CSIR - INDIAN INSTITUTE OF TOXICOLOGY RESEARCH

COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH

Golden Jubilee Lecture

on

Future of Healthcare Innovation in India

September 26, 2015
02:30 p.m.
IITR Auditorium

Professor Balram Bhargava

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Department of Cardiology, Cardiothoracic Sciences Centre
Executive Director, Stanford India Biodesign Centre
All India Institute of Medical Sciences, New Delhi

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50 Years of Service to the Nation

Professor Balram Bhargava

Dr. Balram Bhargava is Professor of Cardiology at the prestigious All India Institute of Medical Sciences, New Delhi and also serves as the Executive Director for *Stanford India Biodesign Centre*. Professor Balram Bhargava, an outstanding cardiologist, is one of the foremost leaders in biomedical innovation, public health, medical education and research. He developed the indigenous *Platinum Iridium coronary stent*. He has been instrumental in clinically evaluating two other Indian stents. These low cost indigenous stents have benefitted several thousand patients. He set up the *Centre for Excellence for Stem Cell Studies*, a c-GMP facility, which has initiated treatment of patients with dilated cardiomyopathy for the first time in the world. This has benefitted number of no-option patients waiting on the cardiac transplant list.

An outstanding leader, Professor Bhargava has promoted the India-Stanford Biodesign programme, a unique interdisciplinary programme to foster innovation, design in low cost implants and devices. This programme has led to the establishment of the 'School of International Biodesign'. The fellowship on Biomedical Technology Innovation and has led to over twenty patents on low cost medical devices.

Dr. Bhargava is currently developing the Chest Compression Device for Sudden Cardiac Death patients; funded by the Wellcome Trust. He is providing leadership for creative disease prevention, early detection and transport system for sick cardiac patients.

Professor Balram Bhargava, An 'innovator' par excellence:

- Padma Shri award by the Government of India
- National Academy of Sciences Platinum Jubilee Award 2011
- SN Bose Centenary award by the Indian National Science Congress 2010-11
- Tata Innovation Fellowship 2007-08
- Vasvik Award for Biomedical Technology Innovation 2004

Fellow of the:

- Royal College of Physicians (of Glasgow)
- Royal College of Physicians (of Edinburgh)
- American College of Cardiology (FACC)
- American Heart Association (FAHA)
- International Academy of Cardiovascular Sciences (FIACS)
- National Academy of Medical Sciences (FAMS)
- National Academy of Sciences (FNASc)
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Future of Healthcare Innovation in India

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All India Institute of Medical Sciences, New Delhi

Abstract
This lecture will focus on the landscape in India in terms of medical device innovation. It will also talk about the power of interdisciplinary collaboration between doctors, engineers, designers and enterpreneurs. Further it will focus on the success achieved by collaboration between institutes/universities across continents.

India is ready and poised for the decade of innovation which has a mindset to be frugal, simple and therefore affordable. These innovations can easily be useful and cost cutting even for the first world. The latter half of the lecture will showcase areas/opportunities in medical device innovation wherein India has met with early successes.

Stanford-India Biodesign Program & School of International Biodesign
In the last 8 years, over 100 innovators were trained. They invented more than 10 technologies which are in active development and clinical evaluation.

Representative innovations.
Consure: A device to manage fecal incontinence that improves clinical outcomes and reduces cost of hospitalization.

IntraOz: Simple and cost effective device to access intraosseous cavity in long bones to administer fluids and drugs during emergencies.

Relligo: A low cost device for pre-hospital care of trauma patients.

Sohum : A low cost device to screen neonates for hearing defects in resource constrained settings.

NeoBreathe: An easy to use resuscitation device which reduces the amount of skill required to perform neonatal resuscitation, with a view to enable frontline workers such as medical professionals, community health workers, midwives and other skilled birth attendants to perform neonatal resuscitation effectively – with minimal training.

HiCare LIMO: A very affordable, cardboard-based, environment-friendly immobilizer for lower limb fractures.

BRUN: An under-development electronic feto-maternal wellness monitoring system for pregnant women.

CSIR-INDIAN INSTITUTE OF TOXICOLOGY RESEARCH

(COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH)

CSIR-IITR, Lucknow is the only multidisciplinary research institute in the field of toxicology in South East Asia with the motto:

Safety to Environment & Health and Service to Industry

R&D Areas

- Food, Drug & Chemical Toxicology
- Environmental Toxicology
- Regulatory Toxicology
- Nanotherapeutics & Nanomaterial Toxicology
- Systems Toxicology & Health Risk Assessment

Recognitions

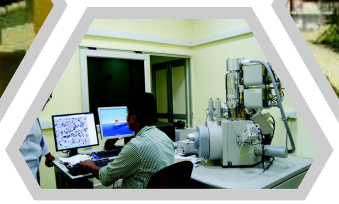
- Scientific & Industrial Research Organizations (SIROs)
- UP Pollution Control Board (Water & Air)
- Indian Factories Act (Drinking Water)
- Bureau of Indian Standards (Synthetic Detergents)
- Food Safety & Standards Authority of India (FSSAI)

Services Offered

- GLP certified for pre-clinical toxicity studies
- NABL accredited
- Safety / toxicity evaluation of NCEs
- Water quality assessment and monitoring
- Analytical services
- Environmental monitoring and impact assessment
- Epidemiological studies
- Information on chemicals / products

Technologies Developed / Available

- Water Analysis Kit
- Mobile Laboratory Van for on spot water quality analysis
- Argemone Detection Kit for rapid screening of Argemone in mustard oil
- CD-Strip for detection of butter yellow, an adulterant in edible oils
- Arsenic Detection Kit



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