wisconsin as HumBio's new Web Developer. She is revamping the website, which should be unveiled in early 2015.

BEYOND HUMBIO

[Alumni Panel](#)

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

**REUNION 2014
7051 HumBio Stories**

At this year's "Guess-the-Grads" game, it was revealed that a total of 7051 HumBio majors have graduated since its inception. Connie Fung (HB '94) won a logo blanket for her guess of 7100! What this means, is that HumBio has 7051 alumni stories, and we would love to hear yours!

STAY IN TOUCH!

Visit the HumBio webpage:

<http://humbio.stanford.edu/alumni>

Send alumni news and stories to

Robyn: rduby@stanford.edu



Be part of building career connections over the generations of HumBio grads by joining the [Stanford Program in Human Biology \(HumBio\) Major Alumni LinkedIn Group](#).



Maya Adam (HB '04), M.D. Retires from Newsletter

With this issue, HumBio says so-long and BIG thanks to Maya, who took on writing and editing this bi-annual newsletter for HumBio's 40th reunion edition. Happily, HumBio will still see Maya around Bldg 20 as she continues to teach her ever popular, HumBio 121, *Critical Issues in Child Health*.

Thank you Maya!

THANK YOU!

Human Biology extends its sincere appreciation to our supporters.

To discuss HumBio gift opportunities or to make a gift, contact

Denise Ellestad,

Associate Director for External Relations at (650) 723-0023.



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This newsletter is available online:

<http://humbio.stanford.edu/newsletter>