

"I was fascinated by science. I really enjoyed finding things out. I was always curious. I also wanted to do something that might make a difference."

"Plus, I always looked forward to school – it was six hours a day when I didn't have to be in the field," he says, laughing.

A 21-year veteran of Duke University Medical Center, today Dr. Patrick Casey, 55, serves as the senior vice dean of research at Duke-NUS Graduate Medical School, an institution formed in 2005 through a partnership between Duke University in Durham, N.C., and the National University of Singapore (NUS). The school enrolled its first class in 2007.

Q. What does your role at Duke-NUS Graduate Medical School entail?

A. We have a Ph.D. program as well as a medical program. We spent the first two years building the medical school and hiring core faculty. Now, I am concentrating on building research programs. We chose to do this in focus areas on particular diseases – cancer, cardiovascular disease, diabetes, infectious diseases and brain disorders. In the latter, we're looking at degenerative conditions in the elderly, such as Alzheimer's and Parkinson's, and psychiatric disorders, such as schizophrenia.

We've built an amazing facility. We have more than 40 research labs and 350 researchers. Our total number of medical students is 220. We also have 35 Ph.D. students.

The student population is made up of 28 different nationalities. Sixty percent are from Singapore, 30 percent are from China, Taiwan, Malaysia, and neighboring counties. The remaining 10 percent are from the U.S., Canada, and Western Europe.

In late May, our first class of medical students graduated. The majority will go on to residency programs at major hospitals in Singapore. They'll work in areas such as internal medicine and pediatrics. From there, they'll spend three to five years in post-graduate training and practice until they receive their specialty certifications.

Q. Why Singapore?

A. Singapore is a country with 4.5 million people and is the size of Minnehaha County. The country has no natural resources. So, how do you sustain the economy of a nation when all you have is human capital? Singapore has a robust financial sector, vast shipping ports and a very good education system. But, it's always looking for ways to further develop its economy through human capital. Its leaders saw the ability to participate in biomedical research and along the way develop first-world medicine and said "let's build it ourselves and have it for our own people."

Q. What can you tell us about your own research?

A. I actually run two labs – one here in Singapore and one in the U.S. on Duke's campus. The lab at Duke is studying signaling pathways in cancer cell metastasis and neuro-biology or,

MEET DR. PATRICK CASEY

Five Questions

Growing up as one of eight kids on a farm just outside of Mitchell, S.D., Dr. Patrick Casey, class of 1978, was always interested in nature.

By age 13, he knew he was going to be a scientist.

signaling in the brain.

The lab in Singapore is focused on the initiation of cancer and its spread. We're looking at the pathways we discovered 10 years ago and are trying to show how important they are. We're looking at how cancers respond to therapeutic drugs in order to help develop drugs that are more effective.

I've always been interested in getting biologists and chemists together to talk more and, in turn, to talk more to doctors. Ultimately, that means getting basic science and clinicians together to figure out "translational medicine." How can we move discoveries more seamlessly into clinical applications?

Q. You've spent the majority of your time at Duke doing research and teaching. What drew you to teach?

A. I spent my first 15 years at Duke primarily being a professor and have always enjoyed the ability to impact students – it's why we go into academics. I feel it's important to educate and train the next generation of scientists. I've had 17 students who've received their Ph.D. while in my labs. There's an immense feeling of satisfaction at seeing the spark in their eyes and watching where they end up in the world.

Q. What do you remember most about your time at Augustana?

A. Augie gave me a really top notch science education. I had some outstanding profes-

sors – Dr. Lansing Prescott, Dr. Arlen Viste, Dr. Roy Kintner and Dr. Lee Johnson come immediately to mind. I was always excited about how they portrayed things. They taught me a lot – especially about how science could be fun.

The culture of Augustana – particularly in the sciences – was an expectation of excellence and engagement. When you walked it, they expected you to work hard and succeed. The professors wanted to make sure that when students left to go off into whatever profession they chose, that they'd do well. They wanted to make sure we were ready.

I was also fortunate enough to spend a summer at a research lab through a National Science Foundation (NSF) program and during my senior year, I continued to work in Dr. Prescott's lab.

As a student of the sciences, you have to spend time in a laboratory because ultimately, you have to be good at experiencing failure. What that means is this: you can be incredibly good at absorbing information from books but, when you go into a lab, it's different. No matter how smart you are, generally speaking, that first few months in the lab you will fail miserably. You'll bang your head against a wall because there are a hundred different ways to do things in a lab, and you just have to learn them and when best to use any particular approach. And, with time and practice, you will.

