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ARCS  
SCHOLAR  
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# Driven to Discover

Buoyed by a community of supporters and world-class scientists, Siva Kasinathan is on a mission to uncover cancer's genetic hideouts

## WHAT MAKES SCIENTIFIC BREAKTHROUGHS POSSIBLE?

It's not the white lab coat. Not the data-crunching computers. It's not even the test tubes. For Siva Kasinathan, a fifth-year graduate researcher in UW Medicine's Medical Scientist Training Program, progress is only possible within a community that includes both scientists and a strong network of supporters.

Siva's community grew exponentially when he became a scholar of the Achievement Rewards for College Scientists (ARCS) Foundation two years ago. A 36-year partner of the UW, the ARCS Foundation Seattle Chapter annually provides some \$600,000 in direct support to UW

graduate scientists in fields ranging from oceanography to engineering. In recognition of his outstanding academic achievements, Siva received an ARCS Foundation scholar award created by Bob, '65, '68, and Micki Flowers, '73.

Bob and Micki are deeply invested in the success of their "Flowers Fellows." Not content staying behind the scenes, they actively support Siva and other ARCS scholars, hosting them for dinners and offering encouragement. Upon meeting the couple, Siva was surprised to learn that they had already read about him and his work. "You can tell with Bob and Micki that they are interested and that they care about what you're doing," he says.

Siva spends his days in a laboratory at the Fred Hutchinson Cancer Research Center, running experiments at the bench and analyzing data on the computer. His mission: Hunt down the home addresses of a special class of proteins, called transcription factors, in the human genome. Once Siva and his fellow researchers come calling on those proteins—some of the "master regulators" of cancer—they'll be one step closer to derailing the disease.

But with tens of thousands of possible addresses to investigate and analyze, Siva's task is a lot more complicated than building a better search engine. That's where things get interesting. "The most fun thing is that a lot of what we work on is stuff that isn't known," says Siva. "There's a lot of excitement when you don't really know what the answer's going to be."

He was drawn to the UW both for its top-flight medical and molecular biology training programs, and the scope of its intellectual offerings. "You could really do anything you want to here," he says. "There are people who are at the top of their respective fields working on pretty much everything."

When Siva hits a snag in his research, he can count on plenty of backup, both from world-class colleagues at the UW and from Bob and Micki.

**"There's a lot of excitement when you don't know what the answer's going to be."**

"When students hit roadblocks," says Micki, "it's important to see them through the process because it advances the science. It's exciting to be part of their journey."

Siva takes the long view, too. Scientists have been studying transcription factors for almost 50 years, but plenty of unknowns remain. "Rewards don't come often, but when they do there's a really big payoff," he says. "It's great to think that something I do might contribute to our understanding of human health and a better way to fight disease."



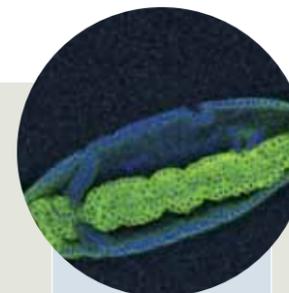
Jodi Green

## A Passion Unleashed

I have a crush on the UW. ■ From synthetic protein design to musical theater to the search for extraterrestrial life, this University is an intellectual tornado. We are scientists and artists, dreamers and doers. We are boundless in our enthusiasm, united in our quest to make the world a better place. ■ While I'm not an alumna myself, my ties run deep. My husband holds a B.S. and an M.D. from the UW. My father-in-law taught botany here for 35 years. My mother-in-law has a degree in art history that she earned at age 55. ■ Since volunteering with the UW Foundation Board, I've developed an unquenchable thirst for the Husky mission. I've explored countless departments, classrooms and laboratories. I've witnessed the immeasurable drive, intelligence and heartfelt devotion of students and faculty. Inspired and humbled, I've become an adopted Husky and student of this great institution. ■ When I become Chair of the Foundation Board this month, I will cement my relationship with the UW. My passion for the University is a romance, a dedication—and an intense personal priority. ■ I look forward to serving you.

—Jodi Green, Chair, UW Foundation Board

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Despite its tiny size, a fruit fly embryo contains the potential to make a mighty contribution to the cure for cancer.

SIVA KASINATHAN, PAUL TALBERT

## Science on the Fly

**SIVA KASINATHAN** is working to pinpoint the exact locations where transcription factors—a specific class of proteins—bind to the human genome. Considered some of the key controllers of cancer, uncovering their home turf is a crucial step toward halting the disease. ■ But before his molecular detective work can begin, Siva needs a pure sample of cells to study. This is easier said than done, because life is, well, messy. Take any chunk of muscle tissue, for example, and it will also contain blood

and nerve cells. ■ Enter the fruit fly embryo. Its genome is much smaller—and therefore easier to study—than the human one, but cell development proceeds along similar lines. In both flies and people, the same part of the embryo (the mesoderm) will eventually become muscle cells. ■ Having more in common with humans than first meets the eye, fruit fly cells provide rich material for scientific investigations, and an early step toward Siva's ultimate goal: stopping cancer in its tracks.