

EXECUTIVE SUMMARY

The survey

The eighth G-FINDER survey reports on 2014 global investment into research and development (R&D) of new products for neglected diseases, and identifies trends and patterns across the eight years of global G-FINDER data. In all, 198 organisations completed the survey in 2014, which covered:

- 35 neglected diseases
- 142 product areas for these diseases, including drugs, vaccines, diagnostics, microbicides and vector control products
- Platform technologies (adjuvants, delivery technologies, diagnostic platforms)
- All types of product-related R&D, including basic research, discovery and preclinical, clinical development, Phase IV and pharmacovigilance studies, and baseline epidemiological studies.

In 2014, following a review by our Advisory Committee, the survey expanded to include Ebola and additional hepatitis C genotypes (5 and 6).

Findings

In 2014, a reported \$3,377m was invested in neglected disease R&D, consisting of \$3,197m from repeat survey participants (called year-on-year – YOY – funders) and \$179m from irregular survey participants.

Total YOY funding for neglected disease R&D increased by \$150m (up 4.9%), but this was entirely the result of significant new investment in Ebola R&D in response to the 2014 West African Ebola epidemic. Without Ebola, YOY funding for neglected disease R&D would have been essentially unchanged from 2013 (down \$14m, -0.4%).

FUNDING BY DISEASE

As in previous years, the three 'top tier' diseases – HIV/AIDS, malaria and tuberculosis (TB) – received the vast majority of global neglected disease R&D funding (\$2,278m, 68%). Overall funding to the top tier rose in 2014, largely due to increased investment in malaria R&D (up \$56m, 11%). TB funding was also slightly higher (up \$13m, 2.3%), with funding for HIV/AIDS essentially flat (down \$5.6m, -0.5%).

The 'second tier' diseases include diarrhoeal diseases, kinetoplastids, helminth infections, dengue, bacterial pneumonia & meningitis, salmonella infections, hepatitis C (genotypes 4, 5 and 6), and Ebola, which was included in the survey for the first time. Funding for this tier increased by \$146m (up 23%) on the back of \$165m in new Ebola R&D investment, as well as increased funding for kinetoplastids (up \$16m, 14%) and dengue (up \$12m, 16%). This was enough to offset reduced funding for the remaining second tier diseases, with the most significant drops for diarrhoeal diseases (down \$18m, -9.4%) and bacterial pneumonia & meningitis (down \$15m, -20%), followed by salmonella infections (down \$6.1m, -11%), hepatitis C (down \$3.6m, -8.5%) and helminth infections (down \$3.3m, -3.8%). As in previous years, the 'third tier' diseases – leprosy, trachoma, cryptococcal meningitis, Buruli ulcer, leptospirosis and rheumatic fever – each received less than 0.5% of global R&D funding.

Without Ebola, funding for neglected disease R&D would have been essentially unchanged from 2013

Industry investment in non-Ebola neglected disease R&D increased sharply

Funding for platform technologies halved in 2014 (down \$22m, -50%), and core funding – non-earmarked funds given to organisations working on multiple neglected diseases – also fell (down \$14m, -13%).

FUNDERS

The public sector continued to play a key role in neglected disease R&D, providing close to two-thirds of funding (\$2,165m, 64%), almost all of which came from high-income country (HIC) governments and multilaterals (\$2,101m, 97%). The philanthropic sector provided 20% (\$678m), and industry the remaining 16% (\$534m) – the largest-ever industry contribution in the history of the G-FINDER survey.

Although public funding for neglected disease R&D increased by \$55m in 2014 (up 2.7%), this was entirely the result of new Ebola R&D investment, with public funding for all other neglected diseases actually falling by \$62m overall (-3.1%).

As in previous years, the top three public funders in 2014 were the US, the UK and the European Commission (EC), and once again the US contributed over two-thirds of global public R&D investment (\$1,529m, 71%). Ebola was the driver behind the increase in US public funding (up \$71m, 4.9%), while Australia was the only other country to significantly increase funding (up \$13m, 47%), reflecting the first disbursements under the country's new three-year funding commitment for product development partnerships (PDPs). Notable drops in public funding came from France (down \$15m, -17%) and India (down \$13m, -24%).

The biggest sectoral funding change came from industry (up \$98m, 28%) – essentially all from multinational pharmaceutical companies (MNCs). Unlike HIC public funders, this was not entirely due to Ebola – industry investment in non-Ebola neglected disease R&D also increased sharply (up \$64m, 18%), driven by MNC investments in malaria and HIV/AIDS. Philanthropic funding remained essentially unchanged (down \$3.2m, -0.5%), reflecting a cyclical funding drop from the Wellcome Trust (down \$8.8m, -6.4%) and slightly increased investment from the Bill & Melinda Gates Foundation (the Gates Foundation, up \$5.8m, 1.1%).

FUNDING FLOWS

Close to three-quarters of all neglected disease R&D funding in 2014 was external investment in the form of grants (\$2,444m, 72%). Three-quarters of this funding went directly to researchers and developers (\$1,849, 76% of external investment), \$526m (22%) went to PDPs, and the remaining \$69m (2.8%) was channelled through other intermediary organisations. This meant that direct funding to researchers and developers was essentially unchanged (down \$23m, -1.3%), despite the addition of \$108m in new grant funding for Ebola R&D.

Funding to PDPs increased for the second year in a row (up \$42m, 9.1%), this time reflecting increased investment from the Gates Foundation. Funding to other intermediary organisations also rose (up \$6.7m, 12%).

Internal investment increased substantially in 2014 (up \$124m, 17%), primarily reflecting increased industry investment in malaria, Ebola and HIV/AIDS, as well as increased intramural R&D investment by the US National Institutes of Health (NIH).

DISCUSSION

The 2014 West African Ebola outbreak resulted in rapid mobilisation of significant R&D funding, led by the US Government

- A total of \$165m was invested in Ebola R&D in 2014, enough to make Ebola the fifth-highest funded of all the neglected diseases, behind only HIV/AIDS, malaria, TB and diarrhoeal diseases.
- Nearly three-quarters of all funding for Ebola R&D in 2014 came from the public sector (\$118m, 71%), and all of this from HIC governments. The US Government was by far the most significant funder, providing \$101m (86% of total public funding).
- The pharmaceutical industry investment of \$35m represented 21% of global Ebola funding, most of which was vaccine R&D investment by MNCs (\$33m, 93% of industry Ebola funding). The philanthropic sector provided a relatively modest contribution of \$12m (7.3% of global Ebola R&D funding).

Public funding of R&D for all other neglected diseases approached a historical low

- Public funding for non-Ebola neglected disease R&D fell by \$62m in 2014 (-3.1%), following a significant drop in 2013, primarily due to sequester-related funding cuts from the US Government.
- This meant that public funding for non-Ebola neglected disease R&D in 2014 was the lowest recorded since 2007, the first year of the G-FINDER survey.
- The US Government is the single largest funder of neglected disease R&D, and has also been the driver behind the decline in public funding. Compared to its peak in 2009, annual US Government funding for neglected disease R&D (excluding Ebola) was nearly a quarter of a billion dollars lower in 2014 (down \$221m, -13%).

Industry funding increased for the first time in three years... and not only due to Ebola

- In 2014, industry reported its largest investment in neglected disease R&D in the history of the G-FINDER survey, with YOY industry funding increasing by more than a quarter (up \$98m, 28%).
- The increase was not only due to Ebola – even with Ebola excluded, industry investment still rose by \$64m (18%), largely due to increased investment in malaria – particularly for late-stage clinical trials of tafenoquine – and HIV/AIDS.
- However, industry investment in TB R&D continued to fall. TB accounted for less than a quarter (22%) of industry neglected disease R&D investment in 2014, compared to around 40% in 2010 and 2011, with YOY industry TB investment nearly a third lower than its 2010 peak (down \$55m, -34%).

Funding to PDPs increased for the second year in a row

- Funding to PDPs had been in consistent decline since 2008, before an increase in funding from European aid agencies in 2013, particularly the UK Department for International Development (DFID).
- In 2014, funding to PDPs increased again (up \$42m, 9.1%), but this time it was the Gates Foundation (up \$55m, 23%) behind the change. This was the first increase in Gates Foundation funding to PDPs since 2008, but still left its total PDP commitment a quarter lower than its 2008 peak (down \$96m, -25%).
- Overall public funding to PDPs in 2014 fell by \$13m (-5.9%), despite a \$17m increase in funding from aid agencies in Australia, the UK and Switzerland.