

Stamler gains ‘genius’ tag as Harrington Discovery Institute director



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Dr. Jonathan Stamler, director of The Harrington Discovery Institute at University Hospitals in Cleveland, has earned a reputation as a “genius.”

“Some people are geniuses,” his father-in-law Norman Wain said. “Geniuses have a capacity to work.”

“He has this sort of infectious personality to want to drive scientists to not just make discoveries, which is great, but you don’t want your discoveries to sit on a shelf or in a notebook,” said Dr. Dan Simon, president of University Hospitals’ Case Medical Center in Cleveland. “You want discoveries to lead to commercialization, because these are discoveries that will help people.”

The Harrington Discovery Institute helps bridge the gap between doctors’ discoveries and getting advancements out on the market. Stamler launched the institute, which has become a leader in that field, while continuing to run his lab and teaching at Case Western Reserve University School of Medicine.

Where does he find the time?

Wain said that Stamler generally leaves home at 6:30 a.m. and returns at 7 p.m. “This is the kind of guy he is,” Wain said.

“He is the hardest-working, most professional person I’ve ever met,” Wain said. “His capacity for work is incredible.”

Naturally, Simon wanted such a hard worker to come to Cleveland from where he had been working at Duke University in Durham, N.C.. He knew Stamler well from their days as residents and fellows at Harvard Medical School in Boston.

“Dan was a huge force in trying to get me here and a very close friendship made that much easier, there’s no question about it,” Stamler said.

Still, Simon knows that it wasn’t him alone that convinced Stamler to come to Cleveland. He credited the presence of the family of Stamler’s wife, Cathy, in Cleveland, as well as Cleveland’s strong Jewish community.

“We never would’ve been successful in recruiting him to Cleveland without the intangibles Cleveland offers,” Simon said. “His connection to the city is critical for his success, and I think that when they went to Chapel Hill in North Carolina, they really missed a connected and vibrant Jewish community.”

The other key factor was the chance to start something like the Harrington Discovery Institute, even if neither the benefactor nor scope were known yet.

The problem, on the other hand, that sparked the center has been present in medicine for a long time. Doctors with ideas for medical advancements had a hard time finding funding and moving forward. Drug companies

weren't likely to adopt projects at their earliest stages. As a result, many worthwhile projects were abandoned in the early stages.

The 'valley of death.'

"He was very, very familiar with doctors who were frustrated because they didn't have enough money to complete their studies," Wain said.

"The real challenge is to take a good idea and create a quality product that can be commercialized, and we provide that mechanism as well as we provide the handoff to the commercial entity," Stamler said.

The program's success lay in creating a nonprofit innovation support center that would provide assistance and development that the for-profit world previously shied away from. Better yet, the nonprofit pharmaceutical company was national in scope, with 35 different programs, thus allowing top ideas to flow in and drawing top pharmaceutical experts to work for the company.

"In effect, the pharmaceutical companies are able to take these technologies much earlier than they otherwise would and they're able to take them because they're in a partnership with BioMotiv (the for-profit accelerator) and believe in the quality of the product," Stamler said.

Already, the innovation center has churned out three programs that were bought by or licensed to pharmaceutical companies, with many more projects in the works. Stamler said the center processes 35 programs every two years. Beyond sheer numbers, Simon said that the Harrington Discovery Institute has started to chip away at the notion that the East and West coasts lead the way in biotechnology with the Midwest lagging far behind.

None of this surprises Stamler so much as the support he received from University Hospitals and the Harrington family in launching the institute.

"I look back and say that if there's a surprise, it's how fortunate we were to have leadership able to see the importance of doing something like this," Stamler said.

While Stamler has spent much time helping others with their innovations, he has also made a few critical ones of his own, relating to the role of nitric oxide in the blood.

"In the pantheon of nitric oxide, he's in the top three," Simon said. "For 100 years, scientists thought hemoglobin carried only two gases ... Stamler discovered that hemoglobin carries a third gas called nitric oxide."

This was a critical discovery given nitric oxide's role in regulating blood flow and how it delivers oxygen.

"Without the third gas in the respiratory cycle, we couldn't live. Our blood vessels wouldn't open and oxygen wouldn't get to our tissues," Stamler said. "When that mechanism goes awry, one gets disease. We study how does that mechanism go awry."

For example, the number one medical procedure in the country, according to Simon, is a blood transfusion. The problem with blood transfusions is that they are associated with an increased risk of stroke and heart attack. If blood sits for more than a day, it begins to lose nitric oxide. Stamler is working on ways to restore the nitric oxide, thus ensuring that oxygen gets to the tissues – essentially allowing the blood transfusion to accomplish its original goal.

'A very big deal.'

Beyond transfusions, Simon said Stamler has been working with colleagues to develop sensors that would detect a lack of nitric oxide in the blood, as well as technology that would help refresh the nitric oxide supply.

All of this doesn't leave Stamler much time for anything else. Still, he said that he sometimes accompanies Wain to Park Synagogue in Cleveland Heights and Pepper Pike. He also likes to work out, read and root for the Cleveland Cavaliers. Most importantly, he likes to spend time with his wife, Cathy.

"I have a wife who balances me out," Stamler said. "She makes up for many deficiencies."

And whatever his deficiencies may be, his positive attributes seem to more than make up for them.

"I can't believe this guy," Wain said. "He's fabulous. He's the most amazing man I've ever met in terms of his industry and his dedication to his idea and what he's doing. He came up with a great idea and then he worked like crazy to bring it to reality."

"Jonathan is a very creative and innovative scientist," Simon said. "His strength is in thinking out of the box, questioning established paradigms and always thinking about important fundamental discoveries, not being incremental. He has sort of a 'genius' quality about him."

Publisher's note: Norman Wain is a member of the Cleveland Jewish Publication Company Board of Directors.