

With a \$9.1 million funding in 2014 by several Indian government agencies, India is ranked fifth in the world with documented investments in TB research. India is ranked ninth in terms of money spent on TB research as a percentage of GDP.

India's spend of \$9.1 million on TB research in 2014 is in line with its historical spending on TB research over the past four years (\$8.6 million in 2013; \$8.7 million in 2012; and \$9.5 million in 2011).

"India has done well compared to some other countries, but it needs to show leadership in TB research and contribute much more for the sake of the over 2 million Indians who suffer from TB unnecessarily each year and hundreds of thousands that needlessly die from TB," said Dr. Suvanand Sahu, Deputy Executive Secretary of the Stop TB Partnership, Geneva, Switzerland in an email to this Correspondent.

Singapore, which has very low TB incidence and mortality, provided \$8.1 million last year. Singapore spends more on TB research as a percentage of its GDP than any other nation.

Though world leaders have agreed to end TB by 2030 under the Sustainable Development Goal 3, achieving this goal will not be possible unless and otherwise new diagnostics, drugs and an effective vaccine become available. The Stop TB Partnership's Global Plan for 2016-2020, published in November 2015, articulates the need for these new tools and estimates that \$9 billion will be required for research in these five years.

"So all countries, including India need to significantly increase their investment in TB research," said Dr. Sahu.

Since India has the highest TB burden and mortality in the world, the country would gain the most from scientific breakthroughs in the development of better diagnostics, shorter treatment regimen and vaccines. "Considering India's economic growth and the enormous human resource potential, the country can be a leader in TB research," he said. Besides being the biggest beneficiary of any TB breakthroughs, there is another reason why India in particular should increase its share of TB funding. Global funding for TB research has flatlined at under \$700 million per year during the last five years. This is despite the WHO increasing its estimates of the size of the TB epidemic in each of the past two years, and the threat of drug-resistant TB continuing to loom large.

"This lack of funding has left TB researchers waiting for the resources required to put new ideas to test and now threatens to forestall the TB community's ambitious vision for the future: a world free of TB," notes a report on TB funding by the Stop TB Partnership and Treatment Action Group (TAG). "There is a proposal to start a research consortium which will coordinate TB research done by different government agencies. The consortium can coordinate and make TB research more effective by avoiding duplication, fragmentation and focus on high priority research areas," said Dr. Soumya Swaminathan, Director General of ICMR.

While the U.S (\$247 million) and the U.K. (\$44 million) have contributed significantly, many developed countries have spent far less than India. The reasons for this are clear — low levels of TB in the developed countries, particularly in Western Europe, have resulted in declining interest in investing in TB research.

Another reason for declining interest in TB research and funding could be traced back to the nature of the disease itself. TB is a slowly progressing disease that does not kill people in public and is linked to poverty. "It kills people but not in as dramatic a way as Ebola does. Had TB been an acute disease with sudden onset and death it would have scared people and governments would have invested readily on research," he underlined.

One more factor that adversely affected TB research was that when the DOTS strategy was launched in the late 1990s, "it was thought that with the existing drugs and diagnostics, the DOTS approach could cut down TB substantially. Research was not prioritised during this period," Dr. Sahu said.