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SFU researcher Ehsan Daneshi, a computational neuroscience PhD candidate, has developed the first portable device that will one day enable police officers in Canada and around the world to perform standardized roadside sobriety tests for both drugs and alcohol.

**MEDIA RELEASE**

## SFU PhD student develops first DUI detecting device for both drugs and alcohol

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**Photos:** <http://at.sfu.ca/EwXrWv>

**Video:** [https://youtu.be/0P\\_FqsFPQK4](https://youtu.be/0P_FqsFPQK4)

**Interviews for download:** <http://at.sfu.ca/XLDDrN>

**B-Roll for download:** <http://at.sfu.ca/UHOldI>

Every eight minutes someone is injured in a driving under the influence (DUI) related incident in Canada, and nearly 1,500 people are killed annually. These incidents greatly impact the Canadian economy costing taxpayers approximately \$20 billion a year.

Simon Fraser University researcher Ehsan Daneshi, a computational neuroscience PhD candidate, has developed the first portable device that will one day enable police officers in Canada and around the world to perform standardized roadside sobriety tests for both drugs and alcohol.

"No other device on the market can test for both drugs and alcohol," says Daneshi, co-founder and vice-president of Ophthalight—a company that develops mobile eye examination tools. "This includes marijuana, LSD, cocaine and other drugs. Less than one percent of drug or alcohol impaired drivers are being caught every year. This is a real breakthrough for DUI detection technology that will help save lives and keep our roads safe."

Currently in Canada, police officers are testing those who are suspected of driving impaired by performing eight routine eye tests with a flashlight. The results from these exams can be subjective and may vary based on the officers training, experience and interpretation. If the driver fails, they are then taken to the police station for further tests.

"The difference is that our device performs the tests objectively and quantifies the test results accurately. Our device has the ability to produce admissible court evidence by creating results containing charts and photos of the driver's eyes. The user-friendly software interface helps eliminate human error and can be used on any mobile device."

The DUI detection technology is an iteration of O-Glass, an award winning technology from Ophthalight, which allows physicians to perform inexpensive, accurate and automated eye exams to help make cost effective eye care ubiquitous

around the world.

Without a formal education in business, Daneshi, a trained engineer, joined SFU's Graduate Certificate in Science and Technology Commercialization program (GCSTC) in 2015. The program provided funding and mentorship to help him develop O-Glass, and to find other commercial uses for the technology to help social causes like the DUI detection device.

"The scientists and engineers who come into our program are highly motivated. Their challenge has been to identify, validate and prioritize market opportunities," says Elicia Maine, academic director of SFU's GCSTC. "It's my hope that Ehsan's device gets adopted by police enforcement officers across North America."

Ehsan has received further support through SFU's [Venture Connection](#), a business incubator, and has garnered several awards for Ophthalight.

#### **FAST FACTS:**

- First DUI detection device that can test for both drugs and alcohol. This includes cannabis, LSD, cocaine, and other drugs.
- Every eight minutes someone is injured in a DUI-related incident in Canada.
- DUI related incidents kill between 1250 and 1500 people a year in Canada.
- DUI incidents in Canada cost tax payers approximately \$20 billion a year.
- Less than one percent of drug or alcohol impaired drivers are caught.

#### **LEARN MORE:**

- [SFU's Graduate Certificate in Science Technology Commercialization program](#)
- [SFU's Venture Connection program](#)
- [Ophthalight](#)

#### **ABOUT SIMON FRASER UNIVERSITY:**

As Canada's engaged university, SFU is defined by its dynamic integration of innovative education, cutting-edge research and far-reaching community engagement. SFU was founded 50 years ago with a mission to be a different kind of university—to bring an interdisciplinary approach to learning, embrace bold initiatives, and engage with communities near and far. Today, SFU is Canada's leading comprehensive research university and is ranked one of the top universities in the world. With campuses in British Columbia's three largest cities – Vancouver, Burnaby and Surrey – SFU has eight faculties, delivers almost 150 programs to over 35,000 students, and boasts more than 135,000 alumni in 130 countries around the world.

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