

## Funding Trends in TB Research & Development: 2005–2007 Preliminary Report, October 15, 2008, Paris, France

### Summary

For the third year, Treatment Action Group (TAG) analyzes and reports on the annual funding of tuberculosis (TB) research and development (R&D). The top 40 TB research funding institutions were surveyed for actual disbursements made for TB R&D in fiscal years 2005, 2006, and now in 2007. The three-year data indicate trends in funding and demonstrate significant shortcomings in the evolution of TB research and development funding in the initial period covered by *The Global Plan to Stop TB: 2006–2015*.

In 2007, overall funding for TB R&D increased by just \$26 million over 2006, a meager 6% increase from \$429,166,680 in 2006 to \$455,490,794 in 2007. In 2006, funding increased 16% from \$368 million in 2005 to \$429 million. Thus reported TB R&D investment appears to be decelerating rather than accelerating. Even if missing data are estimated, overall TB R&D funding would have increased by only 16% at best. (To date, 37 of the 48 institutions surveyed have provided their grant portfolio for fiscal year 2007. If the missing funders invested the same amount as they reported in 2006, about \$32 million more would be reported, making for a 16% increase over that year.) Given biomedical inflation and the devaluated U.S. dollar, even a 16% annual increase does not demonstrate significant growth. At this pace, less than half of the \$9 billion recommended by The Global Plan will be spent on TB R&D by 2015.

- In 2007 governments remained the largest funders of TB research, contributing 57% of the total. Philanthropic institutions contributed 30.8% of support. The private sector contributed 12%. Only the philanthropic sector's investment levels showed significant growth, mainly reflecting activities supported by the Bill and Melinda Gates Foundation. The NIH, which supports a quarter of all TB R&D (about \$160 million), has increased its support for TB research by a mere 1.5% since 2005.
- Of the six categories of research addressed in the analysis, TB drugs continue to receive the highest levels of funding (\$153 million), followed by basic science (\$116 million) and vaccine development (\$60 million). Diagnostic research funding has increased by the highest percentage (68% over 2006, 173% over 2005) among all six categories but remains severely under-funded (\$52.5 million). The increased investment in new diagnostics, drugs, and vaccines is commendable but still falls grievously short of the \$900 million per year recommended by the *Global Plan to Stop TB: 2006–2015*.
- Aside from lack of funding, survey respondents attributed the lack of knowledge surrounding TB pathogenesis and appropriate biomarkers as the top barriers to accelerating and improving TB R&D. This highlights the importance of increased investment in the basic science of TB biology, immunology, and pathogenesis.
- The National Institute of Allergy and Infectious Diseases (NIAID) at the U.S. National Institutes of Health (NIH) remains the top funder of TB R&D, followed by the Bill and Melinda Gates Foundation, which remains the second highest funder three years in a row. While NIH funding has remained almost flat, the Gates Foundation's support has increased 116% from \$57.4 million in 2005 to \$124 million in 2007. Among the top twelve donors the European Commission, the U.S. Centers for Disease Control and Prevention (CDC), the Netherlands Ministry of Foreign Affairs (DGIS), the Novartis Institute for Tropical Diseases, USAID, and the Danish Ministry of Foreign Affairs (Danida) all increased their investments from 2006.
- The 2007 data show signs of decelerating to a plateau level far below that demanded by The Global Plan or the more ambitious levels recommended by TAG since 2006, which include The Global Plan's \$9 billion for new tools research plus \$11 billion for basic science, infrastructure, and operational research.
- To date, twenty-seven institutions have reported data for each of the three years tracked from 2005 to 2007. Of these, twelve increased their TB R&D budget over the three years while fifteen decreased their budget. This suggests that TB R&D funders are becoming less diversified and that the field remains dominated by a small number of large funding institutions—not a healthy situation for any scientific field.
- Of the top ten donors in 2006, eight remain among the top ten donors in 2007. The Netherlands Ministry of Foreign Affairs (DGIS) and Novartis Institute of Tropical diseases made it into the top 10 of 2007, replacing the UK Department for International Development (DfID) and France's Institute Pasteur, whose data are not yet incorporated into the 2007 report.
- Other important omissions include the failure of France's INSERM to submit data for 2006 and 2007. The analysis still awaits data from many public sector donors such as the U.S. FDA, France's Ministry of Foreign Affairs, the UK Research Medical Council, the China CDC, IrishAid, the Global Fund, and the Canadian Institute of Health Research. Other private donor non-respondents include Anda Biologicals, and the Eli Lilly Foundation. The WHO-supported Tropical Disease Research (TDR) and the mostly Gates supported Foundation for Innovative New Diagnostics (FIND) are among the research consortia and product development partnerships which have not yet reported data to TAG.

Obtaining data from these institutions as well as others who play a role in TB R&D is extremely critical for the comprehensiveness and accuracy of these reports. It also aids in the ability for reports to stay consistent and provide trend analysis. It is kindly requested to submit TB R&D portfolios as soon as possible. To submit or obtain survey information, please email [neha.agarwal@treatmentactiongroup.org](mailto:neha.agarwal@treatmentactiongroup.org)

The final version of this report will be available on TAG's website in November of 2008. The updated version of last year's report, *Tuberculosis Research and Development: A Critical Analysis of Funding Trends (2005–2006): An Update* is available at TAG's website, [www.treatmentactiongroup.org](http://www.treatmentactiongroup.org).

# TB Research Investors: 2007 vs. 2006 and 2005

(Change in rank; change in amount invested; % change)

2007 Rank	Institute	2007 Total	Rank	2006 Total	Total Rank	'06-'07% Change	2005 Total	Rank	'05-'06 % Change	'05-'07% Change
1	US NIAD, NIH	131,378,370	1	119,771,818	1	9.7%	120,273,000	1	-0.4%	9.2%
2	Bill & Melinda Gates Foundation (BMGF)	124,200,000	2	96,466,861	2	28.7%	57,411,457	2	68.0%	116.3%
3	European Commission Framework 6/7	26,950,800	3	12,844,807	8	109.8%	13,322,711	8	-3.6%	102.3%
4	Otsuka Pharmaceutical Company	20,766,495	4	22,900,000	3	-9.3%	12,500,000	9	86.2%	68.8%
5	US Centers for Disease Control & Prevention (CDC)	17,874,795	5	17,057,774	6	4.8%	19,903,000	4	-14.3%	-10.2%
6	US other institutes & centers, NIH	17,257,593	6	17,519,000	5	-1.8%	20,354,500	3	-13.6%	-15.1%
7	Wellcome Trust	15,448,553	7	18,380,741	4	-16.0%	18,081,399	6	1.7%	-14.6%
8	Netherlands Ministry of Foreign Affairs (DGIS)	11,983,939	8	5,864,942	17	104.3%	3,168,488	17	85.1%	278.2%
9	Novartis Institute for Tropical Diseases	11,700,000	9	8,100,000	11	34.5%	2,255,193	20	285.8%	478.8%
10	US NHLBI, NIH	11,579,120	10	13,139,592	7	-11.9%	17,117,000	7	-23.2%	-32.4%
11	USAID	10,000,000	11	7,700,000	14	29.9%	6,694,000	12	15.0%	49.4%
12	Denmark Ministry of Foreign Affairs (Danida)	8,840,919	12	415,627	35	2027.1%	170,344	37	144.0%	5090.1%
13	Company X	7,900,000	13	8,700,000	12	-9.2%	18,640,160	5	-53.3%	-57.6%
14	AstraZeneca	7,650,000	14	7,200,000	15	6.3%	8,000,000	11	-10.0%	-4.4%
15	UK Department for International Development (DFID)	6,006,379	15	12,576,339	9	-52.2%	2,008,832	21	526.1%	199.0%
16	South Africa Medical Research Council (SA MRC)	4,847,646	16	1,240,620	31	290.7%	*	*	*	*
17	Sequela, Inc	4,735,000	17	3,743,000	20	26.5%	1,400,000	27	167.4%	238.2%
18	UK Health Protection Agency (HPA)	3,907,664	18	3,689,954	21	5.9%	*	*	*	*
19	Statens Serum Institute	3,611,407	19	**	**	**	*	*	*	*
20	Germany, Max Planck Institute for Infectious Biology	2,336,000	20	1,910,000	24	22.3%	2,500,000	18	-23.6%	-6.6%
21	Company Y	1,770,000	21	1,500,000	27	18.0%	500,000	31	200.0%	254.0%
22	New Zealand, Health Research Council	1,160,335	22	**	**	**	*	*	*	*
23	Elison Medical Foundation	1,020,900	23	1,850,000	25	-44.8%	1,650,000	24	12.1%	-38.1%
24	Mexico National Institute of Public Health	814,746	24	**	**	**	*	*	*	*
25	Defra Pharma International Ltd.	673,770	25	**	**	**	*	*	*	*
26	Swedish International Development Cooperation (Sida)	572,337	26	1,415,691	28	-59.6%	486,599	32	190.9%	17.6%
27	Brazil (amalgamated)	321,481	27	4,031,671	18	-92.0%	755,587	28	433.6%	-57.5%
28	Russian TB institutes	104,658	28	2,772,000	23	-96.2%	1,930,343	22	43.6%	-94.6%
29	KNCV Tuberculosis Foundation	36,720	29	199,556	39	-81.6%	170,666	38	16.9%	-78.5%
30	Korean Institute of Tuberculosis	30,000	30	**	**	**	*	*	*	*
31	Ireland Health Research Board*	11,106	31	385,705	37	-97.1%	*	*	*	*
N/A	Research Institute of Tuberculosis, Japan Anti-TB Association	0	N/A	1,358,568	29	-100.0%	1,487,961	26	-8.7%	-100.0%
N/A	Rockefeller Foundation	0	N/A	450,000	34	-100.0%	1,750,000	23	-74.3%	-100.0%
N/A	Thailand Ministry of Public Health	0	N/A	226,463	38	-100.0%	430,957	33	-47.5%	-100.0%
N/A	Swiss Agency for Development and Cooperation	0	N/A	50,203	42	-100.0%	195,099	36	-74.3%	-100.0%
***	Institut Pasteur	***	***	8,785,490	10	***	8,472,800	10	3.7%	***
***	UK Medical Research Council (MRC)	***	***	8,111,736	13	***	6,178,458	13	31.3%	***
***	India (ICMR/TB Research center (TRC))	***	***	6,347,873	16	***	5,315,133	15	19.5%	***
***	Irish Aid	***	***	3,765,210	19	***	3,600,000	34	94.59%	***
***	Canadian Institute of Health Research	***	***	3,257,764	22	***	2,376,098	19	37.1%	***
***	Global Fund to fight AIDS, Tuberculosis and Malaria	***	***	1,534,259	26	***	1,648,083	25	-6.9%	***
***	All India Institute of Medical Sciences (AIIMS)	***	***	1,299,004	30	***	3,904,821	16	-66.7%	***
***	US FDA	***	***	651,224	32	***	651,231	29	-0.0%	***
***	China CDC National Tuberculosis Reference Laboratory*	***	***	626,059	33	***	*	*	*	*
***	Anda Biologics*	***	***	395,347	36	***	*	*	*	*
***	Eli Lilly Foundation	***	***	140,000	40	***	113,660	40	23.2%	***
***	France Ministry of Foreign Affairs Coopération Française	***	***	131,782	41	***	508,368	30	-74.1%	***
***	Inserm	***	***	**	**	**	5,721,560	14	*	***
***	NW.O. NL	***	***	**	**	**	199,716	35	*	***
<b>TOTAL</b>		<b>455,490,794</b>		<b>429,166,680</b>			<b>368,385,024</b>			

\* Data not available for 2005

\*\* Data not available for 2006

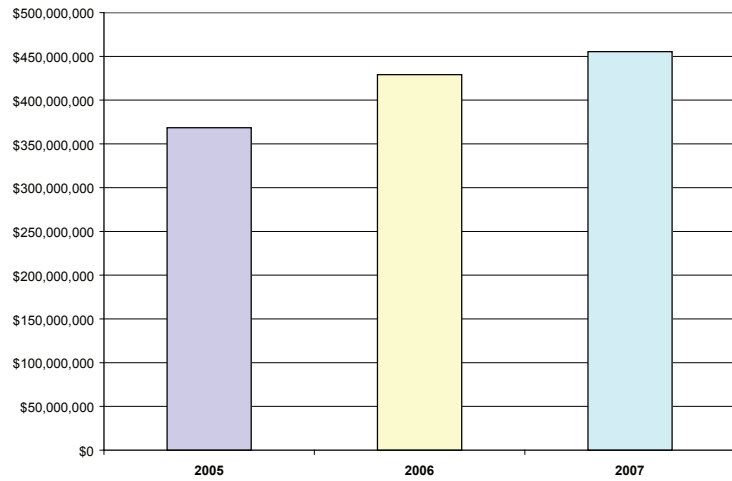
\*\*\* Data not yet available for 2007

# Funding Trends in Tuberculosis Research and Development

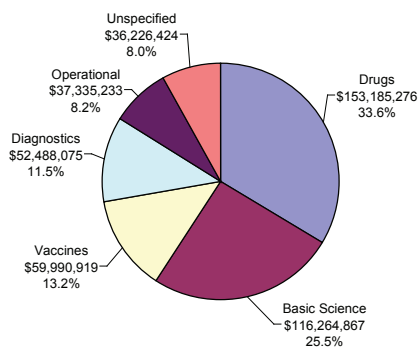
## Preliminary Findings from TAG's 2008 Analysis of TB R&D Investment

Treatment Action Group, October 15, 2008, Paris, France

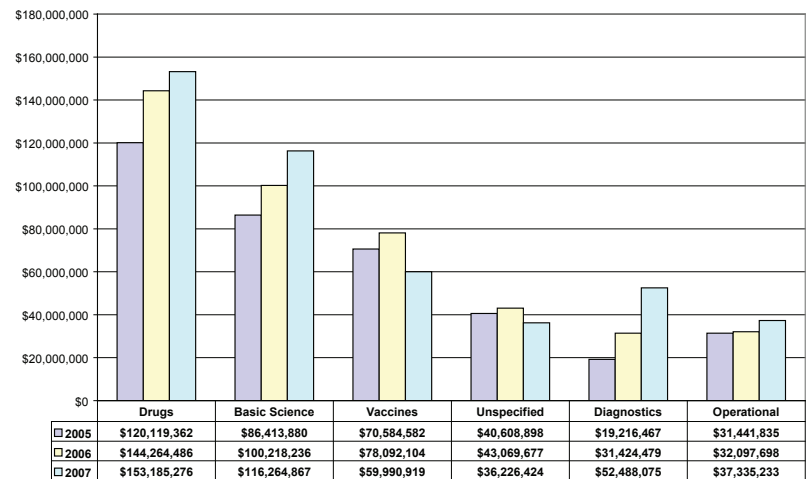
**Total TB Research & Development Funding: 2005-2007**



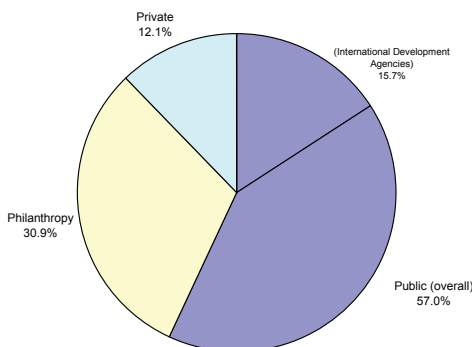
**TB R&D Investment by Category (2007)**  
\$455,490,794



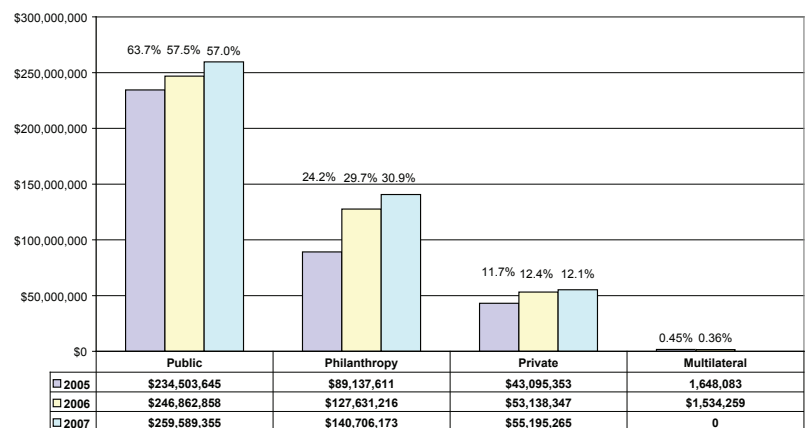
**Investment in TB R&D by Research Category in 2005, 2006, and 2007**



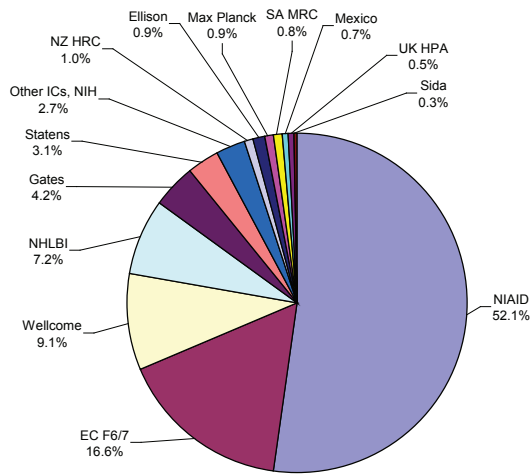
**TB R&D Funding by Donor Sector (2007)**



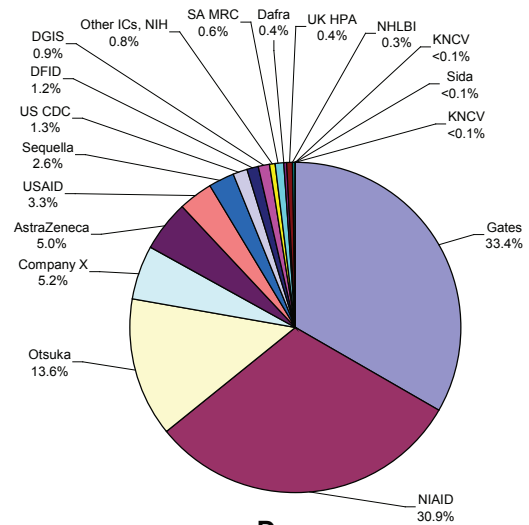
**Amounts and Proportion of Total TB R&D Funding by Donor Sector 2005, 2006, and 2007**



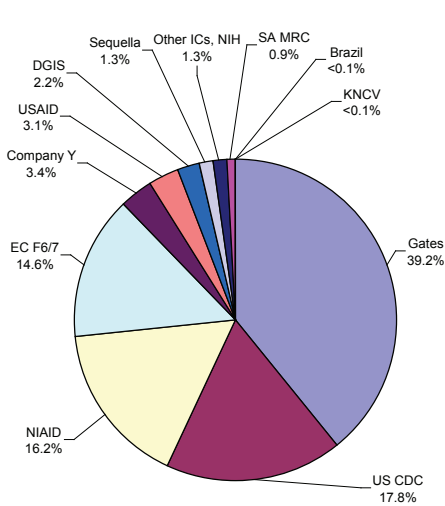
**Donor Investment in Key TB R&D Categories in 2007**



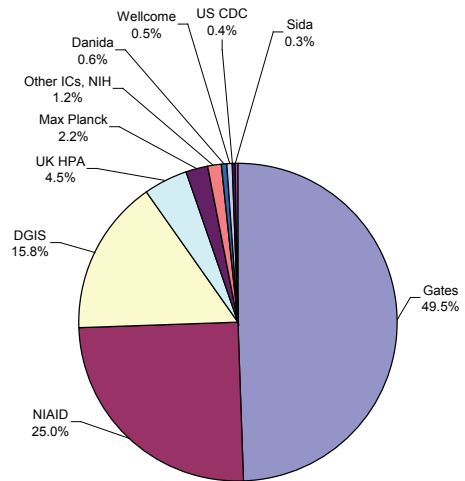
**Basic Science**  
**\$116,264,867**



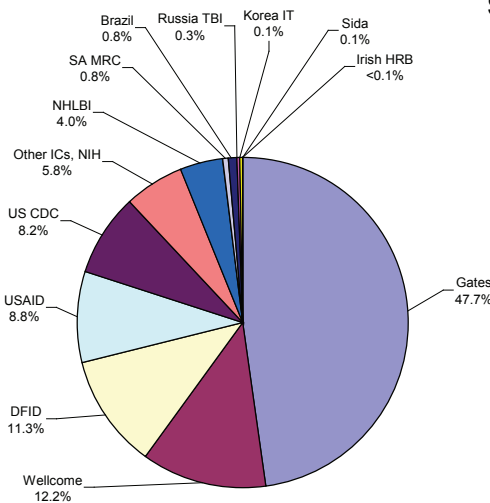
**Drugs**  
**\$153,185,276**



**Diagnostics**  
**\$52,488,075**



**Vaccines**  
**\$59,990,919**



**Operational Research**  
**\$37,335,233**