



Grand Challenges Canada®
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News Release

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CANADA FUNDS ELEVEN NEW GLOBAL HEALTH INNOVATIONS IN INDIA

***Bold ideas in global health receive funding, among them:
life-saving baby temperature wrist band and
device that turns mobile phone into a blood analyzer for diabetics***

Toronto, Canada – Grand Challenges Canada, funded by the Government of Canada, has announced an investment of up to \$3.1 million CAD in 11 innovations in India, designed to save and improve the lives of women and children.

Ten proof-of-concept projects will receive \$112,000 CAD each and one Bangalore-based project, proven successful in trials, is now deemed ready for a \$2 million CAD scale-up. It enables a mobile phone to work as a glucose metre for diabetics.

The funding was announced by the Honourable Chris Alexander, Minister of Citizenship and Immigration, during the Grand Challenges Canada India Health Innovation Summit in Toronto, hosted by Grand Challenges Canada and the National Council of Indo Canadians. This announcement builds on the Programme of Cooperation that was signed in February 2014 between Grand Challenges Canada and the Government of India's Department of Biotechnology, in order to promote the development of long-term cooperation between Canada and India in the fields of global health, early child development, women and children's health and mental health.

"Canada has welcomed generations of newcomers from India who have helped build a pluralistic and prosperous Canada. Both Canada and India share a mutual regard for innovation, and the valuable benefits it brings to our lives and our communities. By working together, we can leverage the expertise of our countries, through innovation and technology, for best practices to improve the health of our citizens," said the Honourable Chris Alexander, Canada's Citizenship and Immigration Minister.

To date, Grand Challenges Canada has funded 80 innovations in India, for a total investment of more than \$16 million CAD. These projects are being implemented by institutions based in India and by institutions based in Canada or other countries, in partnership with Indian institutions. Many of these innovations are improving maternal, newborn and child health, which is Canada's flagship development priority.

BOLD IDEAS WITH BIG IMPACT®



Jana Care, a company based in Bangalore, India, secured a \$2 million CAD investment commitment for the development of the Aina device, a mobile blood monitoring device that plugs into a smartphone and enables the testing of six basic blood parameters. This innovation can be easily used in home, clinical or remote settings, and allows for transmission of medical data directly from patients to health professionals. Grand Challenges Canada's \$1 million CAD commitment comes from funds available under a \$10 million CAD strategic partnership between Grand Challenges Canada and Foreign Affairs, Trade and Development Canada (DFATD). These funds aim to accelerate the scale-up of highly promising health innovations in developing countries. The \$1 million CAD commitment by Grand Challenges Canada in Jana Care will be matched by a syndicate of investors, including Unitus Impact. Unitus Impact is a venture capital firm investing in scalable businesses that increase incomes and improve the livelihoods of the working poor in Asia's fastest

growing economies. Unitus Impact will invest through its recently launched Livelihood Impact Fund, which had its first close in July 2014 with investments from prominent family offices, foundations and high net worth individuals in Australia, Europe, Indonesia, Singapore and the United States.

"Canada is pleased to support the Aina device, a health innovation that promises to improve the quality of health of individuals in India suffering from diabetes," said the Honourable Christian Paradis, Minister of International Development and La Francophonie. "Through innovation we have the potential to transform the health and lives of people in developing countries. This is what our Government's partnership with Grand Challenges Canada is all about."

Geoff Woolley, Unitus Impact CEO, said, "We are very excited to partner with Grand Challenges Canada to support Jana Care in its mission to improve the quality of diabetes care in India and other developing countries. The company's innovative technology, combined with its lifestyle coaching curriculum, has the potential to improve the livelihoods of millions of patients. The focus of our Livelihood Impact Fund is to partner with high-quality entrepreneurs who are tackling critical societal issues, and we are proud to support Sidhant Jena and his team."

Under Grand Challenges Canada's Stars in Global Health program, a total of ten innovators were awarded seed grants of \$112,000 CAD each: two Canadian innovators (Hamilton, Toronto) and eight innovators based in India. The projects include a neonatal wrist band that monitors an infant's temperature and alerts the mother to warm her child, and a tele-controlled ophthalmology slit lamp that makes eye exams for patients in remote locations a reality.

Said Akhilesh Mishra, Consul General of India, “I would like to compliment and applaud Grand Challenges Canada for the initiative to strengthen cooperation between India and Canada in finding sustainable, long-term solutions in global health through integrated science, technology, social and business innovation to improve lives of people at the grass-roots level.”

Said Sudhir Handa, Chair, National Council of Indo Canadians, “Canada and India have long-standing relations, built upon strong interpersonal connections with an Indian diaspora of more than one million in Canada. These existing and new innovations are a testimony to the fact that attracting the best and the brightest talent from India and Indo-Canadians can make a big impact.”

“We thank the Government of Canada for its commitment to innovative projects that address health and development challenges in India, thus helping to save and improve the lives of so many, including, newborns, women and children,” said Dr. Peter A. Singer, Chief Executive Officer of Grand Challenges Canada.

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Scale-Up Project

Mobile phone platform for affordable glucose monitoring and cost-effective diabetes management

Jana Care, India (<http://bit.ly/1zFEEby>)

Diabetes is one of the leading causes of death around the world. In India alone, there are nearly 62 million diabetic patients, a number that is expected to rise to 80 million by 2030. There is a large unmet need to provide an affordable, simple and intelligent blood glucose monitoring solution to patients and healthcare workers, and to couple these diagnostics with clinical decision support tools that can allow the transmission of data to specialists, along with public health agencies.

After an initial proof-of-concept grant under Grand Challenges Canada’s Stars in Global Health Program, Jana Care is now scaling up the development of the Aina device, a mobile blood monitoring tool that plugs into a mobile phone. The device turns any mobile phone into a basic blood analyzer enabling lay users like healthcare workers and patients to measure blood glucose and five other basic blood parameters. The device and platform also integrates decision support and lifestyle tracking tools with a web-based patient management system for remote physician feedback.

Jana Care will be undertaking pilots with both the Indian Ministry of Health and with two large hospital chains and the Public Health Foundation of India.

The project aims to directly impact one million diabetic patients using the Aina device for self-management over the next three years. Additionally, another two million patients could be

screened and managed through healthcare workers, as part of government screening programs and hospitals.

Jana Care is a diabetes technology company that is building mobile diagnostics and evidence-based lifestyle coaching programs, with an initial focus on developing countries and India in particular. The company is based in Bangalore.

Proof-of-Concept Projects



- **Taking Eye Care to Rural Populations with Tele-ophthalmic Slit Lamp Biomicroscope**
LV Prasad Eye Institute (<http://bit.ly/1vEVtEk>)

While 70% of India's population lives in rural areas, 90% of the secondary and tertiary healthcare facilities are in urban areas, far away from the rural population. With this project, LV Prasad Eye Institute intends to integrate the community care by taking eye care to rural populations in remote locations, with the tele-ophthalmic stereoscopic slit lamp biomicroscope that connects patients in remote areas with ophthalmologists across distances and in real time. This makes a full eye examination from any place or distance a reality.

- **A Low-Cost Generic Cervical Cancer Vaccine Made With Microalgae**
Algaeneers Inc., Canada (<http://bit.ly/1ucbDzs>)

Cervical cancer is a leading cause of cancer mortality among women, with more than 85% of the deaths occurring in low- and middle-income countries. Effective commercial vaccines against cervical cancer exist but are expensive. These innovators, linked with McMaster University, will use microalgae to produce vaccines against cervical cancer that cost less than \$1 CAD per dose.

- **Waste Ventures: Empowering India's waste managers with mobile information**
International Development Enterprises (<http://bit.ly/1wpt6Mf>)

Urban India produces 69 million tons of waste annually, most of which is dumped, causing hazards to public health. In collaboration with Hasiru Dala and I Got Garbage, this project will prototype waste picker-owned franchises to collect, compost and recycle up to 85% of waste. A mobile metrics tool will track operations to develop a rapidly replicable model.

- **Locally made fabric glucose sensors to diagnose diabetes**
Achira Labs Private Limited (<http://bit.ly/1ucbDzt>)

Many diabetics in India cannot afford diagnostic strips to monitor glucose levels. Low-cost fabric glucose sensors developed by Achira Labs can be manufactured locally by weaving communities, which are widespread in India and other parts of the developing world. Working



with a non-governmental organization that represents women weavers, the distributed manufacturing model for glucose sensors will be rolled out in at least five locations.



- **Early intervention programs for children with developmental delays in rural communities**

- ***Amar Seva Sangam* (<http://bit.ly/1wpt6Me>)**

In Tamil Nadu, India, nearly half of all children with disabilities lack basic education. This exclusion is even more profound in rural communities. This novel project will empower local rehabilitation workers to implement early intervention programs for children with developmental delays. Customized tablet applications are used to coordinate with specialists located remotely, to tailor individualized programs for identified children.

- **Delivering TB Care to Maoist-Affected Tribal Regions in India and Tracking Patient Adherence to Treatment with Text-Free Biometric Technology**

- ***Operation Asha* (<http://bit.ly/1yHIF0M>)**

Many TB patients in India are not adequately monitored, leading to complications such as multidrug-resistance. This project will address this problem in the tribal and poor regions of Madhya Pradesh, India, by training local healthcare providers to deliver TB treatment and equipping them with low-cost biometric technology that suits the needs of illiterate users. Using patient's fingerprints during each scheduled dose will automatically notify providers when a dose is missed so that timely action can be taken.

- **SAFE: Supporting Addiction-Affected Families Effectively (SAFE)**

- ***Sangath* (<http://bit.ly/12if9BW>)**

In India, like everywhere else, families affected by the addictions of their loved ones experience high levels of stress. SAFE aims to adapt and adjust the evidence-based supportive intervention, the Five Step Method, to make it acceptable, safe and feasible to be delivered by lay counsellors in developing countries.

- **Mobile App for accurate and simple Disability Assessment and Support**

- ***Public Health Foundation of India* (<http://bit.ly/12ifa98>)**

Disability certification guidelines are a complex set of mathematical calculations, based on expert assessment of physical parameters and range of movements. This project proposes to develop a mobile application that can automate calculation, provide instant analysis, certify, link to customized benefits and continuously track the outcomes. The app brings inclusion and existing benefits to the doorstep of the end user.

- **Cleaning Water, Saving Lives, and Creating Opportunity, One CleanCube at a Time**

- ***The Ontario College of Art and Design University, Toronto, Canada* (<http://bit.ly/1ucbDzp>)**

Dropped into any shape and size of water bottle, CleanCube is designed to remove pathogens that cause illness and can lead to preventable death. The goal of this socially innovative product is to provide clean water in the Global South, while leveraging sales from the North American market in order to spur economic opportunity and save lives.

- **A Life-Saving Baby Temperature Band (*)**

BEMPU (<http://bit.ly/1wpt6Mg>)

Bempu is developing a novel neonatal temperature monitoring device that continuously measures the infant's temperature and uses intuitive alarms to alert a mother to warm her child, when needed. The device aims to drastically and cost-effectively reduce the rates of neonatal hypothermia and severe infection.

(*) *Pending successful grant negotiations*

All new seed grants announced today are part of Grand Challenges Canada's Stars in Global Health program, which seeks groundbreaking and affordable ideas that can transform the way low-resource nations address disease and health issues – innovations that can often benefit the developed world as well.

For more information, visit grandchallenges.ca and look for us on Facebook, Twitter, YouTube and LinkedIn.

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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; we support innovators in low- and middle-income countries and Canada. The bold ideas we support integrate science and technology, social and business innovation to find sustainable solutions to health challenges – we call this Integrated Innovation®. Grand Challenges Canada focuses on innovator-defined challenges through its Stars in Global Health program and on targeted challenges through its Saving Lives at Birth, Saving Brains and Global Mental Health programs. Grand Challenges Canada works closely with Canada's International Development Research Centre (IDRC), the Canadian Institutes of Health Research (CIHR) and Foreign Affairs, Trade and Development Canada (DFATD) to catalyze scale, sustainability and impact. We have a determined focus on results, and on saving and improving lives.

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