the work (and play) of Russell Tracy, Ph.D.

ALSO FEATURED:

› Doctors Without Borders Records
› The Pulse at 50
Russell Tracy, Ph.D., followed his own special path to build a distinguished research and administrative career, and in the process has helped foster the work of many others.

by Sarah Zobel | photographs by Mario Morgado

Russell Tracy, Ph.D., directs the UVM Laboratory for Clinical Biochemistry Research; lectures in pathology and biochemistry; travels regularly to meet with collaborators on the countless multicenter, multidisciplinary studies in which his lab has a role; and routinely writes and reviews grants and articles for publication. Yet he describes his days as nothing more than play.

“Humans don’t want to work,” Tracy explains. “Play is being able to spend your day doing something you think of as productive, and being very comfortable in how your day goes. If you can do that, then you’re playing, not working, and the output is almost always much better than if you’re cutting against the grain and working all day.”

When speaking with graduate students today, he tells them to focus not so much on the content — whether it’s cancer, cell biology, or heart disease matters less than that each person finds work that lets his or her brain function the way it’s most able to. He says it’s one definition of play.

According to Tracy, however, most people have no idea how their own brains work. So he suggests to the graduates that they ask themselves, “What would ten people who know me say about why I’m smart?” He’s not looking for a list of accomplishments; rather, he wants them to consider what they’ve done as a process to demonstrate intelligence. Using himself as an example, he often shares with others a binder filled with his elaborate doodles, dated and titled with the meetings at which he drew them.

“I keep [the binder],” Tracy says, “because I find it illustrative to say to people, ‘There’s lots of ways to be productive and smart.’” The doodles, he explains, don’t mean he’s not paying attention — on the contrary, he
listens intently, and creating the drawings helps him stay focused on the discussions. But like most people with a mild to moderate attention deficit hyperactivity phenotype, it took a while for Tracy to figure himself out. As an undergraduate at LeMoyne College, a Jesuit school in Syracuse, New York, Tracy was “the smart guy in class who never did well on tests.” He majored in biology, thinking he should go to medical school, and minored in philosophy and theology. But it was in the latter classes that he earned his best grades, while barely passing biology and chemistry. His senior year, he dropped his genetics course to focus on Teilhard de Chardin, a Christian philosopher, much to the dismay of the chair of the biology department, who called to point out what he deemed to be Tracy’s mistake. Tracy didn’t care that he wouldn’t be accepted by a medical school. At that point, he wanted to engage in pure thought.

“I remember taking a week off from classes to work on decision making,” he says. “Who does that?”

After graduating with his degree in biology in 1971, Tracy considered joining the Navy, until he realized that he’d have to undergo three years of schooling before even being allowed on a submarine. Feeling a sense of aimlessness, he took jobs selling Oriental rugs and tending bar. It was only by chance that he saw a poster announcing graduate biochemistry work at Syracuse University. Because his grades wouldn’t have allowed him to matriculate, Tracy decided — “a little bit impulsively” — to buy a few credit hours’ worth of biochemistry courses. It was 1972, and though his ponytailed fellow students were walking around campus in combat boots, Tracy cut

“A lot of modern cardiovascular research... would not have evolved without Russ playing such a big role in stimulating investigators to work together.”

— Lew Kuller, M.D., Dr. P.H.,
Distinguished University Professor of Public Health
Department of Epidemiology
University of Pittsburgh

Russell Tracy, Ph.D., in his Colchester lab with research technician Cheryl Powden.
Tracy interacts with many members of the Laboratory for Clinical Biochemistry Research staff in the course of his day. Here he chats with lab coordinator Elaine Cornell (left) and research technician April Poiry (right).

“Russ has helped revolutionize thinking about coronary disease,” Poiry says, adding that Tracy is a “prince” who sometimes “has trouble saying no to people who need his help.”

Elaine Cornell, LCBR lab coordinator since 1986, agrees. “He has all these brilliant ideas, and I just look at him and say, ‘Really!’ and then try to rein in some of his brilliance, because we can’t possibly do everything he asks,” says Cornell, laughing. She notes that Tracy comes at things — for example, HIV studies — with a different perspective. “Poiry of Tracy, “He’s always worked to the advantage of the group.”

That’s an opinion that’s shared by Tracy’s colleagues around the country.

“I think a lot of modern cardiovascular research, inflammation, HIV, and diabetes, would not have evolved without Russ playing such a big role in stimulating investigators to work together,” says Lew Kuller, M.D., Dr.P.H., distinguished university professor of public health, and chair of epidemiology at the University of Pittsburgh Graduate School of Public Health, who was another early participant in the Cardiovascular Health Study (CHS). Kuller was conducting a separate study and had found that low levels of a common protein, albumin, can lead to an increased risk of heart attack. At one of the first CHS meetings, he mentioned his finding to Tracy, who gave him insights into the workings of acute phase proteins, and suggested they take a look at inflammation and cardiovascular disease using better markers. Tracy then developed a technique to measure C-reactive protein, and applied it to both the CHS and some of Kuller’s other studies, while realizing that it was a predictor of heart attack risk.

“It was in many ways just a passing observation,” says Kuller, “but Russ was so intuitive and so smart that he said, ‘We’ve got to move with this and understand it.’ A lot of people might have blown me off as just an investigator who doesn’t know much about biochemistry.” In fact, he notes, C-reactive protein subsequently became an essential part of cardiovascular research.

From 2001 until 2009, Tracy served as senior associate dean for research and academic affairs for the College of
stewarding a billion dollars worth of blood

At any given time, the Laboratory for Clinical Biochemistry Research (LCBR) has a role in hundreds of projects, serving as gatekeeper for multicenter cohort studies around the world. The grandfather of these is the National Heart, Lung and Blood Institute’s Cardiovascular Health Study, an ongoing study of risk factors for the development of cardiovascular heart disease in people age 65 and older.

The LCBR staff is also currently extensively involved in the U.S. government’s $70 million exome sequencing program, including organizing the study, writing papers, and directing the work. They’re also collaborating on National Institute on Aging’s Health-ABC Study, and the NHLBI’s Multi-Ethnic Study of Atherosclerosis, the program, including organizing the study, writing papers, and directing the work. They’re also collaborating on the National Heart, Lung and Blood Institute’s Memory study. Faculty members also consult on viral repositories with federal government institutes, including the NHLBI, the National Institute of Diabetes and Digestive and Kidney Diseases, and the National Cancer Institute. In 2011, the LCBR was awarded close to $3.0 million from the U.S. government.

Staff is responsible for all aspects of studies, from design through manuscript production. They participate in clinical studies, clinical trials, and epidemiology studies. Information about the lab and its studies, as well as links to faculty publications, can be found at www.med.uvm.edu/lcb.

Мost of the 150 freezers in the Laboratory for Clinical Biochemistry Research maintain their blood samples at a constant -80º C temperature. Within the freezers the sample vials are kept in color-coded boxes (above).

Russ’s ability to be a mentor to me over the span of my career development, and to let me differentiate myself and become my own person as a scientist, without interference, is a really laudable trait,” Cushman says.

“My ability to accomplish things, which he, in turn, tried to instill in his own now-adult son and daughter. That confidence was active when he applied for his first epidemiology grant, in 1986. As he sat working at a typewriter, his boss passed by and asked what he was doing, observing that Tracy didn’t know anything about epidemiology. Tracy shrugged.

“Russ has helped revolutionize thinking about coronary disease.”

—Bruce Psaty, M.D., Ph.D., M.P.H., Professor of Medicine and Epidemiology University of Washington

Mary Cushman, M.D., professor of medicine and pathology, was one of Tracy’s earliest mentees. Though it’s somewhat unusual for an M.D. to have a Ph.D. as a mentor, Cushman said it worked well, and that she now emulates Tracy’s mentoring style with her own mentees.

“Russ’s ability to be a mentor to me over the span of my career development, and to let me differentiate myself and become my own person as a scientist, without interference, is a really laudable trait,” Cushman says. She adds that he promotes an environment in which the philosophy of “what goes around, comes around” is underscored by careful training of colleagues’ students. “Young people, in my experience, are dying to talk to experienced people,” Tracy says. “They want to know how you got there, that their insecurities aren’t unique in the world.” He credits his mentor’s confidence in his ability to accomplish things, which he, in turn, tried to instill in his own now-adult son and daughter. That confidence was active when he applied for his first epidemiology grant, in 1986. As he sat working at a typewriter, his boss passed by and asked what he was doing, observing that Tracy didn’t know anything about epidemiology. Tracy shrugged.

“Russ has helped revolutionize thinking about coronary disease.”

—Bruce Psaty, M.D., Ph.D., M.P.H., Professor of Medicine and Epidemiology University of Washington

Paula Tracy.

And a little play.

Russ’s ability to be a mentor to me over the span of my career development, and to let me differentiate myself and become my own person as a scientist, without interference, is a really laudable trait,” Cushman says. She adds that he promotes an environment in which the philosophy of “what goes around, comes around” is underscored by careful training of colleagues’ students. “Young people, in my experience, are dying to talk to experienced people,” Tracy says. “They want to know how you got there, that their insecurities aren’t unique in the world.” He credits his mentor’s confidence in his ability to accomplish things, which he, in turn, tried to instill in his own now-adult son and daughter. That confidence was active when he applied for his first epidemiology grant, in 1986. As he sat working at a typewriter, his boss passed by and asked what he was doing, observing that Tracy didn’t know anything about epidemiology. Tracy shrugged.

“Russ has helped revolutionize thinking about coronary disease.”

—Bruce Psaty, M.D., Ph.D., M.P.H., Professor of Medicine and Epidemiology University of Washington

Paula Tracy.

And a little play.

Russ’s ability to be a mentor to me over the span of my career development, and to let me differentiate myself and become my own person as a scientist, without interference, is a really laudable trait,” Cushman says. She adds that he promotes an environment in which the philosophy of “what goes around, comes around” is underscored by careful training of colleagues’ students. “Young people, in my experience, are dying to talk to experienced people,” Tracy says. “They want to know how you got there, that their insecurities aren’t unique in the world.” He credits his mentor’s confidence in his ability to accomplish things, which he, in turn, tried to instill in his own now-adult son and daughter. That confidence was active when he applied for his first epidemiology grant, in 1986. As he sat working at a typewriter, his boss passed by and asked what he was doing, observing that Tracy didn’t know anything about epidemiology. Tracy shrugged.

“Russ has helped revolutionize thinking about coronary disease.”

—Bruce Psaty, M.D., Ph.D., M.P.H., Professor of Medicine and Epidemiology University of Washington

Paula Tracy.

And a little play.

Russ’s ability to be a mentor to me over the span of my career development, and to let me differentiate myself and become my own person as a scientist, without interference, is a really laudable trait,” Cushman says. She adds that he promotes an environment in which the philosophy of “what goes around, comes around” is underscored by careful training of colleagues’ students. “Young people, in my experience, are dying to talk to experienced people,” Tracy says. “They want to know how you got there, that their insecurities aren’t unique in the world.” He credits his mentor’s confidence in his ability to accomplish things, which he, in turn, tried to instill in his own now-adult son and daughter. That confidence was active when he applied for his first epidemiology grant, in 1986. As he sat working at a typewriter, his boss passed by and asked what he was doing, observing that Tracy didn’t know anything about epidemiology. Tracy shrugged.

“Russ has helped revolutionize thinking about coronary disease.”

—Bruce Psaty, M.D., Ph.D., M.P.H., Professor of Medicine and Epidemiology University of Washington

Paula Tracy.

And a little play.