RESEARCHER PROFILE:

DR. SHEETAL SHARMA

Unlocking the mysteries of the gut.

It's all in the genes, Dr. Sheetal Sharma might say – both in the research that he does and in his own.

Dr. Sharma, a gastroenterologist at Mercy Hospital in Washington, MO, comes from a medical family. His father was an obstetrician, and his mother was a pediatrician. Following his undergraduate work at Cornell University, he went to Guy's Hospital at King's College in London for medical school, where he did clinical research in preeclampsia and was ready to follow his father into obstetrics, "but my father talked me out of it."

A colorectal surgeon in medical school suggested that he might want to look at the gut. Dr. Sharma did and was hooked.

"I like this field because it's a nice mix of office work and procedures," he adds. "I like the research, but pure academic work can be limiting. I like to talk with patients, and I like performing procedures, which I couldn't do if I was always in a lab."

There's another attraction as well.

"The unknown is appealing," Dr. Sharma says. "There's so much we don't know about the gut and how it affects the rest of our general health. What we know is truly just the tip of the iceberg."

It's a quickly evolving field. "We used to tell patients to 'rest the gut,' but that's the opposite of what we tell them now. The gut is designed to be active and when resting, it could have adverse effects on the gut fauna: the bacteria that digests our food." Then there's the potential connection between digestion and mental health. "We're beginning to learn that your gut health affects your cognitive function and other aspects of your mental health. We're beginning to see connections between your gut microbiome and psychiatric diseases." GI research has vast implications for many other fields of medicine.

Dr. Sharma's current research, however, addresses a more prosaic concern: colorectal cancer, which, detected early, can be easily treated.

"Colonoscopy is the gold standard for colon and colorectal cancer," Dr. Sharma states, "because not only can you detect it, but you can remove cancerous and precancerous polyps during the procedure. Where the difficulty comes in is convincing people to get it done."

This isn't always as easy as one might think.

"It's not a fun procedure," he admits. "It's inconvenient and it's unpleasant. But it's absolutely necessary. Way too many people let it go for too long, and they miss their chance to catch it early. People need convincing."

That convincing, he says, can come from genetic testing.

Dr. Sharma recently concluded a clinical research study with Freenome, a biotech company, that analyzes blood for certain genetic biomarkers that indicate a higher risk of colorectal cancer.

"You can make a much more powerful argument armed with that data," he says. "If I can talk to a patient and say, look, your genes tell us that you're at very high risk, that can go a long way to helping patients overcome their reluctance."

The implications are enormous.

"Colon cancer is the number three most common cancer in the United States,"

he says. "It's the second most fatal cancer for men and the most fatal cancer for women. And over half of all colon cancer deaths are preventable."

Dr. Sharma is excited about the potential application of his work in the broader population.

"I'd love to see blood testing become commonplace among populations that ordinarily wouldn't get it done," he says. "We're working at getting this test included in the battery of all the other standard labs that patients get, an optional but highly recommended test. Think of the lives we'd save."