



Mentoring Program Supports New Generation of HIV Researchers

Richard Trubo

AS THE AIDS EPIDEMIC REACHES the midpoint of its third decade, HIV researchers in San Francisco have taken steps to empower the next generation of scientists to join the war against the potentially deadly infection. They have launched an ambitious mentoring initiative, targeted at developing and encouraging young researchers committed to a career in HIV research.

The program, which was started in 2004 by the Center for AIDS Research (CFAR) in San Francisco, matches postdoctoral scholars and early career faculty with well-established senior faculty at the University of California at San Francisco (UCSF), the Gladstone Institute of Virology and Immunology, and other local affiliated institutions. The program is believed to be the first of its kind, focused on supporting the goals of young investigators in basic, clinical, and behavioral research in HIV.

While studies have shown that mentoring can contribute to greater productivity and retention of researchers in academia, the creation of one-on-one mentoring relationships has often been a hit-or-miss proposition. But HIV investigators like James Kahn, MD, are convinced that formal networking and the other organized elements of the mentoring project can be key contributors to the future management of the epidemic.

"Most of the senior researchers in HIV are in their last decade of creative work," said Kahn, director of the CFAR mentoring program and professor of medicine at UCSF. "We need to nurture the next generation of investigators to, in essence, replace ourselves. By networking junior faculty within a rich research enterprise here, we hope we'll spread a positive legacy of working to end the HIV epidemic."

Ruth M. Greenblatt, MD, professor of clinical medicine and epidemiology at UCSF, and codirector of the mentoring program, agrees that nurturing future researchers is crucial. "In general, there has been a problem [of] interesting and retaining clinician-scientists in this field, but it's important that we encourage them," particularly as the AIDS epidemic continues to grow, she said.

VALUE OF MENTORING

In the San Francisco program, most mentees are assistant professors or postdoctoral scholars with an average age of 36 years. In the first academic year, 12 mentees participated, and their ranks rose to 23 in the second year. Their senior mentors, two thirds of whom are UCSF professors, volunteer their time and are asked to participate in 1-hour sessions with mentees at least every other month, and to be available by e-mail and telephone.

Kahn said, "Mentoring doesn't always get as high a priority as we'd like, in part because the outcomes are often seen years down the line. So we're touching on something that is very important but not fully appreciated."

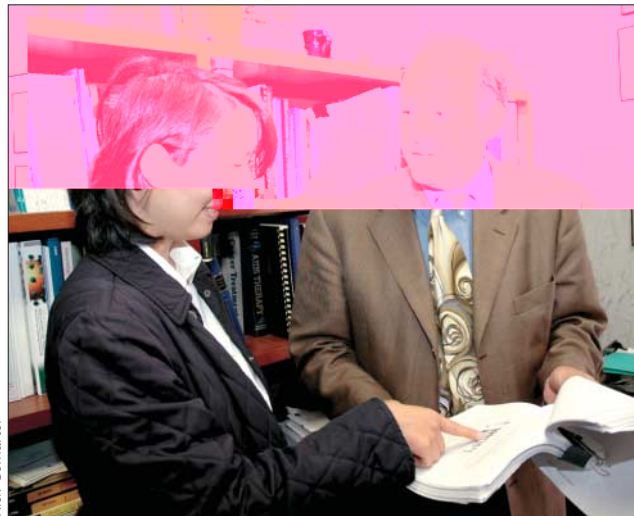
At or near the start of their careers, most researchers learn lessons in the

school of hard knocks, said Greenblatt. "But with this mentoring program, there is an opportunity for people to get connected, and learn from the experiences of others early on so perhaps they can avoid making similar mistakes."

In one-on-one sessions with their mentors, mentees have discussed details of their own research, which include studies ranging from antiretroviral therapy in women to HIV and chronic kidney disease. Mentees also have sought guidance in areas such as navigating through the academic environment and submitting grant applications.

"At this point in the HIV epidemic, the state of the federal budget is making it harder to get research funding," said Greenblatt. "So this is a time when early career investigators in HIV research need more mentoring support."

In late June, the CFAR mentoring program sponsored a 2-day symposium during which many of the mentees presented their research to the HIV scientific community. Monthly didactic workshops, presented by senior faculty, also have become an important component of the program. Workshop topics, many of them suggested by the mentees, have included negoti-



Grace Lee, MD, meets with mentor James Kahn, MD, director of the San Francisco-based Center for AIDS Research's mentoring program. The program is intended to develop and encourage young investigators committed to a career in HIV research.



ating for a first faculty position, scientific ethics, and balancing life and work.

Perhaps just as important as the content of the workshops, these monthly sessions provide an opportunity for mentees to meet and network with one another and with other participating mentors. "These junior investigators are the creative, committed scientists who will need to work together in the years ahead to push forward our agenda of stopping the AIDS epidemic," said Kahn.

EVALUATING OUTCOMES

The term *mentoring* has become something of a buzzword in academic and business circles, but many such programs do not pan out, particularly over the long term. In fact, Greenblatt was initially a little skeptical that the San Francisco program would catch on. "But I've been struck by the number of early career people wanting to join the program and the high attendance rate for the individual mentoring sessions," she said. "The word has gotten out that the program is valuable."

Most of the first-year mentees not only wanted to continue with the program for a second year, but they spread the word, and more junior researchers asked to participate. The mentoring program is now about to embark on its third year.

Even so, 5 of the first year's mentees chose not to continue for a second year, and it was most often because of time limitations. "Some clinical scholars were so overcommitted with clinical and even administrative responsibilities that they couldn't carve out the time to be mentored," said Kahn. Another first-year mentee returned to her home country of Sweden after receiving a career award focusing on HIV research, while still another left the field of HIV study altogether.

Formal outcomes analyses of the San Francisco mentoring program are ongoing, and Kahn and his colleagues are planning to publish their findings. However, he acknowledges that measuring success will be challenging. "At times, it's hard to ascribe good outcomes to a mentoring program because, in fact, mentees are getting input from a vari-

ety of sources," he said. "It will be a challenge to evaluate how much this program contributes."

To date, questionnaires completed by mentors and mentees have provided largely positive feedback, with many mentees reporting particular value in the networking opportunities that the program provides.

According to Kahn, "Our yardsticks of success are going to be the publication of our work, being able to leverage more funding for mentoring activities, and the ability for us to brand this mentoring project and encourage other CFARs to adopt a similar program." In addition to CFAR funding, the program is supported by a National Institute of Mental Health K-24 Award that allows Kahn to devote time to mentoring HIV investigators.

TRANSLATIONAL RESEARCH

One characteristic of the CFAR mentoring program is encouraging a translational approach to research. From its onset, every mentee was paired with an HIV scientist from another discipline—for example, clinical scientists were paired with behavioral or basic scientists in HIV research.

"Many of us have had excellent mentoring in our career, and it has often been from our own laboratory leader or clinic director—in other words, within our own focus of research," said Kahn. "But having mentoring from outside our own field has often been catch-as-catch-can."

"In this program," added Kahn, "we're trying to expose mentees to senior faculty members who have been successful in a field that is somewhat different than their own specific focus, and by doing so, stimulate multidisciplinary-based research."

Efforts also are made to match female mentees with female mentors, with the hope that successful female academicians may be able to give novel advice to their younger female counterparts.

One of Greenblatt's mentees is Deborah Cohan, MD, MPH, a UCSF obstetrician/gynecologist who is medical director of the Bay Area Perinatal AIDS Center, and whose research has con-

centrated on areas like perinatal transmission of HIV. Cohan said, "It's been helpful to have a mentor outside of my department, who can give me a unique perspective and advice. She also serves as a role model as a woman who has achieved success in the academic world. We've talked about everything from the UCSF system to work-life issues, since we're both working mothers."

Jason D. Barbour, PhD, MHS, has completed his first year as a mentee in the program. An assistant professor in the department of medicine at UCSF and San Francisco General Hospital, he has been involved in HIV research since the mid-1990s, focusing on areas such as the immunopathogenesis of HIV infection, as well as drug resistance and viral fitness. His mentor, Susan Buchbinder, MD, is director of the HIV Research Section at the San Francisco Department of Public Health.

"Dr Buchbinder has been a terrific resource for me on many levels, not only on career development and establishing a successful research program, but also about issues in the history of HIV research in San Francisco, including the very early survey work that established the route of transmission of HIV and the behavioral factors associated with the transmission of the virus," he said. Barbour also has begun an active collaboration with Buchbinder, which he describes as a "positive and unexpected benefit from the mentoring program," in which they are evaluating a cohort of uninfected individuals highly exposed to HIV, and examining how they have been able to avoid the infection.

THE FUTURE

The CFAR mentoring program is considered by its founders as a work in progress, and may be expanded in some areas. "We're considering adding some mentoring for the senior faculty themselves, providing them with ideas for direction at the mid and late stages of their careers," said Greenblatt. "Perhaps we'll bring in individuals from outside the HIV research world who have taken interesting steps at that stage of their careers." □