

SFU Press Releases Collection

These archival copies have been generated from web press releases maintained and originally written by SFU Communications and Marketing. Where possible, an effort has been made to preserve the public comments left on the website as well as any included photos or other images. All textual content should be faithful to the original press releases; contact numbers have been removed but they have not otherwise been altered in any way. However, this collection of documents spans multiple generations of web authoring software and not all formatting will be exact.

MEDIA RELEASE

SFU engineer develops retina scanner that will diagnose eye diseases before vision loss occurs

December 19, 2017

[Tweet](#) [Facebook](#) [Pinterest](#) [Email](#) [Print](#)

Contact:

Marinko Sarunic, engineering science, 778.782.7654, msarunic@sfu.ca

Suraaj Aulakh, applied science, 778.782.7029, fascomms@sfu.ca

Marianne Meadahl, university communications, 778.782.9017, mhamilto@sfu.ca

Justin Wong, university communications, jrwong@sfu.ca

Photos: <http://i.sfu.ca/hROrNe>

B-roll: <http://at.sfu.ca/SKHQve>

Interviews: <http://at.sfu.ca/bsjFBC>

SFU engineering science professor Marinko Sarunic has developed a high resolution retinal imaging scanner that will one day revolutionize eye care, helping ophthalmologists diagnose eye diseases before vision loss occurs.

The retina is the light-sensitive tissue at the back of the eye. Its 100 million photoreceptors convert light into the images that our brain ‘sees.’

Today, there are approximately one million Canadians with vision loss caused by major eye diseases such as wet age-related macular degeneration (Wet AMD), diabetic retinopathy, glaucoma and others. The prevalence of vision loss in Canada is expected to double in the next 25 years. An estimated 75 per cent of vision loss can be treated or prevented through early detection.

Sarunic’s high-resolution scanner is on the cutting edge of vision science because it can produce high-resolution, 3-D cross-sectional images of the retina—including individual photoreceptors, and fine capillaries, or blood vessels. And unlike other high-resolution retinal scanners, which are the size of a billiard table, Sarunic’s is the size of a shoebox. It’s perfect for everyday use in medical clinics and hospitals.

“It’s a breakthrough in clinical diagnostics,” says Sarunic. “With the high-resolution scanner, ophthalmologists and optometrists can detect damage and changes to small numbers of individual photoreceptors, giving them a diagnosis before the patient loses vision, and the potential to take preventative measures.”

Currently, physicians use low-resolution scanners that can only assess and diagnose the cause of dead retina cells after a patient’s vision is impacted. Last year, ophthalmologists at Vancouver General Hospital’s (VGH) Eye Care Centre spent eight months testing Sarunic’s high-resolution scanner.

Dr. Eduardo Navajas, a vitreoretinal specialist, says the scanner eliminates the need for, and the complications related to, dye injections that are currently used to diagnose and monitor eye diseases like diabetic retinopathy and Wet AMD.

“Early detection of abnormal blood vessels caused by Wet AMD and diabetes is essential to saving a patient’s vision,” says Navajas. “Dr. Sarunic’s new imaging technology is benefiting patients, allowing us to diagnose and treat Wet AMD and diabetic eye disease before patients develop bleeding and permanent damage to their retina.”

FAST FACTS:

- Today, there are approximately one million Canadians with vision loss caused by major eye diseases such as wet age-related macular degeneration (Wet AMD), diabetic retinopathy, glaucoma and others.
- The prevalence of vision loss in Canada is expected to double in the next 25 years
- The scanner eliminates the need for, and the complications related to, dye injections that are currently used to diagnose and monitor eye diseases like diabetic retinopathy and Wet AMD
- 75 per cent of vision loss can be treated or prevented through early detection.
- Wet AMD accounts for 90 per cent of the severe vision loss caused by macular degeneration
- Diabetic retinopathy occurs in people who have diabetes. It causes progressive damage to the retina. Diabetic retinopathy is a serious, sight-threatening complication of diabetes.
- Glaucoma is a complicated disease in which damage to the optic nerve leads to progressive, irreversible vision loss. Glaucoma is the second leading cause of blindness.

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 more than 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 145,000 alumni in 130 countries around the world.

-30-

Simon Fraser University: Engaging Students. Engaging Research. Engaging Communities.

- For the Media
- For Faculty and Staff

- [About SFU](#)
- [SFU News](#)

[Admission](#)

[Programs](#)

[Learning](#)

[Research](#)

[Community](#)

[About](#)

[Maps + directions](#)

[Library](#)

[Academic Calendar](#)

[Road Report](#)

[Give to SFU](#)

[Emergency Information](#)

CONNECT WITH US

[Facebook](#)

[Instagram](#)

[Twitter](#)

[YouTube](#)

CONTACT US

Simon Fraser University

8888 University Drive

Burnaby, B.C.

Canada V5A 1S6

[Terms and conditions](#)

© Simon Fraser University