UCSF making an impact around the world
Meet innovative scientists addressing HIV/AIDS, women’s health and malaria
GHS year in review

FEBRUARY
Paul Volberding joins GHS
Paul Volberding joined GHS as director of research and director of the UCSF AIDS Research Institute. Paul is a pioneer in HIV/AIDS research and was on the front lines in the early 1980s when the epidemic hit San Francisco.

APRIL
Debas honored with UCSF and IOM medals
Our Founding Executive Director, Haile Debas, received the UCSF Medal—the University’s highest honor. He was also honored in the fall by the Institute of Medicine with the Walsh McDermott Medal, awarded to an IOM member for distinguished service over an extended period. Debas was acknowledged for taking on various roles since his election in 1990 and work on shaping the IOM’s efforts in global health.

APRIL
GHG hosts Bay Area World Malaria Day
The Global Health Group co-hosted the first-ever Bay Area World Malaria Day Symposium to connect and highlight the many Bay Area contributions to the global fight against malaria. The event was one of hundreds taking place around the globe in support of World Malaria Day 2012.

JUNE
SF General Hospital and Trauma Center hosts Michel Sidibé
GHS and San Francisco General Hospital and Trauma Center hosted Michel Sidibé, Executive Director of UNAIDS and Under Secretary-General of the United Nations. He came to the San Francisco Bay Area on a “listening tour” in advance of the International AIDS Conference that took place in Washington, DC in late July, wanting to learn firsthand about the city’s early response to the AIDS epidemic and to hear perspectives on what remains to be done domestically and globally.

MARCH
Molly Cooke joins GHS
Molly Cooke joined the GHS family as the director of education. A leading expert on medical education and educational research, as well an acclaimed teacher, she has twice received the Kaiser Family Foundation Teaching Award as well as a UCSF Academic Senate Award for Distinction in Teaching.
AUGUST
Fourth cohort of MS students graduate
Thirty-five students received their master of science degrees at Genentech Hall on the Mission Bay campus. The commencement ceremony marked the end of the fourth year of the MS program. Students in the class of 2012 grew up in a dozen different countries, speak at least 11 languages and arrived from many distinct disciplines, with research paths that have taken them to no less than 16 countries.

SEPTEMBER
GHS receives $20M gift to build global health hub at Mission Bay
GHS received a $20 million gift from Chuck Feeney and his Atlantic Philanthropies foundation for a new building on the Mission Bay campus. This magnificent gift will help create a central space to bring together—under one roof—the multiple people and elements of UCSF global health that are currently scattered throughout the city, and will jump start the University’s vision to become one of the world’s leading centers for global health sciences. Construction is expected to begin in March 2013 and completed in September 2014.

NOVEMBER
GHS co-hosts TEDxSF: 7 Billion Well
TEDx San Francisco and UCSF Global Health Sciences hosted 600 people at the Mission Bay campus for 7 Billion Well: Re-imagining Global Health. The day featured inspirational talks from scientists, authors, entrepreneurs, artists and others about how to improve health around the world. GHS Executive Director Jaime Sepulveda spoke about vaccine justice; Gavin Yamey, lead for the Evidence to Policy Initiative in the Global Health Group, presented Evidence Brokers, and Suellen Miller, who leads the UCSF Safe Motherhood Program, presented Stop the Bleeding.
Dear friends,

2012 was an intense and productive year for us here at Global Health Sciences. We welcomed several new members to our leadership team, raised $20 million for a new home on the Mission Bay campus, and made progress on many programmatic fronts with the goal of reducing the burden of disease for vulnerable populations around the world.

UCSF’s mission is “Advancing Health Worldwide,” and we take it to heart, each and every day. Our faculty, staff and students are passionate about improving the health of the underserved not only in the 50+ countries in which we conduct our work, but also right here in San Francisco.

An institution with remarkable depth and breadth in health sciences research and clinical care, UCSF is especially strong on three global health fronts: maternal health, and two of the most devastating global health problems of our time: malaria and HIV/AIDS. Our faculty—experts in research, implementation and policy development—form partnerships and work alongside governments in many developing countries to support the prevention, treatment and elimination interventions for these diseases.

This past year we focused on laying the foundation for a strong future. Thanks to the generosity of philanthropist Chuck Feeney and his Atlantic Philanthropies foundation, we will move into a new building on the UCSF Mission Bay campus in September 2014. This new physical center, with its location on one of the world’s leading bioscience campuses, affords us numerous opportunities to establish new programs—and expand existing ones—on the subjects of HIV/AIDS, malaria, health systems strengthening, neglected diseases and other issues critical to improving health around the world.

One of the many benefits of moving to our new building will be the ability to expand our popular education and training programs. Now in its fifth year, the Masters of Science in Global Health Sciences program continues to grow in demand. The same can be said for our Pathways and Clinical Scholars programs, which train enrolled UCSF medical, dental, nursing and pharmacy students as well as graduate students, fellows and residents in global health, and provide them with an opportunity to conduct research with underserved populations locally and throughout the world.

Our amazing leadership team, which includes world-renowned global health experts Sir Richard Feachem, George Rutherford and John Ziegler, continued to grow this last year. We were fortunate to be joined by two admired professors from UCSF: Paul Volberding and Molly

Letter from the director
Cooke. Paul took the helm as GHS director of research and director of the AIDS Research Institute; Molly as the director of GHS education programs. Colin Boyle also joined our team as GHS deputy director. Colin comes to UCSF after 15 years with the Boston Consulting Group, where he was a partner and managing director for the past eight years.

In this annual report you can read about GHS’ accomplishments in 2012, as well as meet some of the UCSF scientists who are making important contributions to advancing health worldwide. And as always, you can visit our website at globalhealthsciences.ucsf.edu to find out more.

2013 is off to a strong start. We will launch an initiative focused on diseases that afflict neglected populations in Mesoamerica. We will celebrate GHS’s 10-year anniversary in August and host a variety of events throughout the year. And we shall continue to invest—in people, infrastructure and partnerships—to accomplish our goals in the years to come.

Jaime Sepulveda, MD, MPH, DrSc
Executive Director

The AIDS Research Institute joins the GHS family
The UCSF AIDS Research Institute (ARI) helps to make sure that the campus’ groundbreaking scientific leadership is known everywhere—from inside the University to the NIH and our global partners and to the world at large.

Led by Paul Volberding, MD, the ARI is the umbrella for the entire HIV enterprise at UCSF, a collectively huge effort. It encompasses scientists and departments with an HIV/AIDS focus from across the campus, including:

- Center for AIDS Prevention Studies
- Center for AIDS Research
- Division of Experimental Medicine
- Gladstone Institutes
- HIV/AIDS Division, Department of Medicine

Welcome to Paul and his team!
34 million: number of people living with HIV/AIDS

90 percent: deaths from pregnancy and childbirth complications that are preventable

Every 60 seconds: how often a child dies from malaria
More than 1,200 UCSF scientists are working in virtually every country in the world to improve the health of vulnerable populations. From basic research to implementation to policy development, from AIDS to zoonotic infections, UCSF faculty, students and staff are having an impact across the globe.

In this report we highlight a handful of faculty across GHS and UCSF who are leading the global health charge in three major health areas: HIV/AIDS, women’s health and malaria.

These creative innovators are conducting research across the life sciences spectrum, from developing novel approaches for locating patients who have disengaged from care, to preventing deaths from childbirth with a simple anti-shock garment, to exploring genetic fingerprinting to track the origin and spread of malaria parasites. Their work extends beyond the bench, to the bedside, and out into the community—in Africa, Asia, and other parts of the world.

Meet UCSF scientists making a difference
Henry Fisher Raymond, DrPH, MPH
Assistant Professor of Epidemiology & Biostatistics
“It’s their Donna Summer moment. But there’s absolutely no reason for them to repeat the horror of the early epidemic in the United States.”

**Henry Raymond** flew at least 150,000 miles last year for work. That’s not surprising: One of his main jobs is tackling HIV in developing countries and applying what has been learned in San Francisco over three decades.

“We’re sharing tools to get really important data from very hard-to-reach populations in settings that are difficult to work in,” says Raymond, DrPH, MPH, an assistant professor of epidemiology and biostatistics at UCSF. “There’s a responsibility. We have this expertise, and we should export it.”

Raymond, who also works for the San Francisco Department of Public Health, says the “San Francisco model,” now ubiquitous in the AIDS world, means developing partnerships among all key parties to work on a problem, and the assumption that communities know themselves and their needs best. Partnerships between government and academia are also crucial, he adds, such as UCSF’s collaboration with the San Francisco Department of Public Health, epitomized by San Francisco General Hospital, whose physicians are UCSF faculty.

In his global health work, Raymond is concentrating on three high-risk groups: men who have sex with men, injection drug users and female sex workers. One approach used in San Francisco involves going to venues where members of the group can be found and doing time-location sampling. Another strategy is respondent-driven sampling, based on recruitment by peers and social networks, which is based on snowball sampling, but controls for bias. Whichever strategy is used, it must be standardized to get consistent results.

“Much of the image of Africa and HIV is a mother and baby,” says Raymond, “But we need to document that there are men having sex with men in African countries. When I first went to Uganda in 2004, gay men said, ‘There’s no HIV among us.’ A gay guy sees a young heterosexual couple on a billboard and says, ‘That’s not my problem.’ There are no data to say, ‘It is my problem.’”

If workers in health sectors are armed with data, it helps them make arguments for services for these hidden but high-risk groups.

In many parts of the world, communities of gay men are finding themselves. “In China, there are lots of cities with nightclubs, and the disco music is playing, and, literally, the disco ball is spinning,” he says. “It’s like 1979 in San Francisco. It’s their Donna Summer moment. But there’s absolutely no reason for them to repeat the horror of the early epidemic in the United States.”

Raymond says that one of the goals of his work is to help build capacity and skills locally and encourage people to keep the work going after he leaves. “I say to my collaborators, ‘I hope the next time I come here is as a tourist.’”
“All this money has gone into treatment, but we need to know who gets treated and what their health outcomes are.”

“The cross-cultural practice of medicine is interesting beyond description,” says Elvin Geng, MD, who has worked in California, New York City, China and East Africa. “But one thing I’ve learned is that people are not that different. They want to be treated with respect—especially when they’re asking for help. It doesn’t matter if you’re Donald Trump or an illiterate mother of seven in Uganda. That’s something public health needs to pay more attention to.”

Geng, an assistant professor of medicine at UCSF, is the son of Chinese immigrants and grew up in an academic family in Davis, California. He’d always been attracted to medicine because it was “ultimately practical.” First he went to acupuncture school but was disappointed, despite its “ideological appeal.” Then he entered medical school at Columbia University. While he was working in a Manhattan emergency room, a man came in with symptoms of a massive heart attack. “They saved his life,” he recalls. “I’ll never forget that experience. I knew at that moment I’d picked the right profession.”

In recent years Geng has been studying “loss to follow-up,” a problem pervasive in antiretroviral treatment programs in Africa for people with AIDS and HIV. These “lost” patients have disengaged from care, for a variety of reasons.

Explanations fall into three categories. Structural reasons are tied to the economic conditions of life, such as a washed-out road. Then there’s service delivery, which amounts to having satisfied patients motivated to return. Finally, there are psychosocial factors, such as depression.

“All this money has gone into treatment, but we need to know who gets treated and what their health outcomes are,” Geng says. “That may seem obvious, but it’s not at all self-evident how you find them.”

It’s impossible to determine what happens to everyone, but it is possible to apply basic epidemiological principles in sampling and learn a lot. “Nate Silver knew Obama was going to win the election, even though he didn’t talk to every American, because he was able to look at the polls and figure out their biases and summarize them,” Geng says. “What we’re doing is essentially very similar.”

He clicks on a video that he shot with his mobile phone from a motorbike in Uganda. He and the driver, Hassan, were looking for patients they’d identified in a sample of those who had not come back for treatment. Hassan, a peer educator at an HIV clinic, knows the society, culture and geography extremely well and knows how to find people without revealing where he works or why he’s looking.

“I like to call him the ascertainer,” Geng says. “We want him to ascertain what happened to the patients. Words matter. We’ve used the word ‘tracking,’ but I don’t like that word.”

Geng and Hassan usually get a good reception. Still, Geng wondered if Hassan was a unique case. So, he got a grant to repeat the approach in 14 clinics in Uganda, Tanzania and Kenya. “The short answer is yes, there are Hassans everywhere,” he says. “They’re absolutely critical. Human relationships are everything.”
Suellen Miller, PhD, RN, CNM, MHA
Professor of Obstetrics, Gynecology and Reproductive Sciences; Director of the Safe Motherhood Program at the Bixby Center for Global Reproductive Health
In 1987, Suellen Miller was a nurse-midwife with a booming practice that reflected her longtime commitment to the women’s health movement. She decided to take her first vacation in six years and bring her 10-year-old daughter along. The trip’s impact was monumental.

“In Nepal I saw horrific conditions under which women were giving birth,” says Miller, PhD, RN, CNM, MHA. “It completely turned my life around.”

Now she is a clinical researcher dedicated to reducing maternal mortality all over the world. Miller, a UCSF professor of obstetrics, gynecology and reproductive sciences, is director of the Safe Motherhood Program at the Bixby Center for Global Reproductive Health. Its LifeWrap project takes up much of her time.

“We don’t think about childbirth as being a life-threatening thing,” says Miller. “But in some countries there are even sayings about it. When friends hear a woman is pregnant, they might say, ‘You have one foot in the grave.’ ”

Globally about 358,000 women die each year, often at home, from complications related to pregnancy and childbirth. To prevent this, LifeWrap advocates the use of a non-pneumatic anti-shock garment (NASG), made of neoprene and Velcro and similar to the lower half of a wetsuit cut into segments. The pressure created by compression sends blood to the heart and brain and slows blood loss, buying time until mothers can get care.

“When I first heard about it, I really pooh-poohed the whole idea,” Miller says. “I was very cynical and skeptical. This thing just sounded ridiculous. It was too simple and too easy.”

But she changed her mind in 2003 after reading an article by Paul Hensleigh, a Stanford doctor who had done case studies in Pakistan on the first-aid device. The two then did research in Egypt and Nigeria with promising results, and Miller has since conducted other studies.

One of the goals of their research, says Miller, was to prove efficacy in order to get the NASG included in the World Health Organization (WHO) guidelines. In late 2012, they met that objective when WHO recommended the device for first aid for postpartum hemorrhage. More companies are now making the garment, which ranges in price from $60 to $300. At least 14 countries are using it, and Miller is reaching out to ministers of health, hospital directors and leaders of professional associations.

At this point she has worked in at least 30 countries in Asia, Africa, the Caribbean and Latin America. She spent a few months on a ship in the middle of the Pacific, providing medical care to the Marshall Islands, and went back and forth to Tibet for five years on a project on the prevention of postpartum hemorrhage.

Whenever she is in Africa, Miller tries to visit big-cat reserves, and her Facebook picture shows her with a cheetah in South Africa. The daughter she took to Nepal now runs a nanny agency in New York, and Miller has two granddaughters.

The self-proclaimed “very doting” grandmother is a passionate advocate and sought-after expert who does not shy away from political undercurrents in the women’s health field. She provided technical guidance to Christy Turlington Burns’ 2010 documentary “No Woman, No Cry,” and in November 2012 she gave a TEDxSF talk called “Stop the Bleeding.”

“Maternal mortality is a gross violation of human rights,” said Miller in her TEDxSF talk. “What is needed is political will for girls’ and women’s lives to matter.”
It often seems as if Craig Cohen, MD, MPH is everywhere doing everything, all at the same time. He's involved in a vast number of programs at UCSF that take him from hospitals and boardrooms in San Francisco to remote villages in Kenya.

Cohen, a professor in UCSF’s Department of Obstetrics, Gynecology & Reproductive Sciences, is an attending physician in the women's clinic at San Francisco General Hospital, as well as the co-director of the University of California-wide Women’s Health & Empowerment Center of Expertise. He has a 32-page resume that details his career as a physician, researcher, mentor and administrator. What it can't convey is his passion and commitment to improving people's lives, specifically those living in some of the poorest conditions in sub-Saharan Africa.

"If you really want to do global health research, you should spend real time on the ground," says Cohen, who lived and worked in Kenya from 1994 to 2002 and returns frequently.

Cohen is founding director of Family AIDS Care & Education Services (FACES), a collaborative partnership between UCSF and Kenya Medical Research Institute (KEMRI) funded by the US President’s Emergency Plan for AIDS Relief (PEPFAR). FACES has grown significantly since it began in 2004 and supports 130 health facilities run by the ministry of health in western Kenya near and on the shores of Lake Victoria, the area of Kenya hardest hit by the HIV epidemic.

Cohen likens the FACES program, which runs on approximately $13 million a year, to a “medium-size business” with the aim of creating knowledge, training the next generation of researchers and providing care to HIV-affected families. The program is built upon Cohen's 19-year collaboration with Dr. Elizabeth Bukusi, Deputy Director for Research & Training at KEMRI.

FACES focuses on HIV prevention, care and treatment. It has drawn more than 131,000 patients, of which at least 61,000 have started lifesaving antiretroviral regimens.

To remain connected to the patients and program staff, Cohen often visits program sites during his frequent trips to Kenya. In addition to building local capacity to take care of people living with HIV, FACES serves as the foundation for a growing list of about 20 research projects, most focused on HIV prevention and treatment, as well as the intersection of HIV and reproductive health, such as family planning and cervical cancer prevention. These studies are supported by a variety of donors including the US National Institutes of Health, Center for Disease Control and Prevention, the Bill & Melinda Gates Foundation, and private philanthropists.

"One thing UCSF brings to the table is academic rigor," says Cohen, speaking by phone from Nairobi. "But sometimes it’s these experiences of visiting an individual patient or research participant at their home or farm that are more powerful than all the data in the world."

He describes a program he leads with Bukusi and Dr. Sheri Weiser at UCSF called Shamba Maisha, which is Swahili for “farm life.” It’s an agricultural intervention, mixed with microfinance and financial literacy training, to improve the health and well-being of people and their families affected by HIV in Kenya.

Last year Cohen went to see an older woman named Mary. In 2007 she joined Shamba Maisha, which connected her with a loan to purchase a human-powered water pump and agricultural inputs, and training as a way to grow food, address food insecurity and earn income. At that time, she was an impoverished widow living in a hut and feeling tremendous stigma because of her HIV status.

“Five years later, she was successful,” Cohen says. “She had graduated to a larger water pump, was irrigating two acres, making money and living in a brick house. With her new stature came respect. People who were once hesitant to interact with Mary now come to seek her advice. She is now viewed as one of the leaders of the community. Mary’s success tells me we are on the right track, that implementing an intervention that combines health and development to empower women and men affected by HIV really does work.”

"Sometimes it’s these experiences of visiting an individual patient or research participant at their home or farm that are more powerful than all the data in the world."
Roland (Roly) Gosling, MRCPCH, FRCPath, PhD
Associate Professor of Epidemiology & Biostatistics; Lead of the Global Health Group’s Malaria Elimination Initiative
“It’s becoming an emergency to get rid of malaria before we run out of tools.”

Among infectious diseases, malaria is one of the most lethal. It kills about 660,000 people a year.

“I’ve seen kids dying of malaria in front of my own eyes,” says Roland (Roly) Gosling, lead of the Malaria Elimination Initiative within the UCSF Global Health Group (GHG). “We work with 34 low-endemic countries with the goal of making those countries malaria free within the next 20 years.”

Gosling, MRCPCH, FRCPath, PhD, believes elimination is entirely possible. Unlike most people in the malaria field, who focus on high-burden areas, he works on moving from low to no transmission. “It’s becoming an emergency to get rid of malaria before we run out of tools,” he says. “Drug resistance is increasing among malaria parasites, and insecticide resistance is rising among mosquitoes.”

The Malaria Elimination Initiative works to bring countries together into regional networks, such as the 14-country Asia Pacific Malaria Elimination Network (APMEN), so that they can clear the last remaining pockets of malaria. “These pockets tend to be complicated border areas with marginalized populations,” says Gosling, who works closely with GHG Director Sir Richard Feachem and colleagues at the University of Queensland to coordinate APMEN. “People there have the worst access to healthcare. There is often conflict. Sometimes there are undocumented workers carrying out illegal activities. They don’t want to be found.”

Gosling, an associate professor of epidemiology and biostatistics, grew up in London and trained as a medical doctor in Nottingham, the “home of Robin Hood,” he notes. He enjoys living in hot climates with palm trees and oceans; malaria work suits him. Tanzania, where he worked for six years, is a second home. He speaks Swahili and returns at least once a year. Malaria transmission is high there; using bed nets and spraying houses with insecticide make sense because mosquitoes often bite when people are asleep.

In low-transmission areas, however, infection happens outdoors and can be related to behavior. “Are people out at night drinking beer in a bar, or working in the forest or sleeping next to their fields?” Gosling asks. “In these settings, traditional interventions don’t work.”

In the quest to find what does work, Gosling and his colleagues are doing clinical trials this year of Primaquine, using very low doses they hope will keep mosquitoes from getting infected with malaria parasites. Primaquine is currently the only licensed drug that can effectively kill mature infectious malaria gametocytes, and thus is viewed as an intervention that could significantly drive down and disrupt malaria transmission. The trials, targeting *P. falciparum* malaria, are taking place in Mali and Thailand.

“These are two different ecological areas and pretty unconnected,” Gosling says. “In Mali people have never used this drug, and the parasite will never have been exposed to it. In Thailand, the standard treatment for *P. vivax* malaria is Chloroquine plus Primaquine, so we expect *P. falciparum* would have been exposed in the past and might have developed some resistance. In both settings we need to know the right dose.”

Gosling and his colleagues in the Malaria Elimination Initiative are using every tool at their disposal to help the 34 countries around the world that are striving for elimination. They are making great progress, but people continue to die, even in low-endemic countries.

“My colleague in Namibia, which is a low-transmission country, called earlier today to tell me that a 15-year-old girl and 60-year-old man had died in the last two weeks,” Gosling said. “Malaria is very real and it kills people. And that’s why we should get rid of it.”
“It’s very relevant for me to think about spatial dimensions, the molecular genotypes of the parasites and the host’s response. I can put all these tools together to answer questions and find connections between things.”

Bryan Greenhouse is only 38 but figures he’ll be working on malaria research the rest of his life. Its breadth and complexities fascinate him.

“You can’t think about malaria and any one small piece of it, because everything is so interrelated,” says Greenhouse, MD. “It’s a lot more interesting than most diseases because it involves people and mosquitoes and communities.”

His first encounter with malaria began 13 years ago, through sheer serendipity, when he was a medical student at the University of Pennsylvania. He arrived in Uganda for a four-month project, only to find that it had fallen through. But he soon met Grant Dorsey, an infectious disease fellow from UCSF who put him to work on a malaria survey in the slums of Kampala. Four years later, Greenhouse came to UCSF, and Dorsey, now an associate professor, is one of his primary mentors.

“I really enjoy the fact that with malaria I don’t have to be pigeonholed into a very small scientific field of inquiry,” says Greenhouse, an assistant professor in residence. “It’s very relevant for me to think about spatial dimensions, the molecular genotypes of the parasites, and the host’s response. I can put all these tools together to answer questions and find connections between things.”

Greenhouse is particularly interested in using genetic fingerprinting to track the origin and spread of malaria parasites in areas where transmission is low and the disease is on the verge of elimination. “We’re trying to create a ‘family tree’ of the parasites,” he says. He envisions online maps that would show in real time where cases are coming from and how they are being transmitted.

“Malaria doesn’t know where a political boundary is,” Greenhouse says. “If Swaziland wants to eliminate malaria and its neighbor Mozambique has a lot of malaria, Swaziland will need to help Mozambique.”

He is focusing on immunology, too, measuring humans’ antibody responses to malaria parasites. He’d like to develop a test to see how many times a person has had malaria and how long it’s been since the last time.

“It’s like cutting open a tree and looking at the rings to go back in time,” he says. “The idea is to do the same with antibodies. You can say, ‘You’ve been exposed 20 times in your life but not at all in the last two years, which means there used to be a lot of malaria here but something has changed.’ You do that on a community level, and you can map spatially and temporally what’s going on with malaria.”

Greenhouse is also studying some fundamental mechanisms for the development of natural immunity.

“Prevention is really the way to go,” he says. “It all comes down to money and effective health systems and allocation of resources. If you have prompt access to therapy, there is a low chance of dying. But at some point when people get so sick, there is almost nothing we can do. We need to prevent people from getting to that point in the first place.”
Bryan Greenhouse, MD
Assistant Professor in Residence, Department of Medicine
Education and training

Our students and trainees—the next generation of global health leaders—are the heart and soul of Global Health Sciences. “They give us hope in the face of constant turmoil all over the planet,” says GHS Founding Executive Director Haile Debas. We have trained 594 people since we began our education programs in 2005: 88 in the Masters program; 77 in the Pathway to Discovery; 168 in Clinical Scholars; and 261 in Complex Humanitarian Emergency Training.

Growth of GHS education programs

- Pathway to Discovery in Global Health
- Global Health Clinical Scholars Program
- Complex Humanitarian Emergency Training Program
- Masters in Global Health Sciences Program
Masters of Science in Global Health Sciences

The Global Health Sciences Masters degree program welcomed its fifth class in September. This is the largest class to date, consisting of 38 students with diverse backgrounds and interests and originating from seven countries outside the US. About a third of our Masters students enter the program with an advanced degree.

Graduates of the one-year program are prepared for leadership careers in international health policy, health care, research and development. Approximately half of our graduates are employed in the global/public health sector, completing residency programs, teaching and/or conducting research in academia or working at NGOs and in other public and non-profit areas. Most of our other alumni are currently enrolled in advanced academic or professional degree programs (e.g., PhD, DPH, MD, MBA).

Read a profile of one of our graduates, Geb Kassa, Class of 2011, on page 23.

Pathways for enrolled students, residents and fellows

UCSF offers several training options for students enrolled in professional and graduate programs, as well as for residents and fellows.

The Pathways to Discovery program is for UCSF health professional students who want to be involved in global health through in-depth course work, as well as clinical or research experiences with an underserved population. The program admitted its sixth cohort, of 14 third- and fourth-year medical students, in 2012. Their mentored projects focus on health issues in 10 countries including Niger, China and El Salvador.

The Clinical Scholars program is a training track for UCSF graduate healthcare professionals (UCSF residents, scholars, fellows and graduate students) from the Schools of Medicine, Nursing, Dentistry, Pharmacy and the Graduate Division, who wish to formally incorporate global health into their professional careers. Thirty-one UCSF trainees entered the program in September 2012, the largest cohort to date.

Complex Humanitarian Emergency Leadership Training Program

GHS hosted its seventh biannual Complex Humanitarian Emergency Leadership Training program in September, this time at the Presidio of San Francisco. With the help of roughly 40 role-playing volunteers, the training simulated a refugee crisis at the border of Syria and Turkey. Over the course of the weekend, 41 trainees were tasked with performing a rapid assessment and developing a plan to meet the needs of the simulated Syrian refugee population. The event challenged trainees to consider water sanitation concerns, interact with the media and address the emergency medical needs of the refugee population.

International Traineeships in AIDS Prevention Studies

Since 1988, public health leaders, researchers in the field and healthcare providers from around the world have been coming to UCSF for training so they can better prevent HIV in their own countries. A joint program between GHS and the UCSF Center for AIDS Prevention Studies (CAPS), the International Traineeships in AIDS Prevention Studies (I-TAPS) offers programs in writing and research for health professionals from low- and middle-income countries.

In Spring 2012 GHS and CAPS hosted 13 scholars who came from Argentina, Brazil, Croatia, China, Iran South Africa, Thailand and Uganda. The program now has more than 200 alumni from 46 countries.

Read a profile of an I-TAPS graduate, Angelica Espinosa Miranda, of the Universidade Federal do Espirito Santo in Brazil, on page 22.
When Angelica Espinosa Miranda finished medical school in 1987, females with HIV in Brazil had a rough time getting health care because doctors were afraid of the virus. But she had no fear—not until she cut her hand doing a Caesarean section on a pregnant woman with AIDS who had an astronomical viral load.

“There was a lot of blood,” says Miranda, MD, PhD, a professor in social medicine and epidemiology at Universidade Federal do Espirito Santo in the Brazilian port city of Vitoria. “Then I got really scared.”

For a month Miranda took 12 pills a day, which sickened her and made her dizzy. For a year she lived with doubt and uncertainty, getting tested for HIV every two months until it was clear that she was not infected.

“It was very good for me because I learned what patients have to go through,” she says.

Her gift for empathy is evident when she speaks about the horror and sadness she felt when visiting drug addicts in a San Francisco clinic or women with terminal breast cancer in Mozambique where the shortage of mammogram machines makes early diagnosis almost impossible.

Her compassion is reinforced by a relentless drive to learn and teach, which made her a natural fit for the International Traineeships in AIDS Prevention Studies (I-TAPS) program at UCSF.

Since 1988, I-TAPS has been offering training and conducting research on how to prevent HIV transmission in low- and middle-income countries. I-TAPS is run by the UCSF Center for AIDS Prevention Studies and Global Health Sciences.

Miranda first came to UCSF for I-TAPS training in 2000 and has returned several times since. She picked up new skills—including writing papers, analyzing data and preparing grant proposals—that she has taught to health professionals in Brazil and elsewhere. She also acquired connections and fresh collaborations that span the globe. For example, she traveled to Mozambique with a UCSF epidemiologist to participate in discussions about breast cancer and taught a course in the rainforest of Brazil with two UCSF professors.

Her I-TAPS training also will pay off when the 2014 World Cup and 2016 Summer Olympics arrive in Brazil. Miranda, a consultant with the Brazilian Ministry of Health, will be helping the government focus on HIV prevention during these events.

In addition to the public health and research expertise Miranda has developed over the years, she says her partnership with UCSF and her experiences working in remote parts of the world have had value beyond her education.

“I learned more than how to be a better physician,” Miranda says. “I learned how to be a better person. I met very committed and interesting people, and I made some very good friends.”
Gebeyaw (Geb) Tiruneh Kassa was 15 years old before he ever saw a vehicle. That’s because he grew up in Feres Bet, a small town in the highlands of Ethiopia. It was extremely remote and health care was almost nonexistent.

“One family in the neighborhood was sick for several days,” says Kassa. “Nobody would visit them because people were worried about disease. Five of them died of typhus. My father brought them food.”

Kassa, MD, MPH, MS, never forgot that experience. It’s partly why he became a doctor, why he founded a medical college in his homeland and why he came to UCSF in 2010 to earn a master of science degree in Global Health Sciences.

“Seeing that family die from a simple disease had impact,” Kassa says. “And later, when I was living in the jungle building houses, I caught dysentery. A doctor there did everything for us. That affected me, too.”

He first spotted an automobile when he went away to high school. It was a 100-kilometer round trip that he made by foot four times annually. At age 17, he entered prison for five years after opposing Ethiopia’s military government. After being freed, he worked as a library assistant to support his mother and seven siblings because his father was still imprisoned.

Eventually, he entered medical school. In 1996, Kassa and four other doctors started GAMBY clinic—combining the initial letters of their first names. “In that clinic there were six patients the first day,” he recalls. “Now it’s a hospital with 100,000 patients a year, 15 specialists and a lot of projects.”

That’s no accident. Kassa thinks big. “For years I’d treat the same people, season after season, with the same complaints with no improvements in facilities or manpower,” he says. “I got fed up and decided it was much better to treat the community than the patient.”

So he went and got an MPH degree, and later a masters at UCSF. He started to organize and oversee projects, aimed at everything from HIV to tuberculosis to reproductive health. He opened a big, one-of-a-kind teaching hospital in Bahir Dar, Ethiopia that will be officially inaugurated in September 2013. And he created MPH programs that now have 375 students, as well as a program to train medical doctors. He wants to link them, as well as the hospital, with UCSF to promote research and exchanges.

“UCSF opened my eyes to see health care globally and opened my mind to think globally,” Kassa says. “Our class was so diverse. Young, elderly, senior and junior researchers, development specialists, clinicians and people with backgrounds from account management to theology.”

Unlike many Ethiopian doctors, he wasn’t tempted to stay in the United States, but he does miss its shopping centers. No problem, though: his wife, a businesswoman, is starting one in Ethiopia.
In the summer of 2013, Global Health Sciences will kick off a year-long celebration of 10 years at UCSF. Here is a look at some of our milestones and achievements.
GHS receives a grant from the Bill & Melinda Gates Foundation to launch the Consortium of Universities for Global Health

Sir Richard Feachem appointed Executive Director of GHS

GHG hosts the Bay Area Global Health Summit

GHG launches the Evidence to Policy Initiative (E2PI)

Jaime Sepulveda joins GHS as Executive Director

GHS hosts the international conference Transforming Health Education Globally: Four Years After

PPHG launches the Global Strategic Information group

Paul Volberding joins GHS as director of research and director of the UCSF AIDS Research Institute

Molly Cooke joins GHS as director of education

Chuck Feeney and Atlantic Philanthropies donate $20M to build a global health hub at Mission Bay

UCSF breaks ground on global health and clinical sciences building at Mission Bay (March 2013)

GHS partners with the Gates and Slim Foundations to address neglected diseases in Mesoamerica (2013)

UCSF opens new global health building at Mission Bay (2014)

GHS 10th anniversary celebration (2013–2014)
Empowering the next generation of global health leaders

Bob and Kathy Burke know that investments in global health education pay tremendous dividends toward building a healthier future for us all.

By investing in UCSF’s most precious resources—students and young faculty—they have provided the foundation for the next generation of global health leaders to thrive.

The Burke Family Global Health Scholars Program has provided much-needed funds to early investigators to expand their research and training programs and to gain data needed to secure other major grant funding. The highly competitive award program enables GHS to recruit and retain talented young faculty, building the pipeline of educators, mentors and researchers.

The Program has also enabled our masters students to conduct invaluable fieldwork across the world, including Bolivia, Chile, Kenya, Lebanon, Malawi, Myanmar, the Philippines and United Arab Emirates.

The Burkes’ generosity is empowering the next generation of global health scientists today.

“It’s so important to create some space for these highly motivated young scientists to pursue global health.”

– Kathy and Bob Burke

Providing comprehensive HIV/AIDS care in East Africa

During their travels to East Africa, Michael and Sue Steinberg saw the ravages of poverty and the AIDS epidemic firsthand. They decided to make a difference by partnering with UCSF.

The Steinberg Comprehensive Care Centre opened its doors in 2007 in the Nyanza Province of Kenya. Over the past five years, the Centre has served thousands of patients, providing effective HIV/AIDS programs, including mother-to-child transmission prevention, cervical cancer screening, voluntary adult male circumcision and family supportive services. A pilot project, Shamba Maisha (Kiswahili for “farming life”), aims to give HIV-positive women the capacity to improve their family’s nutrition through agriculture.

“We have learned that integrating HIV care with family planning is vital,” says Craig Cohen, UCSF professor and director of the Family AIDS Care and Education Services (FACES) program. “We know that families living with HIV need a variety of supportive services and that peer support really makes a difference.”

“We have a long way to go to ending the AIDS epidemic in Kenya and sub-Saharan Africa. We’re glad to be part of the solution.”

– Michael and Sue Steinberg
Building global health leadership skills through teamwork

Kathy Kwan believes that being a global health leader extends beyond being a great clinician. Leadership success will depend on the ability to collaborate, organize and build strong working relationships. That’s why she has supported the incorporation of leadership training into UCSF global health programs. This includes the UCSF Complex Humanitarian Emergency (CHE) Leadership program, which enables global health trainees to practice these valuable skills in a safe yet challenging environment.

Thanks to generous annual support from Kwan’s family foundation, the CHE program has trained 261 Bay Area students from UCSF, UC Berkeley, Stanford, San Francisco State and other Bay Area universities since 2009. Twice a year, students participate in an intensive weekend of training exercises designed to recreate refugee camps born out of civil unrest; past trainings have simulated actual events in Syria and Turkey, Libya and Tunisia, Uzbekistan/Kyrgyzstan and Sudan/Darfur.

"I am excited about investing in the next generation of global health leaders.”
– Kathy Kwan

"The simulation of various events was remarkable. It served to teach me more in one day on my feet than I could have ever learned in a lifetime of reading text.”
– Ruby Singhrao, a student in the GHS masters program
## Individual donors

We are grateful to the following individuals who provided generous support to help us advance Global Health Sciences and AIDS research and program services in 2012.*

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Financials

**Fund sources**
July 1, 2011–June 30, 2012
Total: $40.83 million

**Fund uses**
July 1, 2011–June 30, 2012
Total: $36.33 million

**GHS sponsored project expenditures by fund year**

![Pie chart showing fund sources and uses]

- **Sponsored projects**: 76%
- **Campus support**: 9%
- **Recharges**: 6%
- **Gifts/endowment income**: 4%
- **Tuition/fees**: 3%
- **Indirect cost recovery**: 1%
- **Other**: 1%

- **Personnel costs**: 53%
- **Other/non-payroll**: 17%
- **Subawards**: 13%
- **Facilities and administration**: 11%
- **Lease and rental**: 5%
- **Campus fees**: 1%

Bar chart showing expenditures by fund year:

- 04–05: $5,000,000
- 05–06: $10,000,000
- 06–07: $15,000,000
- 07–08: $20,000,000
- 08–09: $25,000,000
- 09–10: $30,000,000
- 10–11: $35,000,000
- 11–12: $40,000,000
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### Mary Sutphen, PhD  
Assistant Adjunct Professor, Social & Behavioral Sciences

### Lisa Thompson, RN, PhD  
Assistant Professor, Family Health Care

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Organic Health Response (OHR)
Pacific Malaria Initiative (PacMI)
John Ziegler, founder of the GHS Masters Program, retiring

John Ziegler, the founder and director of the GHS Masters program, is stepping down on August 2, 2013, the day the fifth class of Masters students graduates.

John leaves incredibly large shoes to fill. He is admired by students and faculty alike for his excellence in teaching. His classes and seminars are always rigorous, thought-provoking and inspiring, and he insists that students think critically about global health. The sincerity of his belief that education is about group learning, where everyone is a learner and a teacher at the same time, is manifest in every aspect of the program. He leads by example, and his tireless dedication and high standards inspire all the faculty and teaching assistants to be better educators.

We think Megan Tan, a 2012 graduate of the program, says it best:

“As a student, it is an incredibly empowering experience to be taught and guided by someone who seamlessly integrates intellectual rigor with a deeply genuine concern for students’ well-being and continued development. Without a doubt, my life’s trajectory has been profoundly altered by his dedicated teaching and mentoring.”

We will miss you, John!

A fond farewell

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“Chuck Feeney has been instrumental in building the Mission Bay campus into one of the world’s leading centers for innovative health sciences. His support for Global Health Sciences will enable us to translate that vision into a direct impact throughout the world.”

– UCSF Chancellor Susan Desmond-Hellmann, MD, MPH