

Joanna Frketch Thu Nov 22 2012 06:59:45 0 Comments 0 Recommend

Hamilton docs race to diagnose TB faster

Hamilton engineers have bold ideas to diagnose **tuberculosis** (<http://www.hc-sc.gc.ca/hl-vs/iyh-vsv/diseases-maladies/tubercu-eng.php>) in hours instead of weeks.

Two assistant professors at McMaster University are each getting \$100,000 Thursday from the federal government to tackle the same global health problem in vastly different ways.

It's significant because the lag time in diagnosis allows the disease to spread.

"With tuberculosis, the weak link in the chain is diagnosis," said Dr. Peter Singer, CEO of **Grand Challenges Canada**, (<http://www.grandchallenges.ca/>) which uses federal dollars to fund ideas with the potential to impact global health. "These projects are both taking the diagnosis of tuberculosis ... closer to the care of the patient in the developing world, and faster."

Leyla Soleymani (http://engphys.mcmaster.ca/faculty_staff/faculty/soleymani/index.htm) is building a hand-held, solar rechargeable device for fast assessment of TB at the bedside.

Ravi Selvaganapathy (http://mech.mcmaster.ca/faculty/about_selvaganapathy.html) hopes to significantly speed up traditional and trusted diagnostic methods of culture based testing, which is studying bacteria by growing them.

"I wasn't expecting it would be funded because it goes counter to where the entire field of tuberculosis diagnosis is going," he said. "It's to their credit a radical idea like this is selected and funded."

Selvaganapathy got the idea while working on sabbatical in India and noticing that doctors there don't trust many of the new technologies for diagnosing tuberculosis so they don't use them.

He decided to look for a way to make the trusted methods faster by breaking one sample into a million small samples that can be grown in a matter of hours instead of four to six weeks.

"The bacteria itself is very slow-growing and within that time, the patient could have spread that to numerous other people," he said. "This is one of the big problems."

The Hamilton projects are two of 17 funded in Canada, and 51 more are being funded in the developing world for a total of \$7.2 million. There were 300 applications for the awards.

The McMaster researchers were chosen because tuberculosis is the **second leading cause of death** (http://www.who.int/tb/publications/factsheet_global.pdf) from infectious disease worldwide, after the

multi-drug resistant



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Kaz Novak/The Hamilton Spectator

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