Meet Dr. Donna Bouley, Pre-Vet Adviser, Doctor of Veterinary Medicine and Winner of Human Biology’s Excellence in Faculty Advising Award

Human Biology is about as close to a pre-vet major as a student can get at Stanford because of its academic flexibility and related biological content. This spring, Dr. Donna Bouley, DVM, PhD, Professor of Comparative Medicine at the Stanford University School of Medicine, Emerita (Active), took home the 2018 Excellence in Faculty Advising Award in Human Biology, adding to two prestigious university awards that recognize her outstanding contributions to undergraduate education. In 2011, Bouley, was named the Kleinheinz Family Fellow in the Bass University Fellows Program for Undergraduate Education, and in 2007 she was recognized with the Lloyd W. Dinkelspiel Award for Distinctive Contributions to Undergraduate Education.

While only a handful of Human Biology majors aim for a Doctorate of Veterinary Medicine, they have all benefited from Bouley’s strong support and guidance. She often gets to know her students as freshmen in her Comparative Anatomy class. Bouley likes to catch her advisees early so that she can help them map out the best path to meet their academic goals. Among Human Biology’s many caring advisers, ‘Dr. B.’ is revered by her students for her forthright advice and for the unique opportunities she creates for them. One notable resource that Bouley established for her students is the Stanford University Pre-Vet Society (SPVS). The SPVS meets monthly throughout the academic year, giving her pre-vet students a community and a support system. Bouley also extends her dedicated advising efforts to pre-med, pre-dental and pre-biomedical students.

Recognizing that they are still in an exploratory stage, Bouley provides practical and individualized support for her advisees such as arranging hands-on experiences that help them discover and deepen their interests.

Continued on page 7.
Facing the wide world of careers can be overwhelming, especially for bright Human Biology students with myriad interests. To help boost their career readiness, Human Biology developed the Practicum, which fulfills the Capstone requirement. The Practicum is appropriate for students who wish to expand their community-engaged learning, research or pre-professional experiences through reflective written work and a presentation that is well-suited for a career-focused, career-enhancing project. In the Practicum, students first accumulate 80 hours of activity, of the sort mentioned above, related to their Area of Concentration topic. They then attend a variety of career-related workshops in which they draw upon their experiences to reflect on their personal values and skills, particularly in terms of how these guide their next career steps. Students are encouraged to build on their Practicum and develop it into a Synthesis project, as highlighted in the summer 2017 newsletter.

At the end of the Practicum, students write a final reflection essay and give a presentation that displays a culmination of their distinct interests and experiences - similar to an artist's portfolio. The Practicum essay gives a student an opportunity to retrace the trajectory of their undergraduate journey. The presentation is a great way for a student to practice marketing their strengths and skills for future jobs. While the Capstone experiences affirmed some students’ original goals, other students were surprised to discover new passions. Senior Kaylee Blevins, the product of three generations of medical doctors, entered Stanford fully expecting to follow in their footsteps. When her global health classes ignited her desire for advocacy, it was much less clear how she would map out a career in public health. Kaylee reflected, “I found fire, anger and drive to learn and think more creatively about solutions to global health issues. The Human Biology Capstone Practicum workshops helped me identify my interests and path in public health. The first elective workshop I attended was a panel on careers in public health, where I learned about options ranging from foundation and philanthropy work, to technical work.” Sidetracked from the prescribed steps into the professional life as a medical doctor, Kaylee was relieved to have the support of the Practicum.

Each year, the Practicum helps more than 100 seniors integrate their career aspirations, academic interests and personal values by developing and collaborating with other campus centers to offer over 30 workshops. The Human Biology student service offices are abuzz as we assure a variety of meaningful workshops for our students. Opportunities range from the popular HumBio alumni career mentoring lunches, to personal statement writing boot camps for medical school applications, to workshops on incorporating values into career planning.

Photo courtesy of Alexandra Ulmer, HB ’19, leader of Stanford’s Haas Center for Public Service impact abroad trip to remote southern Bolivia. In a program offered through Child Family Health International students provided Healthcare and Youth Development services. Madison Houston (left) and Mariam Noorulhuda (right).
Reflections from a Career Workshop leader

Sharing with HumBio students was a great opportunity to reflect on how my Stanford experience has shaped my career trajectory, as well as an inspirational time to meet current students. I’m in awe of their creativity, energy and accomplishments. We talked a lot about prototyping ourselves - trying out different environments, varied projects, and even alternative selves - to discern our calling and place in this world. Human-centered design became our pathway to designing ourselves as humans centered on transcendent values.

Russell Jeung, PhD
Chair & Prof. of Asian American Studies
San Francisco State University

Reflections from 2018 Practicum essays

Outside of the classroom, I was involved in nutritional epidemiology research at Harvard’s School of Public Health, and I took an internship with Sutter Health Management and Design, where I applied my design thinking classes to tackle the problem of enrolling more elderly cardiology patients through an online portal. This was my first big hands-on exposure to the different jobs that exist in healthcare outside of medicine.

I was grateful to be able to fulfill my Practicum workshops through the five-week long Health Careers Initiative at Stanford’s BEAM career center.

Ei Thazin

Sometimes we forget what makes our story unique. My story has been a narrative of twists and turns, confidence and insecurities...each year has been a different season in my life, marked by themes that changed as time went on.

Freshman year was a time of “false confidence.” Sophomore year was the year of “the shift.” Junior year was defined as "new directions," and senior year is the year of “new adventures.” In these seasons, I have become closely acquainted with who I am and who I hope to be.

Lauren Norheim

At a career mentoring panel about the intersection of technology and social good, alumni speakers shared their non-linear career paths and emphasized that despite feeling the need for their lives to go according to plan, the world rarely works that way. Students navigating their evolving career and gap year plans found the advice reassuring.

The Practicum process reveals myriad paths taken, and not taken. The forces that push and pull on students’ interests and commitments range from an impromptu decision to take a course with a teammate in what might turn out to launch a life-changing trajectory, to an eye-opening Stanford-abroad experience, to a service trip suggested by a professor that inspires a student to pursue a research project. As students recounted their four-year experiences, they saw how their personal values emerged and guided their responses to opportunities both within and beyond Stanford. Some told stories of encountering unexpected twists and turns that opened up new directions for them; others told of expanding upon and deepening their knowledge, skills and commitment to align with their initial academic interests and goals. One student, who began Stanford as a religious studies major, recalibrated her academic journey toward women’s health and a career as an OB-GYN after an awe-inspiring overseas trip to help deliver babies in Bolivia. Another student started her Human Biology major intent on becoming a doctor but found her real joy was in the narratives related to healthcare. She replaced her chemistry classes with anthropology classes and design-thinking classes at Stanford’s d.school and saw how her interests could come together in a career in healthcare administration.

Many of our HumBio students aspire to heal the world in one way or another. How they will accomplish this is as varied as each student and the professions they choose to work in as medical doctors, researchers, academics, policy makers, advocates, health administrators, educators, lawyers and more. The Capstone helps students find the common theme that ties their academic interests and personal values together and supports them in mapping these onto the first steps of their career pathways.

For information on leading a career mentoring lunch, please email Robyn Duby at rduby@stanford.edu or Lia Cacciari at cacciari@stanford.edu.

Photo: Katie Holmes at a Cardinal Quarter project with Stanford’s Haas Center for Public Service
CONGRATULATIONS ATHLETES!

WOMEN’S NATIONAL CHAMPIONSHIP SWIM TEAM
ELLA EASTIN - SWIMMER OF THE MEET
LEAH STEVENS - ALL-AMERICAN
ALEXANDRA MEYERS

NCAA POSTGRADUATE SCHOLARSHIPS
ELISE CRANNY - CROSS COUNTRY
TED MICLAU - DIVING

PAC-12 SCHOLAR OF THE YEAR
BRITTANY MC PHEE - BASKETBALL

NATIONAL SCHOLAR-ATHLETES

WOMEN’S CREW
ANIKA CHRISTOFERSON
MEGAN CVITANOVIC
INDIA ROBINSON
ALIE RUSHER
LEIGH WARNER

HEALTH DESIGN CHALLENGE

Best friends, aspiring doctors and 2018 HumBio graduates Urvi Gupta (left) and Divya Gopisetty (right) brought more than 60 patients, students, medical professionals and design thinkers together on campus this June to brainstorm ideas for gadgets and services tailored to meet the needs of diabetes patients. In addition to managing logistics, they formed teams of patients, students and designers which met weekly over a three month period. This way participants were prepared to make maximum progress when they met for the day-long Disrupt Diabetes conference.

This effort served as Urvi and Divya’s Capstone Synthesis project, and was supported by the Bingham Fund for Student Innovation in Human Biology. Read more.

STUDENT NEWS

ACCOMPLISHED INSPIRED & INSPIRING

PHOTO: Zoe Heineman

MIKA KOCH ’19
NEWMAN CIVIC FELLOW
PURSING A LIFE OF SERVICE
Mika was honored to receive the Newman Civic Fellowship. She said, “I plan to pursue a life of service. A lot of times public service gets cast aside because people think that you’re not going to earn a lot of money, or that it’s not exciting and innovative. I think this field has the largest opportunity to be creative and make change globally.” Read more.

PHOTO: Haas Center for Public Service

CONGRATULATIONS 2018 WINNERS!

Deans’ Awards for Academic Achievement
* Maya Lorey
* Kristin McIntire

Firestone & Golden Thesis Awards
* Kristin McIntire
* Joriene Mercado
* Madeleine Weiss (Golden)
* Amy Xu

Haas Center for Public Service Post-undergraduate Fellows
* Brian Kaplin: John Gardner Fellow
* Maya Lorey: Tom Ford Fellow

IIE Fulbright Scholarship
* Jason Li

PHOTO: Stanford’s Center on Global Poverty and Development

CHRIS LE BOA’19
SUSTAINABILITY AWARD FOR FOOD RECOVERY
Chris won the Sustainable Stanford Student Award. He is deeply involved with SPOON (Stanford Project on Hunger) bringing excess campus food to those in need, including from Stanford Stadium and Maples after athletic events. Chris said, “Our student ID cards give us access to dining halls and cafes that greet us every day with trays piled high with food. I hate to see food going to waste at Stanford, especially when there are so many hungry people living [nearby]. It’s our responsibility to give back.” Read more.
**ACCOMPLISHED**

**INSPIRED & INSPIRING**

Jason is in the inaugural class of the Knight-Hennessy scholars program, which aims to prepare a new generation of leaders with the deep academic foundation and broad skill set needed to develop creative solutions for the world’s most complex challenges. Scholars receive financial support for the entire cost of their graduate education at Stanford.

Jason graduated with honors and a concentration in implementing innovations in low-resource settings. He aspires to a career as a human-centric physician, working with patients to identify their values and achieve their life goals through health, innovation and technology. Read more.

Molly served as a HumBio CA (Core Course Associate) before heading to medical school at the University of Michigan (U-M). Because of a diving accident she had as a teenager, Molly’s mobility is limited. She chose to attend U-M in part because the administration offered strong support for challenges she might face. Molly is now in her third year and is helping to pilot the use of medical devices that will allow her to perform certain diagnostic tasks as an MD. The technological gains made on these devices are expected to provide benefits for all doctors. Read more.

In her book, Amanda synthesizes research from over two dozen scientific fields to reveal how to embody vital qualities, and to strengthen social and emotional intelligence by cultivating innate somatic intelligence. This is powerful applied mind-body science. Readers learn how to tap into the intelligence hidden in posture, gesture, and sensation that will open the door to more meaning, greater courage, deeper connection and more powerful leadership. Read more.

Rachel is a science reporter for The Verge. Have scientific news to report? Want to keep up with the latest news? Check out Rachel’s website.

In an interview with Stanford Medicine News Center, associate professor of medicine and of health research policy at Stanford, Allison Kurian, MD, said, 'In general, multigene panel tests yield more clinically useful results and are rapidly becoming the norm.... Newly diagnosed women should ask their doctors whether they may be appropriate candidates for genetic testing. They should also advocate for the opportunity to discuss genetic testing and its implications with an experienced clinician, such as a genetic counselor, in a timely manner.' Read more.
FACULTY NEWS

MARCELLA ALSAN, PHD
STUDY: EFFECT OF BLACK DOCTORS ON BLACK PATIENTS
Alsan, associate professor of medicine (Primary Care and Outcomes Research), led a clinical trial that indicates that black men could be healthier if seen by black doctors. Alsan teaches HB 124E: Economics of Infectious Disease and Global Health. Read more.

SANJAY BASU, PHD
NEW CALCULATIONS TO ESTIMATE STROKE & HEART ATTACK RISK
Basu, assistant professor of medicine (Primary Care and Outcomes Research) and, by courtesy, of Health Research and Policy (Epidemiology), worked with colleagues to update calculations to help physicians decide whether to prescribe aspirin, blood pressure or statin medications. Old statistical methods and calculations to estimate stroke and heart attack risk are based on a cohort who would now be 100-130 years old. The new equations are expected to substantially improve the accuracy of cardiovascular disease risk estimates. Basu teaches HB 154A: Engineering Better Health Systems: modeling for public health. Read more.

JOAHIM HALLMAYER, MD & RUTH O'HARA, PHD
AWARDED NIH GRANT TO STUDY AUTISM
Hallmayer, professor of psychiatry and behavioral sciences and O'Hara, associate professor of psychiatry and behavioral sciences, will collaborate with colleagues to see if induced pluripotent stem cells, or iPSCs, are produced in children with autism who also have enlarged brains. Hallmayer and O'Hara co-teach HumBio 164: Autism Spectrum Disorder. Read more.

CRAIG HELLER, PHD
COOLING GLOVE HELPS PEOPLE WITH MULTIPLE SCLEROSIS, EBOLA WORKERS & MORE
Heller, the Lorry I. Lokey Business Wire Professor Biology/Human Biology, and colleague Dennis Grahm have found more ways to use the cooling device they developed, known as “the glove.” Maximizing heat transfer through the palms, the glove cools the body’s core temperature, boosting exercise recovery for athletes and dramatically improving their performance—better than steroids! In a recent trial, it allowed fresh women to do more than 800 push ups in under an hour. It now helps people with multiple sclerosis live more normal lives, and keeps Ebola workers cool in their protective gear. Heller has taught The Human Organism in the Core since 1985, and teaches HB 161: The Neurobiology of Sleep. Read more.

ROELAND NUSSE, PHD
ENDOWED AS REED-HODGS ON PROFESSOR OF HUMAN BIOLOGY
Nusse, the Virginia and Daniel K. Ludwig Professor in Cancer Research, joins colleague Minx Fuller as a Reed-Hodgson Professor in Human Biology. Nusse, professor of developmental biology, researches the role of the signaling molecule Wnt, which is involved in embryonic development, cancer and functions of adult stem cells. Nusse has taught developmental biology in the HumBio Core since 2005. Read more.

PAUL WISE, MD
ELECTED TO THE AMERICAN ACADEMY OF ARTS AND SCIENCES
Wise, the Richard E. Behrman Professor of Child Health and Society, professor of pediatrics, and a senior fellow in the Freeman Spogli Institute for International Studies, works on health inequalities, maternal and child health policy, and health in the areas of violent conflict, political instability and weak governance. He teaches HB 129S: Global Public Health. Read more.

CHRISTOPHER GARDNER, PHD
BUSTS MILK MYTHS & WEIGHS IN ON ALL-CARNIVORE DIET
Gardner, the Rehnborg Farquhar Professor in Medicine, Stanford Prevention Research Center, dispelled some milk myths in an interview with Stanford’s Medicine News Center. While it is a good source of calcium, it is not necessarily the most critical factor for bone health. Giving examples of predominantly lactose-intolerant cultures that do more weight-bearing activities than Americans, Gardner says, “It’s better to be physically active than drink milk as a way to strengthen your bones.”

Gardner spoke with The Guardian about the all-carnivore diet, explaining that growing evidence suggests that inadequate fiber allows bacteria to eat and weaken the colon’s protective mucus lining. He also says that the carnivore diet is bad for the planet, abuses the welfare of animals and the workers who handle meat production. “This is disastrous on multiple levels.” Gardner teaches HB 130: Human Nutrition & HB 166: Food & Society: exploring eating behaviors in the social, environmental and policy context.

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Some students come to her class completely convinced of their pre-vet path, only to find that their passions lie elsewhere, and vice versa. For instance, in a project conceived with her HumBio advisee Andy Meislin, and established in collaboration with San Jose Animal Care and Services, students treat the pets of the city’s homeless population in “Healthy Pet Clinics.” Last year, one of the pre-vet students was so affected by the experience of working with the homeless population and their pets that she is now considering a career as a social worker. The program is in its third year, and with a combined financial boost from Bouley and the Haas Center for Public Service, each summer a different pre-vet student has the opportunity to work in teams to provide valuable community outreach in “Shelter Medicine.”

Bouley’s enterprise is to get to know her students well over their four years, and to help them figure out their strengths. As a veterinary pathologist, she collaborates across several disciplines (radiation oncology, mouse models for human disease, infectious diseases of frogs, medical device development, etc.), supporting research that directly impacts human health. Her interest in “One Health” (the principle that the health of humans, animals and the earth are all interconnected) is highlighted during the bi-annual One Health Symposia she organizes. Here, invited speakers with diverse research and clinical emphases expose students to research that explores connections among animal, human and environmental health. The pre-vet students get to hear about human medicine, while the pre-med students learn the value of animal models, and both sets of students learn how human and animal health are influenced by their environment.

Bouley works tirelessly to create unique opportunities for her students, and if a student needs financial help, she subsidizes their educational activities with her annual stipend as the Kleinheinz Family University Fellow. Each summer she arranges for one or two students to shadow with her former colleagues at the teaching hospital of her alma mater, the University of Kentucky. In addition, she has supported a student volunteer at a wildlife rehabilitation center, two student researchers at the premier Gluck equine center, and even a HumBio student traveling to Africa to work on an archeology project.

Bouley said, “Stanford University offers outstanding support for its undergraduate students.” She harnesses these resources to the great benefit of her advisees. Bouley is impressed with her students’ breadth of perspective and hard work. She feels they are valuable contributors to the professions they enter, and they inspire her to share her energetic mentorship, giving them insight into the life of a veterinary pathologist, and beyond.

PRE-VET EXPO

Bouley organizes bi-annual Pre-Vet Expos. These day-long scientific meetings draw about 150 participants and expose students and the public to the diversity of the vet profession. Six to eight vets from diverse practices give “a-day-in-the-life” talks and have lunch in small groups with participants. Expo attendees range from vets who treat companion and farm animals, to animal anesthesiologists, veterinary pathologists (like Bouley), and vets specializing in wildlife and zoo animals.

The expo hall is filled with information on finding volunteer and research opportunities, navigating the vet school application process, and hands-on activities such as wrapping life-size model equine legs and suturing fake skin.
I hope you will enjoy this “back to school” edition of our Human Biology newsletter. Our continued focus on teaching and advising excellence is clear, and the inspiring achievements of our students and alumni simply impressive. Do peruse the article on Capstones, which supplanted our previous Human Biology Workshop and the Internship. Yes, Human Biology never stops evolving.

On that topic of change, stay tuned to hear more soon about our new Human Biology minors in Epidemiology, Global Health, and Health Policy. We know that 25% of our class enrollments come from non-HumBio majors, and we want to be certain to serve the entire undergraduate community. These minors meet the growing demands of today’s students and resonate too with Stanford as a “purposeful university,” as heralded by President Marc Tessier-Lavigne.

This will be my 7th and final year directing Human Biology. I am grateful to everyone who continues to give Human Biology such great purpose and energy to advance the human condition. As always, I want to thank our supporters, alumni, staff, faculty, and most of all, our students for making Human Biology the great major it is. Thoughts? Email me at pfisher@stanford.edu.