

MOVERS

King Holmes, director, Department of Global Health, University of Washington, Seattle



1995-2006: Section Head, Division of Allergy and Infectious Diseases, Harborview Medical Center, Seattle, Washington

1989-2006: Director, Center for AIDS and Sexually Transmitted Diseases, University of Washington, Seattle

King Holmes was not a typical medical student. His love of research allowed him to diversify, ultimately making him a hybrid of clinician and scientist.

After being drafted into the navy in 1964 from a medical internship at Vanderbilt University in Nashville, Tennessee, Holmes became an epidemiologist at a Pearl Harbor preventive medicine unit. At the same time, he studied for a PhD in microbiology at the nearby University of Hawaii.

His first task as an epidemiologist was to find a cure for penicillin-resistant gonorrhoea, which was becoming widespread onboard ships. "I had visions of working on exotic tropical diseases, such as malaria and haemorrhagic fevers, but this was the most common problematic infectious disease facing the navy at the time," he says. He co-designed a randomized trial for a treatment that combined penicillin with probenecid, a drug that reduces blood levels of uric acid. This proved to be 100% effective in curing the disease.

After three years in Hawaii, Holmes left the navy to train in internal medicine and infectious diseases with Marvin Turk at the University of Washington in Seattle. A faculty position in pulmonary disease opened the door to a 14-year career at the US Public Health Service Hospital in Seattle, although he soon switched departments to infectious diseases. With cases of sexually transmitted diseases (STDs) increasing in number, Holmes' experience meant he was in high demand.

He and several colleagues carried out their research at the Seattle-King County STD clinic until a separate clinic was built at Harborview Medical Center in Seattle. There, he trained a series of fellows who went on to become leaders specializing in diseases such as gonorrhoea, chlamydia, genital herpes and, later on, AIDS.

In the mid 1980s, Holmes approached the dean at the University of Washington's School of Public Health and Community Medicine about starting a programme in international health. It didn't happen, but by 2000 a new dean had realized the dream with the creation of the Department of Global Health, which was funded in part by the Bill and Melinda Gates Foundation. Holmes begins his tenure as chair of the new department this month. He plans to provide broad interdisciplinary training by involving every school of the university.

"AIDS is the biggest challenge of my career," he says, adding that it will take the creativity that interdisciplinary programmes foster to conquer the extensive health problems and inequities faced by developing countries. ■

Virginia Gewin

RECRUITERS & ACADEMIA

More than one route to PhD success

The idea of a one-size-fits-all model for PhD study is simplistic, patronizing and bad for science. A recipe such as Georgia Chenevix-Trench's, detailed in "What Makes a Good PhD Student?" (*Nature* **441**, 252; 2006) is just one model for PhD success.

It is a mistake to promote a corporate culture of bulging briefcases, long hours and working weekends as signs of good research practice. PhD students should be judged on their insight and the outcome of their work, not by the number of hours they spend working.

Ernest Rutherford once asked a student who was working one evening whether he also worked in the mornings. The student proudly answered yes. "But when do you think?" Rutherford replied. He was convinced that the creative scientists spent evenings and holidays relaxing with their families, and imposed strict limits on the hours his students worked. A high proportion of them went on to win Nobel prizes.

Chenevix-Trench's model ignores calls from employers and graduates for PhD programmes that build transferable skills. In 2000, a survey by the National Association of Graduate-Professional Students found that most graduates believe that there are few research-only academic positions. Those surveyed wanted more interdisciplinary PhD

programmes that encourage teaching experience and provide a meaningful entrée into faculty life. A survey by Bettina Nyquist and Jody Woodford of 365 individuals, including PhD students and people working in education, academia and government, also found graduate education to be too narrow (*Reenvisioning the PhD: what are our concerns?* Centre for Instructional Development and Research, University of Washington, Seattle; 2000).

Chenevix-Trench errantly blames high PhD attrition rates on poor academic standards and lack of passion or hard work. A study by Barbara Lovitts and Cary Nelson (*Academe* **6**, 44-50; 2001) found no meaningful difference in academic performance between completers and non-completers. Graduate students who don't finish their degrees are typically less integrated into the department, suffer intimidating, hostile or laissez-faire departmental culture, and have poor relationships with supervisors.

Academics must heed the serious consequences of poor supervision if they are to strive for the best outcomes for students and society. ■

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GRADUATE JOURNAL

Lab life or love life?

It's hard to excel in all facets of life. Every hour spent with friends, family or hobbies is one less hour of data collection or paper reading.

For me, this means I sometimes feel I have to choose between being a successful scientist and having a successful relationship. I'd like to work long hours, eat when I want and sleep when I want. But my husband works a nine-to-five job, so how can I justify working evenings and weekends? I have colleagues whose partners work in the same lab or are also PhD students, which may make it easier, but when it comes down to it being alone is the simplest option.

A speaker at a recent seminar was asked how he had achieved so much. He said he had made many sacrifices: developing blots at 3 a.m. in the lab left little time for a girlfriend. In May, an article in *NatureJobs* suggested that being a good graduate student meant working 60-hour weeks on little pay. All this requires sacrifices. But in the end, will a *Nature* paper keep you warm at night? Will you end up looking back at your life and wishing you had told that person you loved them or spent more time with your kids? I wonder: if I want a rich personal life, am I destined to be mediocre? ■

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