



Grand Challenges Canada™
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News Release

March 9, 2014

Smartphone app reads blood oxygen levels, capitalized with new \$2 million Canadian private-public investment, device could save lives of women and children in low-resource countries

Major new investment in LGTmedical's Phone Oximeter™ will advance it towards developing world use

Government of Canada \$1 million investment, part of new \$10 million partnership with Grand Challenges Canada to accelerate scale-up of promising global health innovations

Toronto, Canada – Private and public investors are injecting \$2 million into a Canadian mobile health innovation that offers hope of preventing thousands of deaths and improving the health of expectant mothers, newborns and children throughout the developing world.

LionsGate Technologies (LGTmedical), a Vancouver-based social enterprise, has secured its first major financial backers to scale up development of the Phone Oximeter™, an app and medical sensor that turns a non-specialist, community-level health worker's smartphone, tablet computer or laptop into an affordable and simple but sophisticated medical-grade diagnostic tool, which is currently typically available in the developing world only in some hospitals.

Mr. Irfhan Rajani, CEO of Vancouver-based Coleco Investments, leads a \$1 million angel investment in the device, to be matched with a \$1 million grant from Grand Challenges Canada – the first such investment under a new \$10 million strategic partnership between Grand Challenges Canada and the Department of Foreign Affairs, Trade and Development Canada (DFATD).

“Our Government is promoting innovative approaches to addressing the world's most urgent needs in both global health and international development, including leveraging private sector investment and partnerships that focus on results,” said the Honourable Christian Paradis, Canadian Minister of International Development and La Francophonie. “This newest investment is a precise fit with the Prime Minister's global commitment, through the Muskoka Initiative, to improve the health and lives of mothers and children in the world's poorest countries.”

Developed by scientists Drs. Mark Ansermino, Guy Dumont and Peter von Dadelszen of the University of British Columbia, the device measures blood oxygen levels through a light sensor attached to a person's fingertip. This technique is known as pulse oximetry.

The Phone Oximeter™, using a predictive score, can accurately identify an estimated 80% of cases of pregnant women at risk of life-threatening complications resulting from high blood pressure. The condition, pre-eclampsia, is one of three leading causes of maternal mortality. Each year, about 76,000 of an estimated 10 million pregnant women worldwide who develop pre-eclampsia die from it and related complications. The number of fetus and infant deaths due to these disorders is estimated at more than 500,000. “That equates to over 1,600 deaths of pregnant young women and babies every day – an unacceptable burden – and more than 99% of these deaths occur in developing countries, an issue of social justice,” said Dr. von Dadelszen.

The Phone Oximeter™ can also reveal dangerously low oxygen levels in patients with pneumonia, which kills more than 1 million children annually.

The \$40 target price will make it 80% less costly than any other current device capable of meeting high-level medical standards.

Tests to fine-tune the device will involve monitoring blood-oxygen levels of athletes in training, allowing developers to fast-track its preliminary use. Longer term medical trials of the mobile application and its pre-eclampsia predictive capability will involve 80,000 women in four countries: India, Pakistan, Mozambique and Nigeria.

"This is a critical step in achieving our goal of having a pulse oximeter in every home," said Dr. Mark Ansermino. Dr. Guy Dumont adds, "Through innovative engineering, we have been able to tap into the computing power of smartphones to produce medical-grade, low-cost monitoring systems amenable to widespread usage in low- and medium-resource countries."

"Not only will the Phone Oximeter™ address a critical global health need, LGTmedical will create jobs and economic opportunities in Canada and elsewhere," said Mr. Rajani. "As an impact-oriented investor, this is a win-win situation. I commend the Government of Canada, through Grand Challenges Canada, for creating this impact investment opportunity, which would not have otherwise occurred."

Noting the poignant timing of the announcement, right after International Women's Day (March 8), Grand Challenges Canada's Chief Executive Officer Dr. Peter Singer said, "This life-saving device is the 'double-double' of global health: it leverages both the global ubiquity of mobile phones, and the know-how and financial resources of the private sector. We hope this innovation will move swiftly from its invention in a Vancouver lab to villages around the world, creating jobs in Canada while saving lives.."

Grand Challenges Canada's \$1 million contribution comes from funds available under a new \$10 million strategic partnership agreement announced today between Grand Challenges Canada and the Department of Foreign Affairs, Trade and Development Canada (DFATD). The new funds will accelerate the scale-up of highly promising health innovations in developing countries. It will also enable innovators to access funding, technical and business support, and

other resources to accelerate their transition to scale.

Said Tom Walker, President and CEO of LGTmedical, “Thanks to this private and public investment, we can produce a tool with the potential to save the lives of women and children in remote, resource-poor communities around the world. We encourage other impact investors to join us in this landmark venture.”

“This innovation by LGTmedical is a great example of how we stimulate bold ideas with big impact in global health, while mobilizing private sector partners,” said Grand Challenges Canada’s Chairman Joseph L. Rotman. “Tackling global health while creating jobs is the best of both worlds.”

After initial funding from the Bill & Melinda Gates Foundation, the innovation was subsequently awarded a seed grant in 2011 by Saving Lives at Birth, a partnership between Grand Challenges Canada, the U.S. Agency for International Development (USAID), the U.K. Department for International Development (DFID), the Government of Norway and the Bill & Melinda Gates Foundation. Grand Challenges Canada extended additional funding in 2012 through a proof-of-concept grant.

For more details about the Phone Oximeter™, please click [here](#).

Please visit grandchallenges.ca and look for us on Facebook, Twitter, YouTube and LinkedIn.

About Grand Challenges Canada

Grand Challenges Canada is dedicated to supporting Bold Ideas with Big Impact™ in global health. We are funded by the Government of Canada through the Development Innovation Fund announced in the 2008 Federal Budget. We fund innovators in low- and middle-income countries and Canada. Grand Challenges Canada works with the International Development Research Centre (IDRC), the Canadian Institutes of Health Research (CIHR), Canada’s Department for Foreign Affairs, Trade and Development (DFATD), and other global health foundations and organizations to find sustainable, long-term solutions through Integrated Innovation® – bold ideas that integrate science, technology, social and business innovation. Grand Challenges Canada is hosted at the Sandra Rotman Centre.

www.grandchallenges.ca

About the Department of Foreign Affairs, Trade and Development Canada

The mandate of Foreign Affairs, Trade and Development Canada (DFATD) is to manage Canada’s diplomatic and consular relations, to encourage the country’s international trade, and to lead Canada’s international development and humanitarian assistance.

www.international.gc.ca

About LionsGate Technologies (LGTmedical)

LGTmedical is a spin-off company from the University of British Columbia, the Child & Family Research Institute, and BC Children’s Hospital. It has leveraged the synergies of award-winning interdisciplinary research, global foundations and business expertise to establish the innovative core technologies, infrastructure and partnerships, to become a leading mHealth company. LGTmedical is focused on product and channel development to achieve the most scalable and

clinically impactful global mobile health solutions.
www.lgtmedical.com

About the Sandra Rotman Centre

The Sandra Rotman Centre is based at University Health Network and the University of Toronto. We develop innovative global health solutions and help bring them to scale where they are most urgently needed. The Sandra Rotman Centre hosts Grand Challenges Canada.
www.srcglobal.org

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