Neurotransmitter expert is named chair of physiology

In December, Hermes Yeh, Ph.D., will become the first chair of physiology at DMS in more than a century who's neither an alum nor already on the faculty. The last three chairs, for example, were Donald Bartlett, M.D., a DC and DMS graduate who'd taught at DMS for 19 years before becoming chair in 1990; Heinz Valtin, M.D., who'd taught at DMS for 20 years prior to his 1997 appointment; and Marsh Tenney, M.D., a DC and DMS graduate who was chair from 1956 to 1977.

Build: But although Yeh (pronounced "yay") is new to Dartmouth, the physiology department's strong tradition of research and teaching is part of what drew him to DMS. "I think a chair who comes in would be wise to build on the existing strengths," he says.

Adjusting to new places comes naturally to Yeh, who is currently a neuroscientist at the University of Rochester's Center for Aging and Developmental Biology. The son of a Taiwanese diplomat, he moved often as a child—from Taiwan to Germany; back to Taiwan; then to Beirut, Lebanon; back to Taiwan again; then to Austria and Germany. "When you are a little kid and you go from one country to the next, you have to learn the language, go to school, and everything," says Yeh. Moving from place to place "taught me how to adjust very quickly and adapt to changing environments and situations."

Yeh came to the U.S. in 1972 to study zoology and physical chemistry at DePauw University in Indiana. In 1976, he enrolled at the University of Texas Southwestern, intending to earn a Ph.D. in genetics. But when his advisor took another job, "I was left in Dallas . . . not knowing exactly what to do," he recalls. Then one day he passed by a neurophysiology lab. "I saw these blinking lights," remembers Yeh, "and these sweeping oscilloscopes," instruments that measure electrical signals. "It looked really cool." Soon Yeh was working in the lab, studying neurotransmitters—chemicals that allow or inhibit communication between brain cells—specifically norepinephrine. As a doctoral student, Yeh helped to define norepinephrine as a neuromodulator and to describe how it worked. "As it turns out," he explains, norepinephrine "didn't exactly turn things on or off. . . . It was more of a modulator."

After completing his Ph.D. and a fellowship at the National Institutes of Health (NIH), he spent eight years at the University of Rochester, three at Wake Forest University, five at the University of Connecticut, and another five at Rochester.

Nerve: Throughout his career, Yeh has remained active in both teaching and research, studying how nerve cells in the brain communicate and how they adapt to normal development, aging, and toxic substances, such as alcohol. He is probably best known for developing a way to

FACTS & FIGURES

On the ball

Predicting a pandemic

"It's clear that an influenza pandemic is overdue," declared Kathryn Kirkland, M.D., chair of DHMC's SARS/Influenza/Contagious Respiratory Infection Committee, in July 2005.

Past

20%
Worldwide infection rate from the 1918 "Spanish flu"

20 million to 40 million
Worldwide deaths from the 1918 flu

675,000
U.S. deaths from the 1918 flu (47% of all deaths that year)

September 1918
Boston Red Sox win the World Series

Present

108 / 54
Confirmed cases and deaths worldwide from avian flu, 1997-2005

36,000
U.S. deaths annually from seasonal flu

2 million to 7.4 million
Estimated deaths worldwide if avian flu becomes a pandemic

October 2004
Boston Red Sox win the World Series

Avian flu, Kirkland went on, is "a good candidate to cause a pandemic at this point. It's immunologically a new virus . . . and it is highly virulent to humans. . . . Perhaps most worrisome of all, the Red Sox appear to be on a winning streak."

SOURCES: U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION AND A DHMC GRAND ROUNDS LECTURE BY KIRKLAND ON JULY 22, 2005