

National kudos for teens' cancer work

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EDMONTON - Mustafa and Hazal Babadagli hope to find a way to stop the spread of cancer.

First they have to graduate from high school.

The 17-year-old twins, International Baccalaureate students at Old Scona Academic High School in Edmonton, received national recognition Wednesday for their work in infiltrating cancer cells, placing fourth among 14 regional entries in the 2008 Sanofi-Aventis BioTalent Challenge.

Now in its 15th year, the challenge is a high-level competition that introduces students to the real world of biotechnology by carrying out research projects of their own design.

Brother and sister were in Ottawa when the winners were announced Wednesday at National Research Council headquarters.

Today they'll be back at school, writing exams.

"It's been a bit exhausting, but it's been one of the best experiences of my life," Mustafa said from Ottawa, hours before boarding a plane.

"I've been able to meet a lot of important people, and I've met students who've accomplished some of the kinds of things my sister and I have been able to do."

The twins have developed a way to infiltrate cancer cells in hopes of switching off a gene that makes them invasive.

They created an innovative technique to silence a gene that produces MMP enzymes, believed to be responsible for cancer migration.

Cancer cells produce a number of different MMP enzymes, and it's not known which play a key role in the cell migration.

Ultimately, Mustafa and Hazal discovered they had targeted the wrong enzyme



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Twins Mustafa Babadagli, left, and Hazal, 17 of Edmonton in Ottawa.

and could not prevent cancer cells from spreading. They plan to keep on trying, though, until they succeed.

Their accomplishments at such a young age are astounding, even by the standards of scientists such as Hasan Uludag, who mentors the teenagers.

"They have observed a promising way to deliver a powerful class of drugs for cancer therapy," said Uludag, a professor of chemical and materials engineering at the University of Alberta. "They have also laid the groundwork for pursuing a new way to treat cancers, one that is based on preventing cancer spread."

Not surprisingly, both have been accepted into the U of A, he in engineering, she in science. They also have their eye on medical school.

"They have so many dreams," says Sule Babadagli, the twins' mother.

She said her children's curiosity about medicine has been fostered not just by their parents -- her husband, Tayfun, is an engineering professor at the U of A -- but by their extended family in Turkey. "My family has so many medical doctors - my brother, my sister, and their partners, too."

The Babadaglis vacation in Turkey every summer for two months, where Mustafa and Hazal spend their days working in hospitals, or at their uncle's in-vitro fertilization clinic.

"We learn a lot, sure, but we wouldn't be doing it if it wasn't fun," said Mustafa.

All of this means a lot of togetherness for brother and sister, who despite the occasional squabble remain close.

"I guess we're just used to hanging out together; we've been doing it since we were in our mom's womb," Hazal says.

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