

Edmonton

Edmonton twins use biotechnology to try and prevent the spread of cancer cells

A Grade 12 brother and sister duo at Old Scona Academic High School, Edmonton, have developed a way to infiltrate cancer cells in hopes of switching off a gene that makes cancer cells invasive.

Mustafa and Hazal Babadagli, 17, created an innovative technique to silence a gene that produces MMP enzymes, believed to be responsible for cancer cell migration.

Cancer cells produce a number of different MMP enzymes and it is not known which are play a key role in the cell migration. Ultimately they discovered they had targeted the wrong MMP enzyme and could not prevent the cancer cells from spreading. But they'll be trying again to target the correct MMP enzyme.

Mentor Hasan Uludag of the University of Alberta was highly impressed by their efforts. "The students have observed a promising way to deliver a powerful class of drugs for cancer therapy. They have also laid the groundwork for pursuing a new way to treat cancers, one that is based on preventing cancer spread."

The brother and sister team are satisfied that they've made a contribution to medical science in a very new field of medical biotechnology involving RNAi . "We learned a great deal while being involved in this project."

"This is our 2nd year in the competition and it has definitely affected the path that we will take in the future."