

ISSAR SMITH

# Forget the Barcalounger

This scientist may have retired from active research in the lab but “Smitty” shows no signs of ever wanting to give up his work days at the Public Health Research Institute. **BY TY BALDWIN**



Issar Smith

“Well, I don’t like to play golf,” says Issar Smith, PhD, laughing, when a reporter asks why he has kept working long after most of his contemporaries have settled into a Barcalounger, one of those deeply-padded lounging chairs. “But I did kind of retire from research,” adds this 78-year-old researcher. “I quit working in the lab when I was 75.”

For Professor Smith, associate director for programs and development at PHRI, retiring from his lab, now headed by Gloria Rodriguez, PhD, (where he still, nonetheless, sits in on weekly meetings), has only

meant becoming more involved in other areas of service at UMDNJ. David Perlin, PhD, director of PHRI, “asked me to stay on as an administrator,” Smith says. “I work on developing new programs, organizing PHRI symposia on infectious diseases and recruiting and mentoring younger faculty. It’s not new to me, but now I have more time to think about trends in science and to transmit my knowledge to the next generation. I love the institute and the people here. In a sense, they are like your scientific progeny. You want to see them do well.”

Smith, who goes by the nickname

“Smitty,” grew up in New York City, the son of immigrants from what is now Lithuania (his father worked as a printer, his mother as a furrier). “The name ‘Issar,’” he says, “it’s unusual. I think my parents made it up. As a kid, you want to fit in, so I’ve been called ‘Smitty’ since I was a child. Even my students call me that.” He completed his education in New York (BA, City College; MA and PhD, Columbia) and, after fellowships at Sloan-Kettering, New York University and a junior faculty position at Albert Einstein College of Medicine, began his long association with PHRI in 1967.

In his postdoctoral studies, Smith—er, Smitty—had become interested in the molecular biology and genetics of the bacterium *Bacillus subtilis*. “It lives and grows normally,” he says, “but when threatened by its environment *B. subtilis* has the unusual property of forming spores that can survive in the soil for hundreds of years. I was motivated by scientific curiosity and wonderment. It seemed like a great opportunity to study cell differentiation.”

He continued this work at PHRI, but in 1994, when New York City experienced a mini-epidemic of tuberculosis, Smith realized that his work with *B. subtilis* had been good preparation for the study of *Mycobacterium tuberculosis*, the causative agent of this disease. “The same questions that I’d been using for *B. subtilis* also applied to tuberculosis,” he says. “For example, once *M. tuberculosis* infects the human body, how does it change? How does the bacterium deal with the threat from the human host that’s trying to kill it? The point, though, was not just to ask nice questions, it was to help fight the disease. I thought that if I understood how the bacterium responded to the lung’s environment, then that would give me a good idea of how best to attack it.”

All bacteria, he explains, have similar, regulatory processes to turn on the genes that allow them to adapt to new environments, and in the case of pathogens like *M. tuberculosis*, to survive and grow during an infection. “If you can find something that’s very

important for the *tubercle bacillus* to grow and cause disease in its host, then you can use that information to develop a vaccine strain, or a target for a drug.”

In addition to his work on tuberculosis and other administrative duties, Smith also plays a major role in PHRI’s summer program for minority students in Newark high schools. The program, a hands-on laboratory research experience, has been headed for many years by Yak Saturen, a high school teacher. It is funded by external grants and Smitty, of course, helps to write the proposals. About a dozen students each year attend a two-week workshop on lab protocols followed by six weeks in one of PHRI’s labs,

during which time each is paired with a mentor, while working on his or her own research project.

“The students aren’t allowed to handle anything toxic or dangerous,” Smith says. “They don’t work with live pathogenic bacteria or viruses like HIV, but they can work with surrogate (non-pathogenic) bacteria, do cloning, or study antibiotic resistance.” At the end of the summer, the students give oral presentations on their research before PHRI staff, representatives of funding agencies and importantly, the students’ families. While Smith is quick to point out that these PHRI alumni do very well in state and national science competitions, his greatest

satisfaction comes from the pride he sees in their parents’ faces and the motivation these students provide for their younger siblings in the audience.

“I’ve been a socially committed person my whole life,” Smith says, “very active with causes relating to peace and social and economic justice. Good scientists need to be completely involved with friends and family, with causes they believe in, and with their community.” For example, he adds, “homelessness and HIV were largely responsible for New York’s mini-epidemic of TB. You can’t just be a bench scientist. You have to treat the social causes as well as the disease, itself.” ●

## Future Docs

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Roberts is well suited to lead. “The reason LeAnne was elected was because she understood the problems related to the state of health care. She is more than just an advocate, she’s knowledgeable. There are very few people in the room who have a better understanding of what is happening than LeAnne,” says Carmel. “She translates that knowledge as her message in a way that is not overbearing, her manner is very pleasing, and very informative. It is collegial. She is not trying to be the majordomo. ‘You and I can understand this, we can do this’ is her attitude.”

This future OB-GYN juggles course work, her AMA responsibilities, and a part-time gig in retail along with two of her favorite pastimes: baking and reading Civil War history books. She also likes football and rugby. Roberts recalls visiting NJMS when she was a student at Rutgers. “The first time I stepped on this campus I felt like this is where I belonged. I just felt that this is my new home. Before I went into my interview and I was walking up the escalators I said, I have to be here. I can’t describe it and I couldn’t reproduce it anywhere else that I went to interview. Five minutes before

I walked into my interview I said, I have to be here.”

Since that day, she has thrived on and off campus. Roberts was an Arnold P. Gold Humanism Honor Society inductee in 2011 and a Pozen Community Scholar in 2010. She’s accumulated a list of memberships, affiliations and achievements and will graduate with the Class of 2013 earning both her MD and her Master’s. When Roberts realized medical students in New Jersey did not have formal representation in the state’s medical society, she worked diligently with colleagues to form an official Medical Student Section at the Medical Society of New Jersey (MSNJ). She articulated student needs while serving as a member of the Board of Trustees at MSNJ for two years.

“Our society is actively involved and supportive of our efforts to maintain the viability and future of the profession in our state,” says Roberts, whose parents, Leander and Shirley Roberts, are her heroes. Her father retired as a lieutenant colonel after 27 years in the Air Force and is now in education. Her mother is a career educator.

Roberts’ enthusiasm and passion for progress are as infectious as her smile. Just ask Avantika Mishra, a third-year student at NJMS and the current chair of the student section of MSNJ, the oldest professional medical society in America. Mishra thinks

Roberts’ best quality is her ability to intrigue people and get them excited about issues they may not regularly ponder. “It’s really hard not to pay attention to her. She’s so passionate and sincere about what she believes in. It makes you want to be as motivated and as passionate about the issues.”

An advocate at heart, Roberts is motivated by empowering others. As a third-year student she completed a clinical rotation in the OB–GYN unit of University Hospital (UH). At first she thought her growing interest in health-related policy “had pulled me so far out of wanting to do clinical medicine, but I woke up every day excited to go into UH for my rotation. I had a blast. It was such a great learning experience. I had some of the best teachers that you could possibly ask for while I was on rotation. It made me remember that this is why I’m here. So, I do know that I want to practice, but I don’t know if you’re going to get 30 or 40 years out of me.”

You might wonder how she manages so many responsibilities. Roberts, age 26, says, “If you ask most med students, prior to coming to medical school if they thought that they would be able to function the way they do now, they would say, ‘no way.’ But when you’re thrown into it, you just figure it out and make it happen.” ●