Quantum Physician

By Erik Baard

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If this were a James Bond film, we'd be at the bottom of the ocean or in the belly of a dormant volcano. Instead, we're straddling a new highway bypass in a suburb near Princeton, New Jersey.

Scientists weave between vast white clean rooms in the 53,000 square foot former Lockheed Martin space satellite manufacturing plant that now serves as the headquarters of BlackLight Power, perhaps the most unusual technology startup on Earth. BlackLight, which financial giant Morgan Stanley Dean Witter is itching to take to the stock market inside of a year, generates power, plasma and a vast class of new compositions of matter, according to its literature. Randell Mills, MD, the founder of the company, wants BlackLight to become the world's first trillion-dollar company. That might be tough, considering that four Nobel laureates in physics have, off the cuff, called Mills delusional or a fraud.

Mills had no business going to medical school in the first place.

Mills is pensively gazing out the window past a dark and silent 1989 Apple Macintosh, the museum piece on which he pounded out the rudiments of his Grand Unified Theory of Classical Quantum Mechanics. Mills argues that quantum theory has been wrong for 80 years in claiming that the behavior of subatomic particles can't be predicted or controlled. He claims that the pollution-free energy and novel materials come from catalyzing the electron orbit of hydrogen closer into the nucleus than thought possible, forming what he calls a hydrino.

His inspiration out the window isn't stars, or some distant horizon. I think it's going to be corn, he says, pointing at the rows of sprigs about 50 yards off. Corn? You see, before Mills was seen as a Harvard Medical School graduate with no business mucking around in physics, he was seen as a farm

boy with no business tramping around Harvard Medical School.

From corn to cadavers

Young Randy bring on the violins is the child of two orphans. He graduated from Chester County, Pennsylvania's Octarara Area High School in 1975 only because teachers chose to overlook the bright student's absences: he and his brother worked their own farm, as well as their father's. The idea of attending college was vague at best. His father struggles with the farm today; his brother is now in business digging water wells for local farms and homes.

The break in Randy's lifeline came two years after high school when, having been up all night finishing a harvest for the season, the bleary-eyed and frenzied 19-year-old bolted out of the trailer that served as the farm office, through a glass door. He was rushed to Community Memorial Hospital with a heavily bleeding left hand and forearm. Hand surgeon Dr. C. Thomas McChesney performed a five-hour operation.

Dr. McChesney had a big impact on me, Mills recalls. That was the first time I felt technology intervening in my life in a big way. It encouraged me to learn science and make a contribution. Mills was soon back, poking around the hospital and asking the surgeon questions that I couldn't answer, and I think I know my way around the hand pretty well. He was brilliant and a joy to talk to, says McChesney, who turned 78 this year.

Mills enrolled at nearby Franklin and Marshall College using his farm profits and split his time between academics and tilling until he graduated, first in his class, in 1982. He went straight into Harvard Medical School after making it clear to the admissions officers that he'd never practice medicine: he wanted to start a technology business.

I had my jaw hanging for the first few weeks. I looked around myself and was amazed at how talented the other medical students were. Coming

from such a small school like F&M, I was kind of intimidated. But I thought, 'You guys are awesome! Why are you going to waste your time practicing medicine? Why aren't you out solving society's problems?' In medicine, you can help only one patient with a tumor in his neck at a time, Mills says.

But medical school was exactly where Mills wanted to be.

Medicine is probably the broadest education you can get, he says. You need biotechnology, chemistry, computer science, physics, mathematics, psychology. . . I think it's a mistake to divide the world too much. There's always a blur. I mean, where does an MRI stop being a medical instrument and start being Larmor frequency physics?

'Virtual particles in your liver'

And medicine also influences the way I solve problems, and seek and process knowledge, Mills adds. Mocking theoretical physicists enamored with the latest quantum trends, Mills imagines You go into your doctor's office and he tells you that you're feeling ill because you've got virtual particles in your liver. He tells you that you can't detect them, but they must be there because his math says they must be. Wouldn't you run for the door to get a second opinion?

I've never met anyone like that before.

Sam Patz, assistant professor of radiology at Harvard, was going for his PhD in physics when he met Mills, working on his MD. Today he's intrigued by Mills' concept for real-time, three-dimensional body imaging. He was surprised to see a medical student spending so much time doing math and physics calculations. Now I know he's really a mathematician and physicist at heart. I've never met anyone like that before.

Somehow Mills finished his medical school coursework a year early and studied electrical engineering and biotechnology at Harvard and down the street at the Massachusetts Institute of Technology while he waited for his degree to come

through in 1986. He then aced his medical boards, and soon surprised peers with his first blending of physics and medicine. He proposed a new cancer therapy based on Mossbauer isotopes in a paper published in *Nature* in December 1988 [1]. After a flurry of small efforts to pursue development and marketing of the therapy, he put it on the back burner to dedicate himself to independently developing other ideas in medicine, especially his take on quantum mechanics.

Throwing it all away

That meant living for five years on less than $5,000 per year, with no health insurance, with a Harvard degree hanging on the wall of his one-bedroom apartment back in Pennsylvania.

Classmates thought he was throwing away privilege.

Some of his classmates were appalled. A lot of people got very emotional about it. They thought I was throwing away a privilege. But there are different species of people. I couldn't be any other way, Mills explains.

Today, Dr. Greg Gagnon, assistant professor of radiation oncology at Georgetown University Medical Center, remains enthusiastic about Mills' cancer approach, which commands a more skeptical respect from medical physicist Dr. John Humm, a staff member at Memorial Sloan-Kettering Cancer Center whose critique of Mills' paper appeared alongside it in *Nature* [2]. Researchers at Johns Hopkins, Southern Research Institute, the National Institutes of Health, and various companies are excited about Mills' projects. Mills' plans range from drug delivery molecules that operate by intramolecular energy transfers to an artificial intelligence architecture based on waveform mathematics and the oscillations of activation energy through neuronal ensembles.

Western civilization is standing on how many BTUs we use.

But Patz, the Harvard radiologist, is right, Mills says. He's fixated on the prizes he spies behind the quantum curtain.

This reaction with hydrogen, forming the hydrino, is probably the work that's most important to me.

When it comes to improving the quality of life and adding to longevity, breakthroughs in energy have done more for humanity than medicine, Mills says. Without better and better energy, we'd still be in caves. It's no exaggeration to say that western civilization is standing on how many BTUs we use.

Pretty impressive thoughts can come out of those corn fields.

Erik Baard, a freelance journalist working in New York, is working on a book about the work of Randell Mills.

References

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