Global Forum for Health Research

HELPING CORRECT THE 10|90 GAP

# High-income Country Investors:
## Financial Flows for International Health Research

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This research paper contributed to the Global Forum for Health Research's report *Monitoring Financial Flows for Health Research 2004*. Visit www.globalforumhealth.org for the full report.

# Contents

# I. Background

Tracking and monitoring global patterns of spending on health research and development (R&D) is a relatively new field. In a globalizing world, however, it is fast becoming an important axis of information: knowing who is spending how much, on what, where, why and for whose primary benefit. Health research is a critical response channel for meeting global commitments on access to good health and, in particular, to improved health status in low- and middle-income countries (LMIC).

Financial data on health-related R&D data are collected by national and international organizations, both public and private. Each country has a set of institutions, groups and individuals that create, store and transfer knowledge about new and improved health products and interventions and more efficient ways of delivering them.[*] While the same core types of institutions exist in most countries, their organization and relative importance vary from country to country.

At the supranational level, the Organization for Economic Cooperation and Development (OECD) and the statistical agency for the European Union (Eurostat) collect health-related R&D data from member and selected non-member governments based on central government data. OECD also collects public and private health research expenditure data as reported by performers of research. At the national level, countries collect health research data through various means such as national surveys. In addition, organizations and associations within countries (e.g., pharmaceutical industry associations and foundation centres) as well as regional groups (e.g., the Ibero-American Network of Science and Technology Indicators) collect health research financial data and aggregate the data to serve their particular interests.

While fraught with problems of international comparability, quality and availability, data sets from these sources are useful for estimating global expenditures for health research as indicated in Figure 1.

The under-investment in health research that addresses the diseases and conditions of most of the world's people was first explicitly described by the Commission on Health Research for Development in the 1990 report entitled "Health Research: Essential Link to Equity in Development." The Commission estimated that only about 5 per cent of global annual resources for health research were being devoted to the health issues of 90 per cent of the world's people. This phenomenon became known as the "10/90 gap" – a catchphrase that has become a rallying cry for prioritizing global health inequities. In 1996 Michaud and Murray confirmed that "investment for research and development relevant to diseases and conditions that burden the low- and middle-income countries occupies a remarkably low priority in worldwide spending on health R&D."[†]

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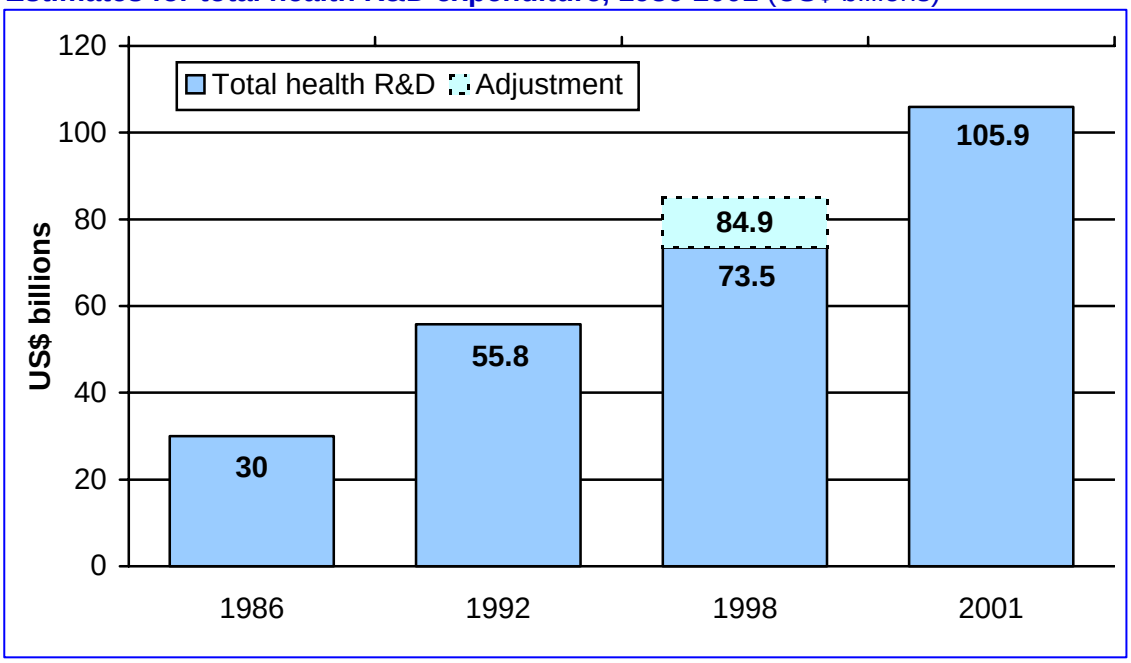
[*] Adapted by Alison Young from "Managing National Innovation Systems," OECD, 1999, Paris.

[†] Michaud, C. and C. Murray, "Resources for Health R&D in 1992: A Global Overview," Annex 5 to "Investing in Health Research and Development," a report of the Ad Hoc Committee on Health Research Relating to Future Intervention Options, WHO, 1996.

**Figure 1**
**Estimates for total health R&D expenditure, 1986-2001** (US$ billions)




*Sources:*
**1986**: Report of the Commission on Health Research for Development "Health Research: Essential Link to Equity in Development" , 1990.
**1992**: Investing in Health Research and Development, A Report of the Ad Hoc Committee on Health Research Relating to Future Intervention Options, WHO, 1996.
**1998**: Global Forum for Health Research Report, Monitoring Financial Flows for Health Research, 2001.
**2001**: Global Forum for Health Research Report, Monitoring Financial Flows for Health Research, 2004.

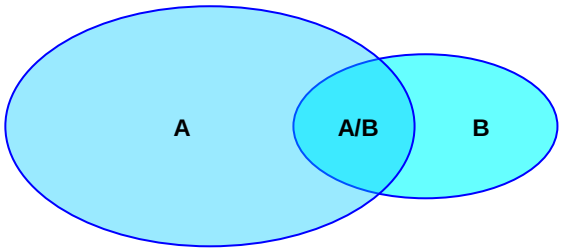
Figure 2 illustrates how global expenditures for health research play out from the "10/90" perspective. The vast majority of R&D spending is done by high-income countries (HIC) for high-income countries (Area a); a relatively small share is financed by low- and middle-income countries (LMIC) and carried out in these countries (Area B). The small area of overlap (AB) is of particular importance for correcting the "10/90" gap: it describes R&D funded mainly by high-income countries but carried out in and for the primary benefit of low-and middle-income countries. The AB area includes research that is carried out in high-income countries and is relevant to the major diseases and conditions that impact poor countries. The A/B area also includes R&D funded by LMIC in HIC.

The Global Forum for Health Research was established in 1998 to "help correct the 10/90 gap." It serves as a forum for researchers and those that fund research; provides a mechanism for advocacy for health research; and reviews global health research needs, particularly those relevant to low- and middle- income populations. The Global Forum conducts periodic assessments of global resources spent on health research as an important tool for carrying out its functions. An external review of the first report (2001) on international health research resource flows suggested that more disaggregated data from a broader spectrum of contributors would be very useful for purposes such as advocacy and priority setting. To that end, this research paper takes a wider look at the sources and flows of funds earmarked for international health R&D. The data obtained in this expanded search – and presented here – has not been previously published as an integrated body of evidence that adds new knowledge about resources for international health research from a broad spectrum of investors in high-income countries.

**Figure 2**
**Graphic representation of global health research funding**

**A = R&D by high-income countries (HIC)**
**B = R&D by low- and middle-income countries (LMIC)**
**A/B = R&D funded by HIC in or for application in LMIC and by LMIC in HIC (see text for details)**

***[1] Proportions for surfaces A, B and A/B are indicative only***




## II. Introduction: Funding for international health research

International health research, as defined in this paper, includes health research and research training funded by high-income countries that are carried out:

- abroad – in other high-income countries or in low- and middle-income nations; and
- domestically, but addressing important global health issues.

In the 2001 "Monitoring Financial Flows for Health Research" report from the Global Forum, an initiative was taken to collect data that would serve as a proxy for research capacity-strengthening. While the data generated were considered to be one of the most interesting features of the report, it was very difficult to obtain and, therefore, incomplete. Such data were not routinely collected by most HIC investors and thus required considerable time and effort by staff to compile for the report. Additionally, much research by national research institutions and foundations that addressed the major global diseases and health conditions was not captured using this methodology. While "international health research" data collection may be perceived as overly broad, this approach captures more resource flows data of relevance to the '10/90 gap' and is routinely collected by a number of major HIC investors.

This paper looks at the context for resource flows for international health research by HIC investors, followed by data on resource flows from selected investor organizations. Extensive contextual text is provided for official development assistance (ODA) and foundation/charity investors to enhance the reader's understanding of the current participation of these sectors in international health research. Data at the HIC organization level are illustrative, not comprehensive. The largest HIC investors from the public and not-for-profit sectors providing data for research on the major diseases and conditions affecting low- and middle-income countries have been included. The data provide a reliable picture of resource flows for selected HIC organizations: funding levels for health and health research for the international comparison year 2001 and, in some cases, more recent years; long-term funding trends; sources of income; and allocations for types of research. Organizations, in some cases, also provided information on prospects for the future and internal re-organizations that potentially affect resource flows within their organization.

*Primary investors* are defined as organizations that receive direct allocations from national governments or generate their own funds for health research. They include government institutions administering ODA and supporting national and international research; not-for-profit organizations such as foundations that rely primarily on their own assets; and pharmaceutical companies.

*Secondary investors* receive grant funds from primary investors and include multilateral organizations, partnerships, initiatives and non-governmental organizations (NGOs). Primary investor agencies and organizations may transfer funds laterally to other primary investors and vertically to secondary investors, making resource flows difficult to track. Further complicating the documentation of resource flows for international health research is the fact that organizations have very diverse mandates, modes of operation and priorities – with implications for how they define and track data, making international comparisons difficult.

Since this paper includes financial data from both primary and secondary investors, the data are not additive.

Resource flows for the following types of investor organizations are described in this paper:

- ODA agencies;
- multilateral agencies;
- foundations/charities/trusts;
- research institutes; and
- NGOs, including partnerships and initiatives.

Given the recent increases in ODA budgets and foundation/charity giving, more in-depth coverage of these primary investors is provided than for the other categories. An effort was made to gather more data on a greater number of national research institutes, given their ever-expanding role in international health research. The work on NGOs focuses on selected organizations that play a role in international partnerships and initiatives, including both large and smaller ones to illustrate the variety of roles NGOs play in international health. The for-profit sector, including pharmaceutical companies, is not included in this update except within the context of partnerships and foundations. Company-specific data for the for-profit sector merits further attention in future reports due to their important and growing contribution to international health research; it is hoped that this report may help motivate companies to provide data in future.

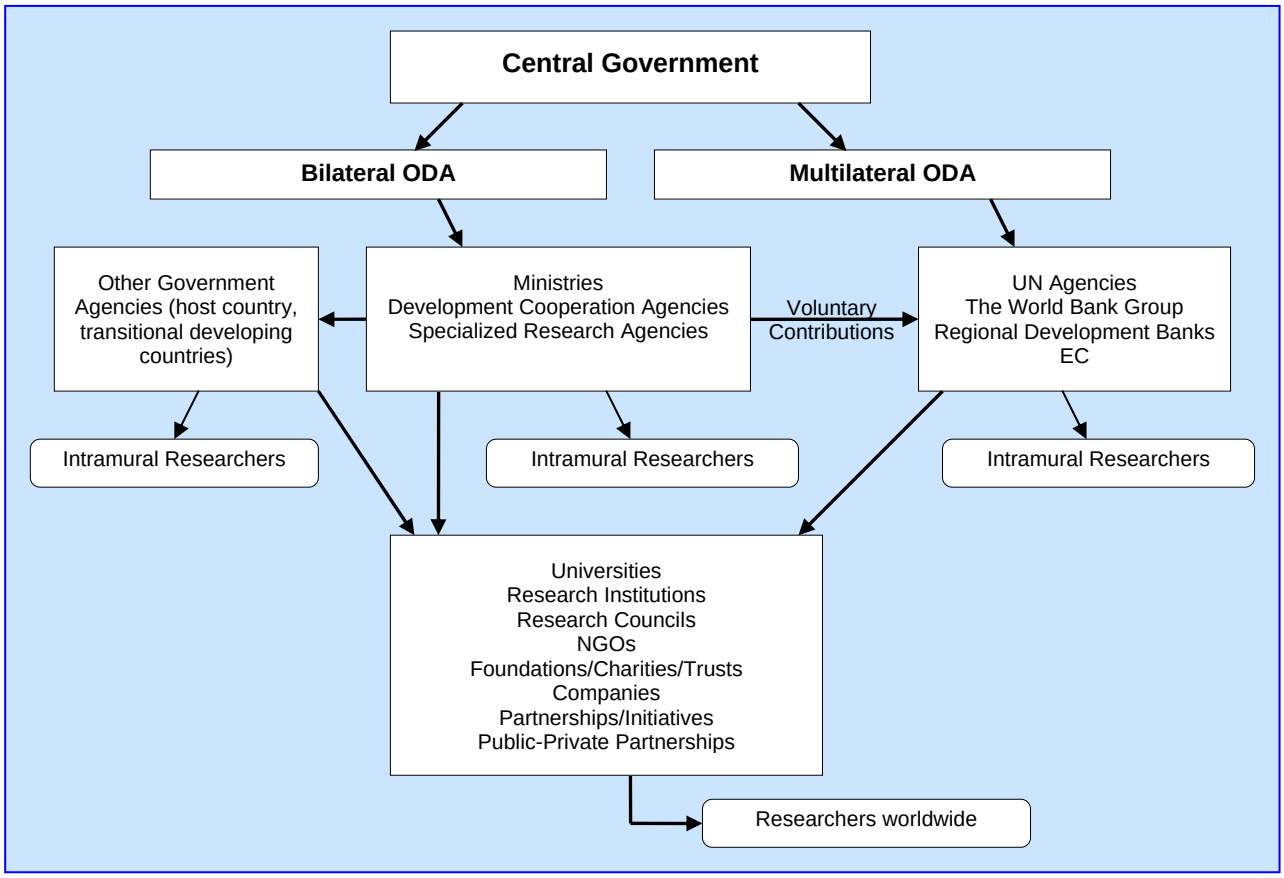
Data were obtained from public sources such as annual reports, websites and published articles as well as from short informal surveys of the organizations. In general, institution-specific financial data disaggregated as health research or international health research was not in the public domain unless the organization in question was a health research institution.

## III. Official development assistance investment in health research

ODA is an important source of health and health research funding for developing countries (bilateral ODA) and multilateral institutions (multilateral ODA). ODA is administered by countries in a variety of ways through specialized development cooperation or development aid agencies. Sometimes these agencies are independent; sometimes within ministries of Foreign Affairs or Development Cooperation. Bilateral ODA may be administered through a different agency or ministry than multilateral ODA.

Health research monies may be administered and managed by these agencies themselves or channelled to other agencies or ministries such as education, health, research ministries and specialized research institutions. Alternatively, health research funds may be channelled through multilateral avenues, e.g., as voluntary contributions for UN agencies such as WHO. Intramural research is uncommon within these public institutions in HIC, so the majority of funds are managed and/or implemented through a variety of institutions as described in Figure 3. However, policy research and operations research may be carried out intramurally in public institutions in LMIC or in some multilateral institutions receiving ODA.

**Figure 3**
**Model of ODA resource flows for health research**




At a supranational level, ODA financial flows are monitored by the Development Assistance Committee (DAC) of OECD. DAC member countries account for at least 95 per cent of worldwide ODA (see Table 1). Aggregated health and health research data are collected annually from DAC members. Selected data are made available to the public in annual reports; health and population data are always reported but health and population research is not.

**Table 1**
**DAC member countries**

| | | |
|---|---|---|
| Australia | France | Luxembourg |
| Austria | Germany | Netherlands |
| Belgium | Greece | New Zealand |
| Canada | Ireland | Norway |
| Denmark | Italy | Portugal |
| Finland | Japan | Spain |

## *A. ODA trends in funding*

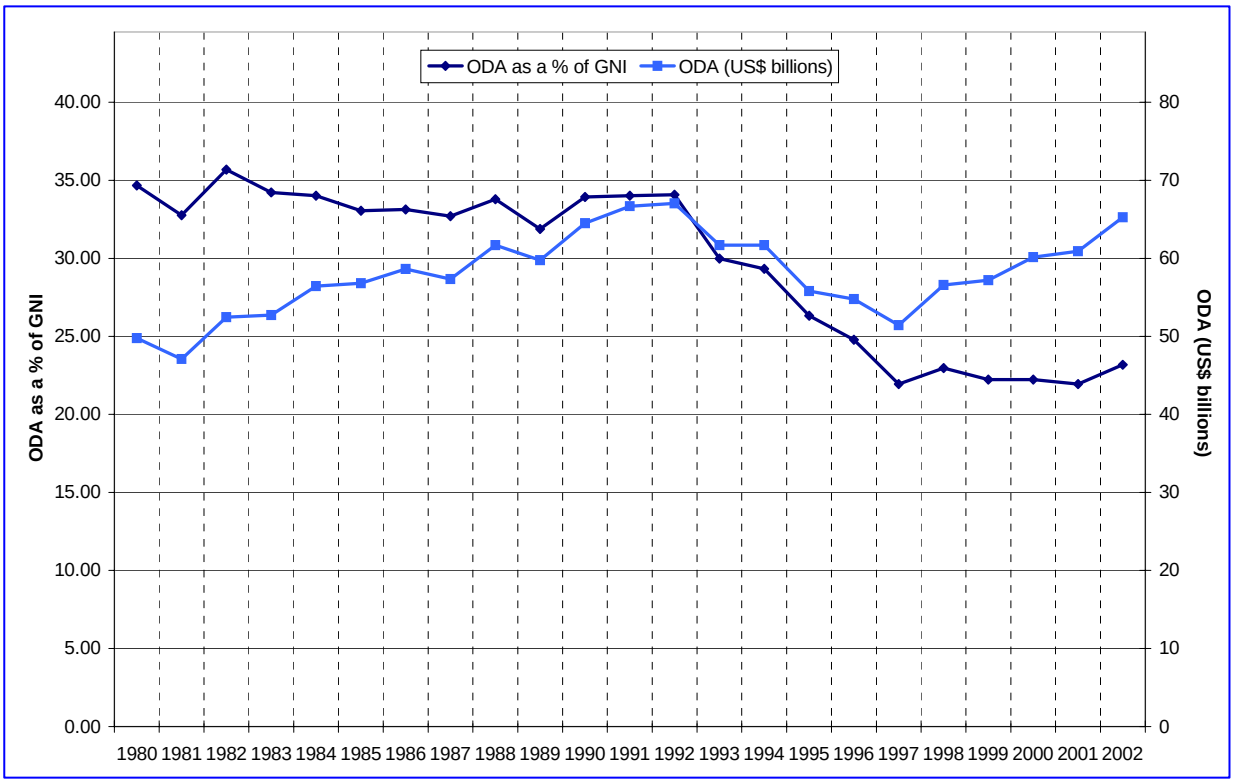
After maintaining a steady level through the 1980s, aid to low- and-middle income countries fell sharply. This was, in part, because the end of the Cold War meant a relaxation of superpower rivalry in aid to developing countries. By 1997, aid reached an all-time low of 0.22 per cent of donor countries' combined national income. In the period 2001-02, the trend reversed. By 2002, there was a 7.2 per cent real increase in ODA (see Figure 4) and further increases are projected through 2006 (see Table 2).

The United States projection assumes for 2006 US$ 5 billion from MCA, US$ 2 billion from the emergency fund for AIDS relief, phased spending from Iraq and Afghanistan reconstruction supplements and 2% p.a. inflation in the USA to deflate from 2006 to 2002 prices.

This turnaround reflects several events. The September 11 terrorist attacks on the United States of America in 2001 led to a reassessment of US policy towards developing countries. An important outcome of this process has been "consensus in the [US] Administration and Congress that significant and effective foreign aid is both morally justified and an important contribution to US national security. "[DAC 2002 Report, p. 30.]

Secondly, the International Conference on Financing for Development in Mexico in March 2002 led to new initiatives (the Monterrey Consensus) to improve the quantity and quality of aid. Donors committed themselves to the largest multi-year percentage increase in aid in real terms in DAC history. If the commitments are kept, ODA is anticipated to be about US$ 77 billion in 2006.

**Figure 4**
**DAC members' total ODA, at 2001 prices as a share of GNI, 1980-2002**




Source: OECD

## Table 2
## DAC Members' ODA prospects for 2006

| | Net ODA in 2002 | ODA/GNI in 2002 | Net ODA in 2006 | ODA/GNI in 2006 | Real change in ODA, 2006 over 2002 (at 2002 prices and exchange rates)[1] | |
|---|---|---|---|---|---|---|
| | US$ millions | % | 2002 US$ millions | % | US$ millions | % |
| Austria | 520 | 0.26 | 728 | 0.33 | 208 | 0.40 |
| Belgium | 1072 | 0.43 | 1234 | 0.46 | 162 | 0.15 |
| Denmark | 1643 | 0.96 | 1531 | 0.83 | -112 | -0.70 |
| Finland | 462 | 0.35 | 598 | 0.42 | 136 | 0.29 |
| France | 5486 | 0.38 | 7378 | 0.47 | 1892 | 0.34 |
| Germany | 5324 | 0.27 | 7099 | 0.33 | 1775 | 0.33 |
| Greece | 276 | 0.21 | 515 | 0.33 | 239 | 0.86 |
| Ireland | 398 | 0.40 | 671 | 0.63 | 273 | 0.69 |
| Italy | 2332 | 0.20 | 4195 | 0.33 | 1863 | 0.80 |
| Luxembourg | 147 | 0.77 | 206 | 10 | 60 | 0.41 |
| Netherlands | 3338 | 0.81 | 3566 | 0.80 | 228 | 0.70 |
| Portugal | 323 | 0.27 | 424 | 0.33 | 102 | 0.31 |
| Spain | 1712 | 0.26 | 2328 | 0.33 | 616 | 0.36 |
| Sweden | 1991 | 0.83 | 2247 | 0.87 | 256 | 0.13 |
| United Kingdom | 4924 | 0.31 | 6906 | 0.40 | 1982 | 0.40 |
| **EU Members' Total** | **29949** | **0.35** | **39627** | **0.42** | **9679** | **0.32** |
| Australia | 989 | 0.26 | 1089 | 0.26 | 100 | 0.10 |
| Canada | 2006 | 0.28 | 2730 | 0.34 | 723 | 0.36 |
| Japan | 9283 | 0.23 | 10500 | 0.26 | 1217 | 0.13 |
| New Zealand | 122 | 0.22 | 154 | 0.26 | 32 | 0.27 |
| Norway | 1696 | 0.89 | 2067 | 10 | 370 | 0.22 |
| Switzerland | 939 | 0.32 | 1143 | 0.36 | 204 | 0.22 |
| United States | 13290 | 0.13 | 19539 | 0.17 | 6249 | 0.47 |
| **DAC Members' Total** | **58274** | **0.23** | **76849** | **0.29** | **18575** | **0.32** |

Notes include assumptions/commitments for projections:

1. Assumes average real growth in GNI of 2% p.a. (3% for Canada, 4% for Greece, and 0% for Japan) from 2002-06.
2. Austria committed to 0.33 by 2006.
3. Belgium committed to 0.7% by 2010.
4. Denmark committed to more than 0.7%.
5. Finland committed to 0.44% by 2007.
6. France committed to 0.5% by 2007; ODA/GNI ratio for 2006 interpolated between 2002 and the year that the target is scheduled to be attained.
7. Greece committed to 0.33% by 2006.
8. Ireland committed to 0.7% by 2007; ODA/GNI ratio for 2006 interpolated between 2002 and the year that the target is scheduled to be attained.
9. Italy committed to 0.33% by 2006.
10. Luxembourg committed to 1% by 2005.
11. The Netherlands committed to 0.8%.
12. Portugal committed to 0.33% by 2006.
13. Spain committed to 0.33% by 2006.
14. Sweden committed to at least 0.87% in 2006.
15. The United Kingdom committed to 0.4% by 2005-06.
16. Australia committed to 0.26% in 2003-04; estimated ODA/GNI 0.26% in 2003-04; assumes same ratio in future years.
17. Canada committed to 8% annual increase until 2010.
18. Japan committed to 1998-02 average level in 2006.
19. New Zealand commitments under review.
20. Norway committed to 1% in 2005.
21. Switzerland committed to 0.4% by 2010; ODA/GNI ratio for 2006 interpolated between 2002 and the year that the target is scheduled to be attained.

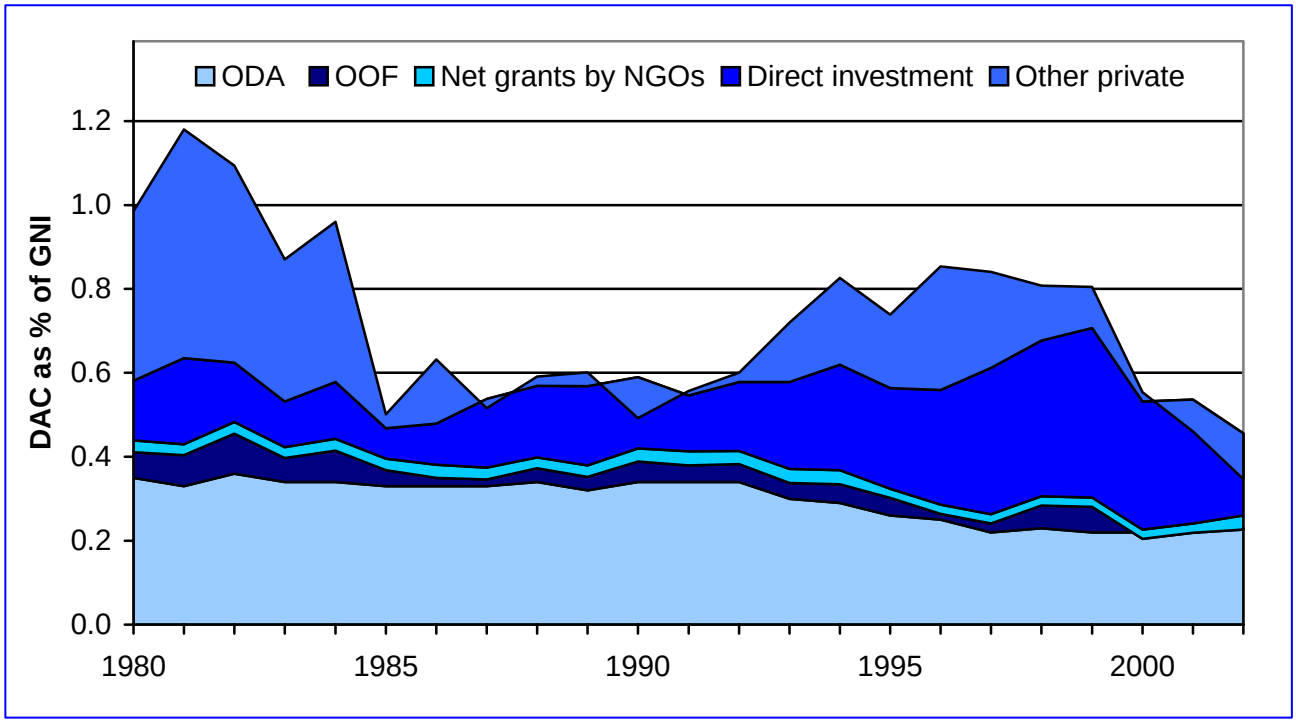
Source: OECD

These increases are likely to have a positive impact on international health research since ODA is an important source of funding for research conducted in developing countries by developing country researchers and for research on major health issues in the poorest of countries.

The evolution of ODA in the context of other resource flows for development is shown in Figure 5. ODA and grants by NGOs have been the least volatile components of capital flows to low- and middle-income countries. Private flows fell sharply in the early 1980s, reflecting the collapse in international bank-lending. Private flows revived in the 1990s, although they have not reached their levels of the early 1980s as a share of DAC members' gross national income (GNI). The composition of private flows has changed: direct investment is more significant and lending less.

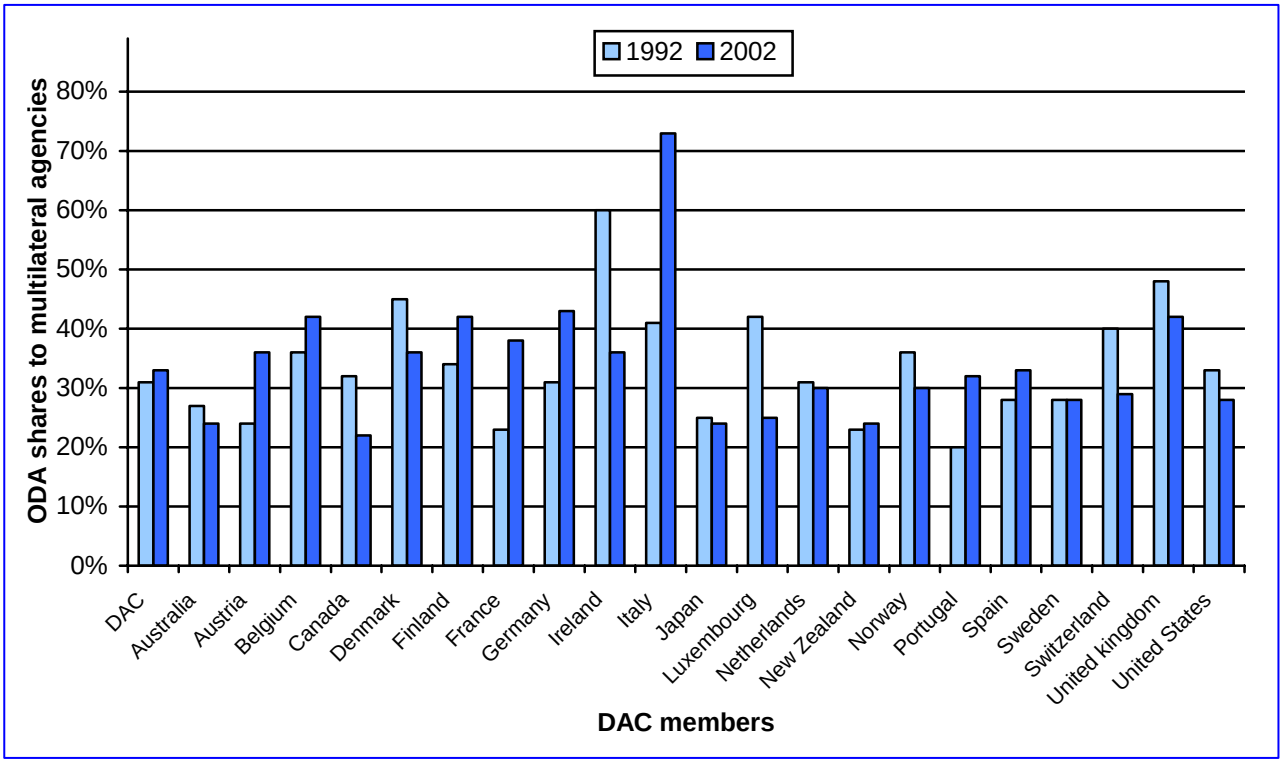
While the overall share of multilateral aid in DAC members' programmes has remained relatively constant at 30 per cent over the last decade, there have been considerable shifts within the total (see Figure 6). Aid delivered through European Commission (EC) and UN agencies has increased steadily, even though the shares going to the UN do not include extra-budgetary or voluntary contributions. Multilateral share increases have occurred in countries that seek to play a more active role in EC development cooperation, e.g., Germany and Spain. Multilateral share increases have also occurred where ODA has been rising and there is limited capacity to administer it, e.g., in the Netherlands. On the other hand, bilateral shares have remained steady or increased for some countries, in part due to questions regarding the quality of work by some multilateral agencies as well as accountability issues. The share of ODA for multilaterals rose for Austria, Belgium, Portugal, Finland, France, Germany, Italy, and Spain; the share fell for Australia, Canada, Denmark, Ireland, Luxembourg, Norway, Switzerland, the United Kingdom, and the United States; and remained about the same for other DAC members.

**Figure 5**
**DAC members' resource flows to developing countries, 1980-2002**




Note: Net OOF (Other Official Flows) were negative in 2000-2002, and other private flows were negative in 1987, 1990, 2001 and 2002
Source: OECD

**Figure 6**
**DAC members' ODA shares to multilateral agencies, 1992 and 2002**




Source: OECD

Net ODA from DAC members was US$ 52.3 billion in 2001, up 0.5 per cent from 2000 in real terms and stable at 0.22 per cent as a proportion of DAC members' combined gross income. Japan's ODA fell 17 per cent in real terms, due in large part to 12.7 per cent depreciation of the yen from 2000 to 2001. The drop in value of Japan's ODA was offset by increases from the USA and most EU member states. American ODA rose to US$ 11.4 billion, becoming the world's largest aid donor for the first time since 1992. Denmark, Luxembourg, the Netherlands, Norway and Sweden continued to be the only countries to meet the UN target for ODA of 0.7 per cent of GNI.

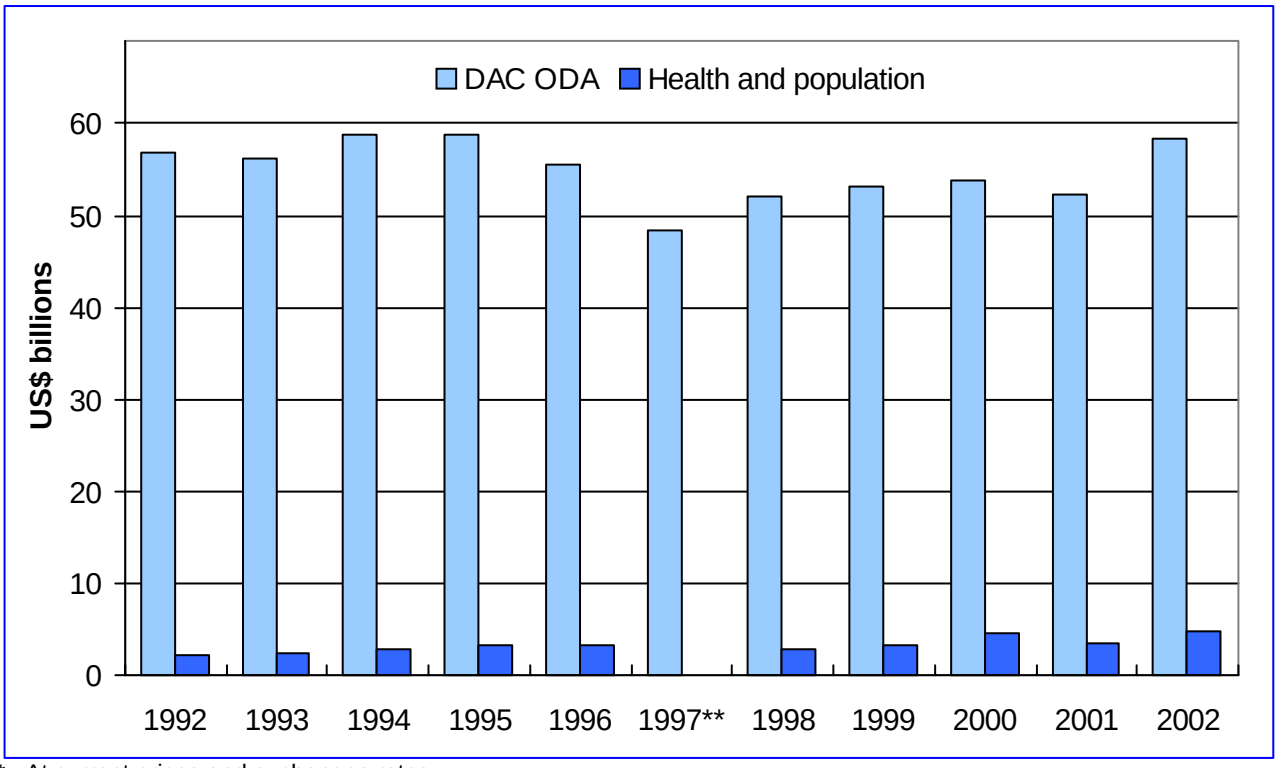
Figure 7 shows health as a function of ODA of DAC member countries over time. As ODA began to rise in 2001, the share for health and population sectors also rose. Also of interest is the percentage of 2002 ODA allocated to the health sector by country (see Table 3).

## *B. Summary of ODA financial flows in selected countries*

Research as a percentage of health ODA increased between 1998 and 2001 for some ODA agencies and fell for others. Of the six agencies that support both research and operational programmes from ODA and for which data are available, four (USAID, DFID of the United Kingdom, Sida/SAREC of Sweden, and Danida of Denmark) met the goal established by the Commission on Health Research to allocate at least 5 per cent of health ODA to research. It should be noted that since ODA is disbursed to numerous agencies in some countries, the percentage provided is not equivalent to 5 per cent total ODA for a country.

Additional trends and data for ODA allocations are provided in the following sections which describe major executing agencies for ODA.

**Figure 7**
**Health and Population as a function of total DAC net development assistance, 1992-2002**




* At current prices and exchanges rates
** Health and Population not known for this year
Source: 2003 Development Co-operation Report, OECD; DAC Annual Reports

## Denmark

In 2000, Danida outlay for research included DKK 49 million for the Council for Development Research (RUF), DKK 73.4 million for Danish research centres, DKK 59.2 million for ENRECA (Programme for Enhancement of Research Capacity in Developing Countries) and DKK130.3 million for global research – for a total of DKK 318.6 million (Figure 8). In 2001, from the total ODA budget of DKK 12,800 million, DKK 247 million was allocated for research [personal communication, Danida]. More than 40 per cent of total research funding was allocated to global research that is largely channelled through multilateral/international organizations [Report of the Commission on Development-related Research Funded by Danida, Partnership at the Leading Edge: A Danish Vision for Knowledge, Research and Development, Copenhagen, April 2001].

In 2003, research institutions supported by Danida were consolidated into the Danish Centre for International Studies and Rights. As of 2003, ENRECA projects for research-capacity partnerships, formerly allocated directly from the Danida board, fall under the RUF portfolio, an advisory body to the Ministry of Foreign Affairs [DAC Journal, Volume 4, No. 3, 2003, OECD].

In 2001, US$ 163 million – or 3.6 per cent of net ODA [Development Co-operation Report 2002] – was allocated for health and population. Support for health research [personal communication, Danida] included DKK 31 million for tropical disease research at the Danish Bilharziasis Laboratory (DBL), DKK 23 million for bilateral support to health research through ENRECA and RUF research projects, and DKK 42 million for global research mainly executed through multilateral institutions. Disease-specific allocations and percentages of research monies made available to developing country researchers were not available.

**Table 3**
**ODA allocated to health by DAC members, 2002**

| | Health (%) | 2002 ODA (US$ millions) | 2002 Health (2001 prices and exchange rates) |
|---|---|---|---|
| Australia | 8.6 | 916 | 78.78 |
| Austria | 2 | 488 | 9.76 |
| Belgium | 9.5 | 996 | 94.62 |
| Canada | 5.5 | 2011 | 110.61 |
| Denmark | 8 | 1540 | 123.20 |
| Finland | 17.7 | 434 | 76.82 |
| France | 4.2 | 5125 | 215.25 |
| Germany | 4.4 | 4980 | 219.12 |
| Greece | 3.4 | 253 | 8.60 |
| Ireland | 25.9 | 360 | 93.24 |
| Italy | 2.3 | 2157 | 49.61 |
| Japan | 3.5 | 9731 | 340.59 |
| Luxembourg | - | 139 | - |
| Netherlands | 4.9 | 3068 | 150.33 |
| New Zealand | 3.9 | 110 | 4.29 |
| Norway | 11.2 | 1517 | 169.90 |
| Portugal | 4.3 | 293 | 12.60 |
| Spain | 8.2 | 1559 | 127.84 |
| Sweden | 8.1 | 1848 | 149.69 |
| Switzerland | 4.5 | 863 | 38.84 |
| UK | 11.5 | 4581 | 526.82 |
| USA | 16.2 | 13140 | 2128.68 |
| Total | 8.3 | 56109 | 46575 |

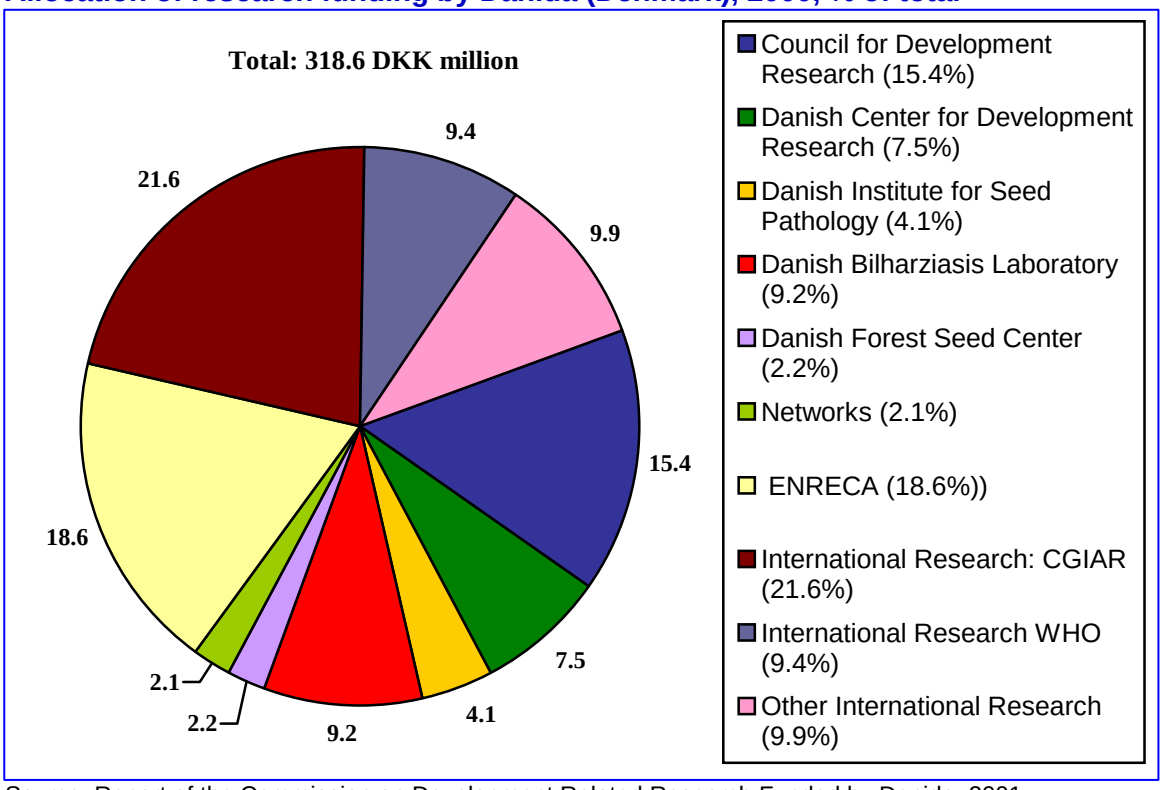
Source: Adapted from 2003 Development Cooperation Report, OECD 2004.

## Sweden

The ODA level has remained relatively stable over the past 10 years from US$ 1,518 million in 1993 (2001 prices and exchange rates) to US$ 1,848 million in 2002. The majority of ODA is administered by the Swedish International Development Agency (Sida): in 2001 3.8 per cent of ODA was allocated for health and population and in 2002 that percentage was up substantially to 8.4 per cent as ODA rose from US$ 1,666 million to US$ 1,848 million [DAC Reports, OECD].

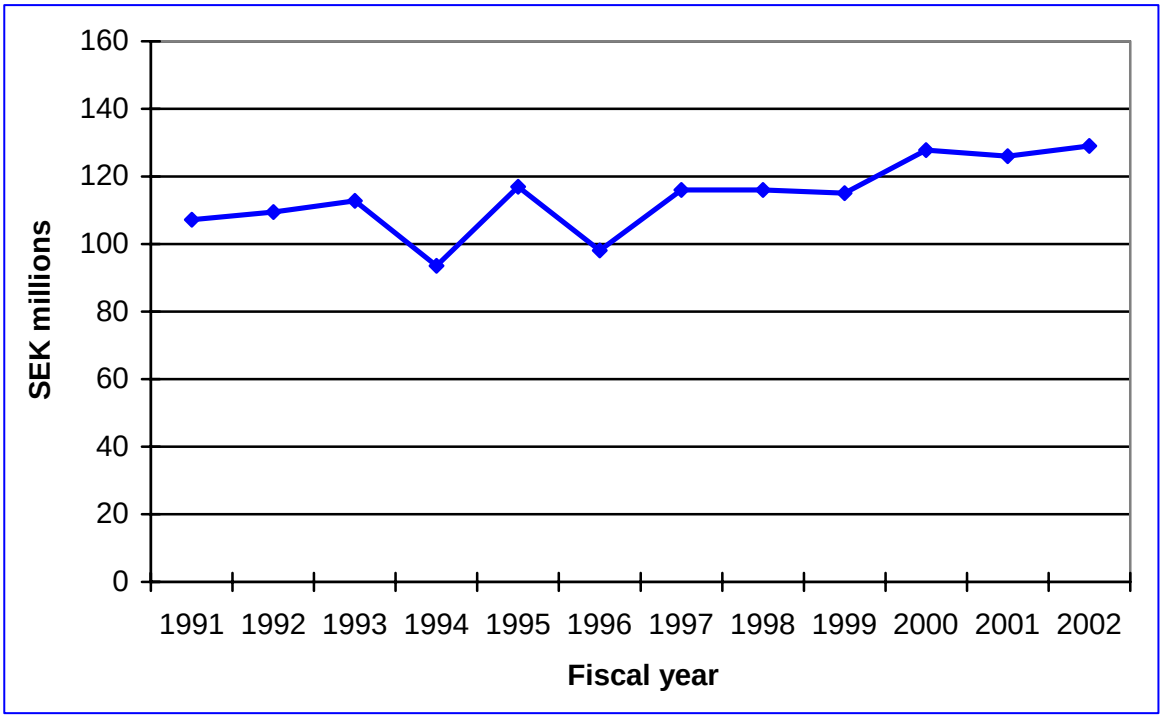
In 2001, from the Sida budget of SEK 11.9 billion, SEK 775 million was allocated for research administered by the Department of Research Cooperation (SAREC) [personal communication, SAREC]. Health research constituted SEK 126.5 million or 17 per cent of the total for research (Facts & Figures 2002, Health Sector, Sida 2003). Since 1999 the amount of funds for health research has shown modest increases (Figure 9). Sub-allocations for health research are found in Figure 10; disease control constitutes the largest sub-sector at 39 per cent while sexual health and rights is the second-largest sub-sector.

**Figure 8**
**Allocation of research funding by Danida (Denmark), 2000, % of total**



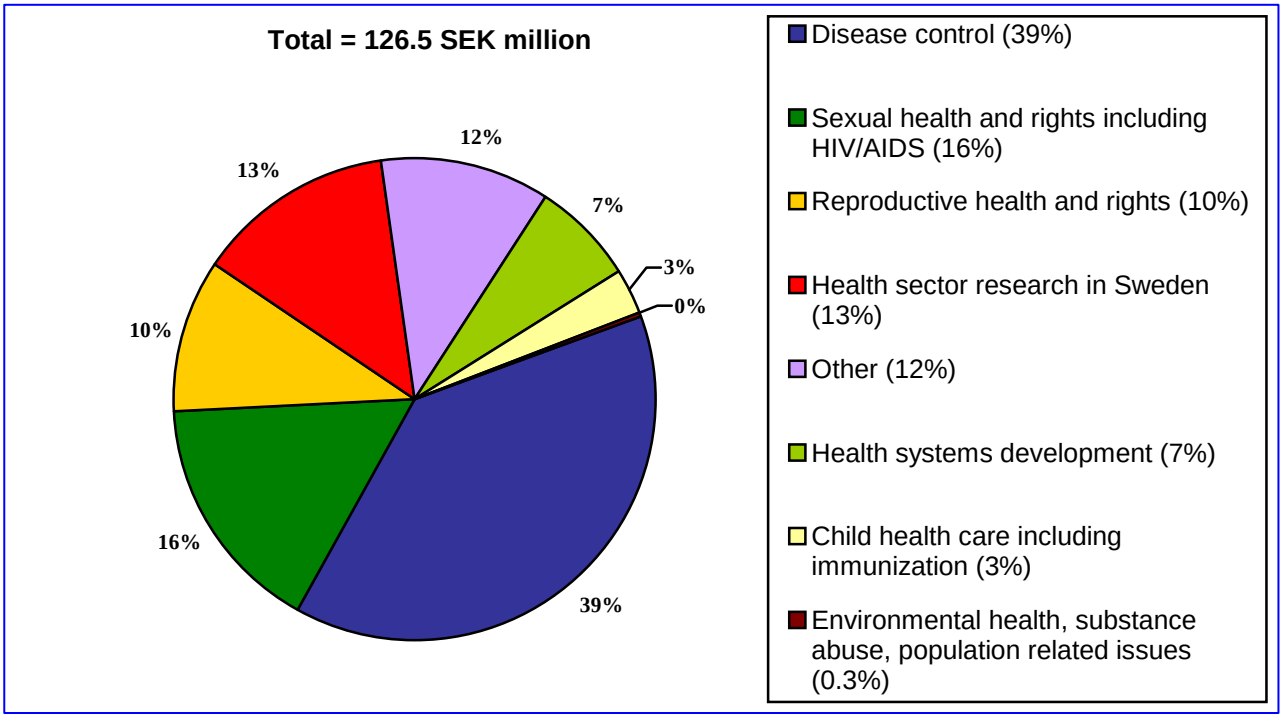

Source: Report of the Commission on Development Related Research Funded by Danida, 2001.

**Figure 9**
**Health research funding trend, Department for Research Cooperation, Sida (Sweden), 1991-2002**




Note: *Fiscal Year 1995/96 was 18 months
Source: SAREC interviews, Facts and Figures 2002, Health Sector, Sida.

**Figure 10**
**Health cooperation by sub-sectors, Department for Research Cooperation, Sida (Sweden), 2002, % of total**




**Source: Facts and Figures, 2001, Sida.**

## United Kingdom

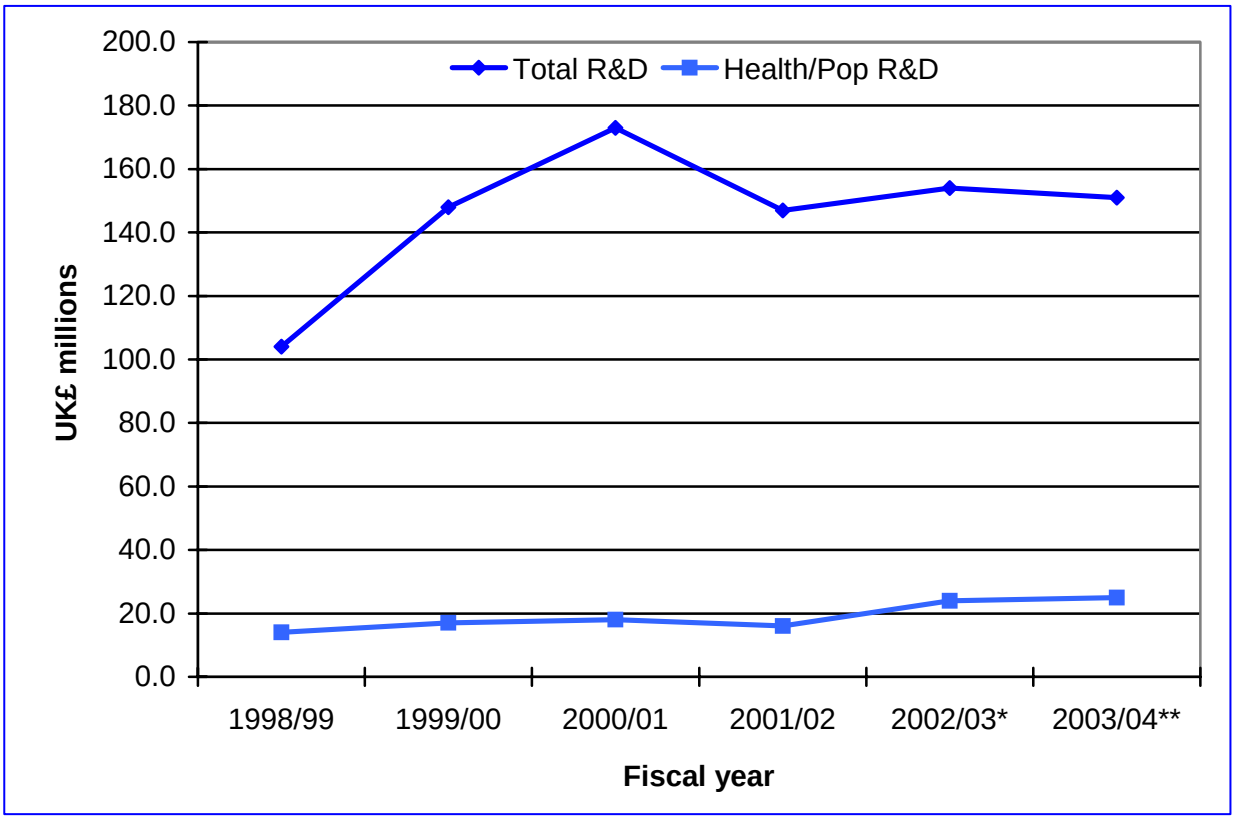
Net ODA disbursements (2001 prices and exchange rates) rose from US$ 3,415 million in 1993 to US$ 4,581 million in 2002. The main executing agency for the United Kingdom aid is the Department for International Development (DFID). Multilateral and bilateral assistance are seen as a continuum and thus not subject to arbitrary allocations. Multilateral disbursements have been about 40 per cent of ODA, mainly due to contributions to the EC (20 to 25 per cent of total ODA). There is stronger interest in accomplishing strategic objectives through other multilateral channels as well [DAC Journal, Volume 2, No. 4, 2001, OECD].

Sector allocation of ODA has been driven by the UN Millennium Development Goals (MDGs), resulting in an increased focus on health and education: 6.9 per cent of bilateral ODA was committed to health in 2001 and rose to 11.5 per cent in 2002. However, the United Kingdom has expressed concern about the proliferation of international funds and partnerships for specific sectoral purposes because of the potential difficulty in mainstreaming commitments [DAC Journal, Volume 2, No. 4, 2001].

In 2003, the management of DFID research units was brought together under a new Central Research Team in the Policy Division with the task of preparing a new strategy for research, taking into account the DFID Research Policy Paper published in 2002. DFID was contacted regarding the new strategy and resource allocations within health research but did not provide data.

Figure 11 depicts the flow of resources for total research and health research from 1998/99 to 2003/04. In 2001/02, DFID spent UK£ 146.6 million (just over US$ 200 million) on research and development, up from UK£ 104 million in 1998/99. Health research expenditures for 2001/02 were about UK£ 16.3 million (US$ 23.5 million), up about 16 per cent since 1998 in UK£ but unchanged in US$ [Forward Looks, 2000-2003].

**Figure 11**
**Research funding trends, Department for International Development/DFID (UK), fiscal year 1998/99 to 2003/04** (UK£ millions)




* 2002-03 provisional
** 2003-04 planned
Sources: Forward Looks 2000, 2001, 2003

## United States

In 2002, 98 per cent of ODA was distributed to eight government agencies. USAID received half, Department of State 18.6 per cent (mainly multilateral assistance), Department of Treasury 10.7 per cent and other agencies 20.3 per cent. This represents a greater dispersion of ODA than in 1998 when USAID received 64 per cent of total ODA gross disbursements [DAC Journal, 2002].

Non-official American aid plays an important role in worldwide development assistance but is poorly tracked. The USA accounts for 50 to 60 per cent of all private transfers from DAC countries, including those from corporations, foundations and academic institutions. Foundations such as the Bill and Melinda Gates Foundation and the Howard Hughes Medical Research Institute have taken on important roles in international health research. Private non-concessional flows to developing countries totalled US$ 28 billion – about two and a half times the size of official US aid to the same countries [DAC Journal, 2002].

In 2002, the USA provided evidence of a greater commitment to development cooperation [DAC Journal 2002, Volume 3, No. 4, OECD].
President George W. Bush launched the Millennium Challenge Account. Funding for this new initiative, administered by the Department of the Treasury and implemented through the Millennium Challenge Corporation, is projected to grow to a total of US$ 5 billion by 2006 which would

increase ODA by about 50 per cent over 2002 levels. Funds will be used to combat poverty and advance the MDGs, with HIV/AIDS identified as a sector issue of interest.

The National Security Strategy was made public in 2002, with development cooperation an integral and explicit part of the strategy.

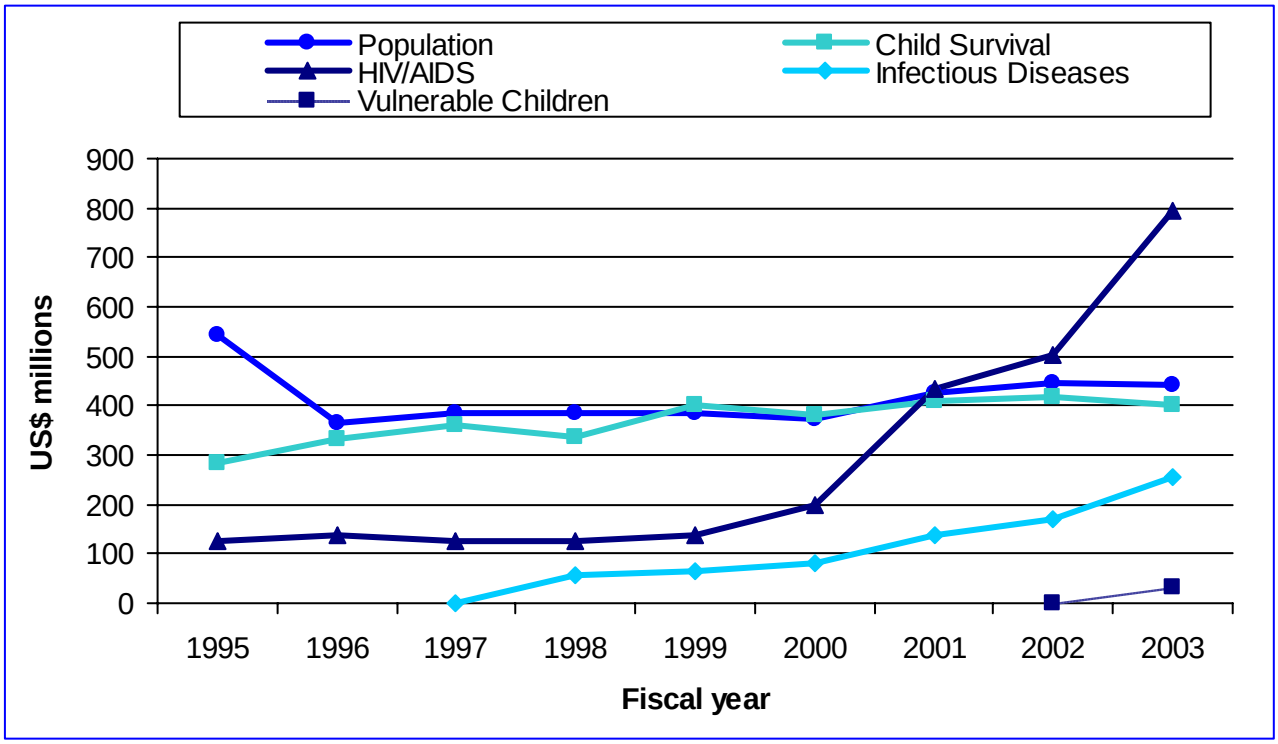
The proportion of multilateral aid declined from 29.4 per cent in 1998 to 23.6 per cent in 2001; 11 per cent was channelled through UN agencies and 7 per cent through the World Bank Development Cooperation [DAC Journal, 2002, Volume 3, No. 4, OECD].

The United States allocates a large (35 per cent in 1999/2000) and expanding contribution to the social sector, especially education and health, including child health and family planning. Efforts continue to expand through its strong support for the Global Fund for HIV/AIDS, Malaria, and Tuberculosis (GFAMT), the Global Alliance for Vaccines Initiative (GAVI), and prevention of mother-to-child transmission of HIV.

Over the three-year period 1998/99 to 2000/01, the USAID health budget (funding for child health, infectious diseases, nutrition, population and HIV/AIDS) rose each year – from US$ 19 billion to US$ 1.1 billion and US$ 1.4 billion. During this same period, overall USAID funding levels fell – from US$ 7.3 billion in fiscal year 1999, to US$ 6.8 billion in fiscal year 2000 and up slightly to US$ 6.9 billion in fiscal year 2001 [personal communication, USAID].

Allocations by health sub sector from 1995 to 2003 are shown in Figure 12. Funding levels for family planning and child survival have remained relatively stable. Funding for infectious diseases increased steadily, while HIV/AIDS funding more than tripled by the end of the three-year period.

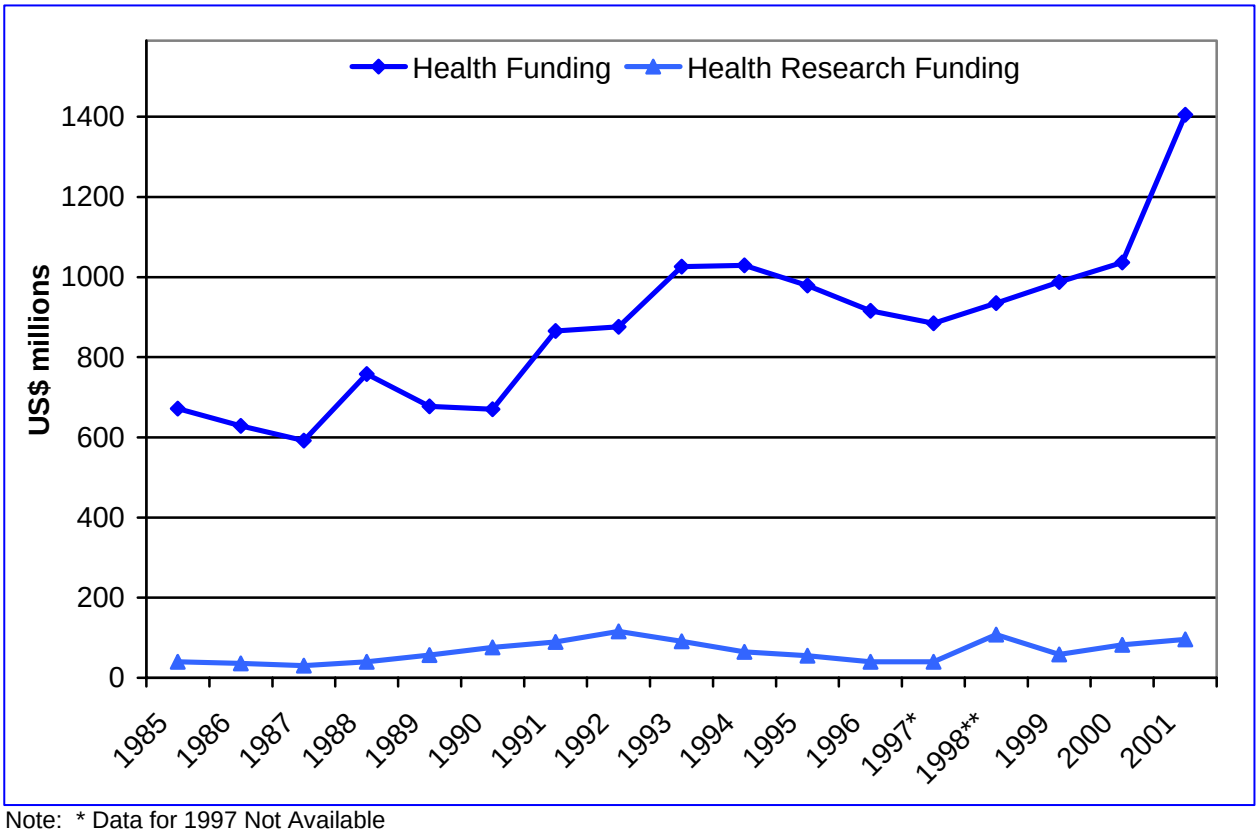
**Figure 12**
**Resource flows for health sub sectors, USAID (United States), 1995-2003**




Source: Financial data from USAID

Research levels dropped significantly in 1999 compared to 1998, but rose over the three-year period from fiscal years 1999 to 2001, resulting in a 66 per cent increase (Figure 13). Of the US$ 1.4 billion health budget in 2001, an estimated 7 per cent or US$ 96 million is attributable to health research funded by the Bureau for Global Health. Priority areas include: population, maternal health, infant and child health (acute respiratory infections, diarrhoea, and nutrition), HIV/AIDS, and infectious diseases (Figure 14). The estimate does not include research funded by Regional Bureaus or field missions and thus represents an underestimate of total research funded by USAID [personal communication, USAID].

**Figure 13**
**Health and health research funding trends, USAID (United States), 1985-2001**

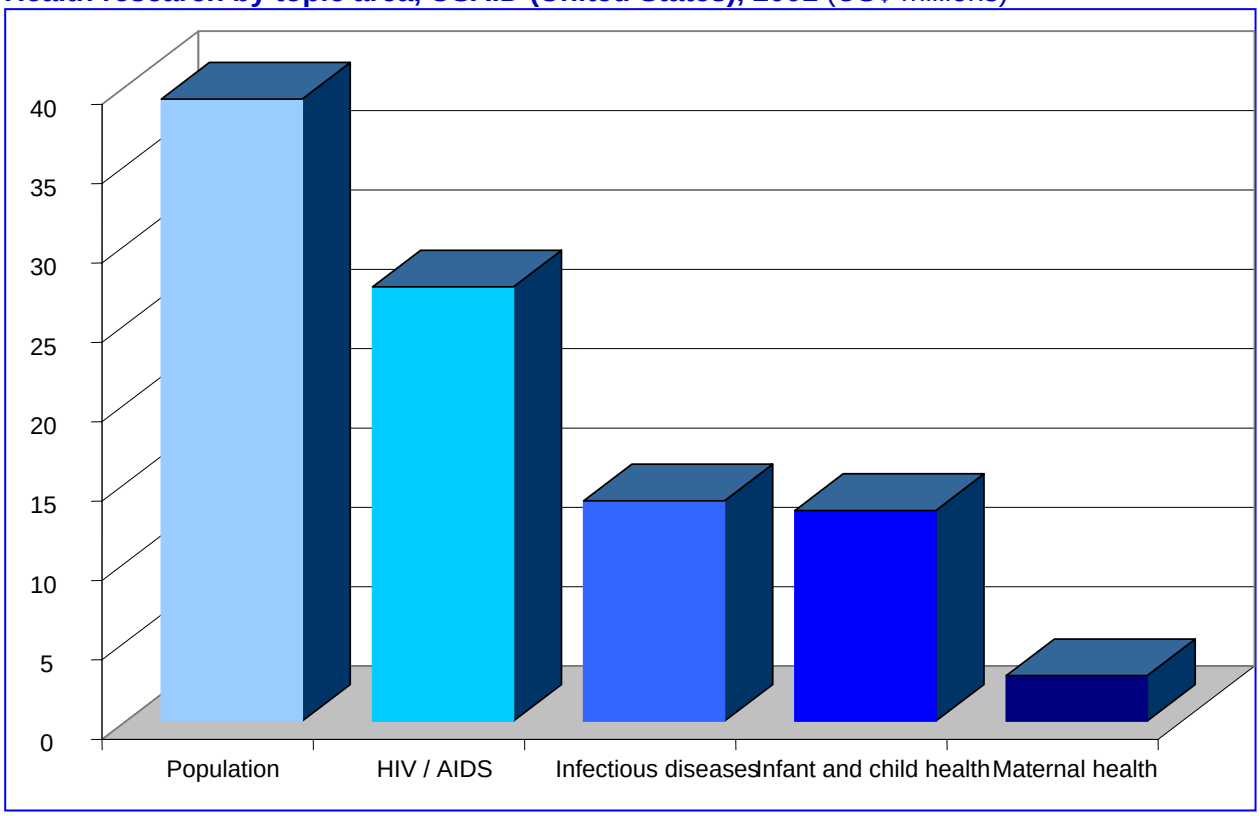



Note: * Data for 1997 Not Available
** NMS data, corrected for PHN
Source: ACSI, NMS, CIHI, Interviews and Other USAID Financial Reports

## Canada

In 2000, 79 per cent of international assistance (or 63 per cent of total official aid and official development aid) was managed by the Canadian International Development Agency (CIDA) under the Minister for International Cooperation. Other departments and agencies to administer ODA include Department of Finance (9 per cent), International Development Research Centre (4 per cent) and Department of Foreign Affairs and International Trade (4 per cent). In 2000, the CDN$ 1.8 billion for international assistance was a significant reduction from a peak of CDN$ 3.2 billion in the 1980s. Canadian ODA declined steeply from 0.45 per cent (the ODA/GNI ratio) at the beginning of the 1990s to 0.22 per cent in 2001. Funding and policy decisions by the Canadian government in 2002 intend to increase the ODA/GNI ratio to about 0.35 per cent by the end of the decade [DAC Journal, 2002, Volume 3, No. 4, OECD].

**Figure 14**
**Health research by topic area, USAID (United States), 2001** (US$ millions)



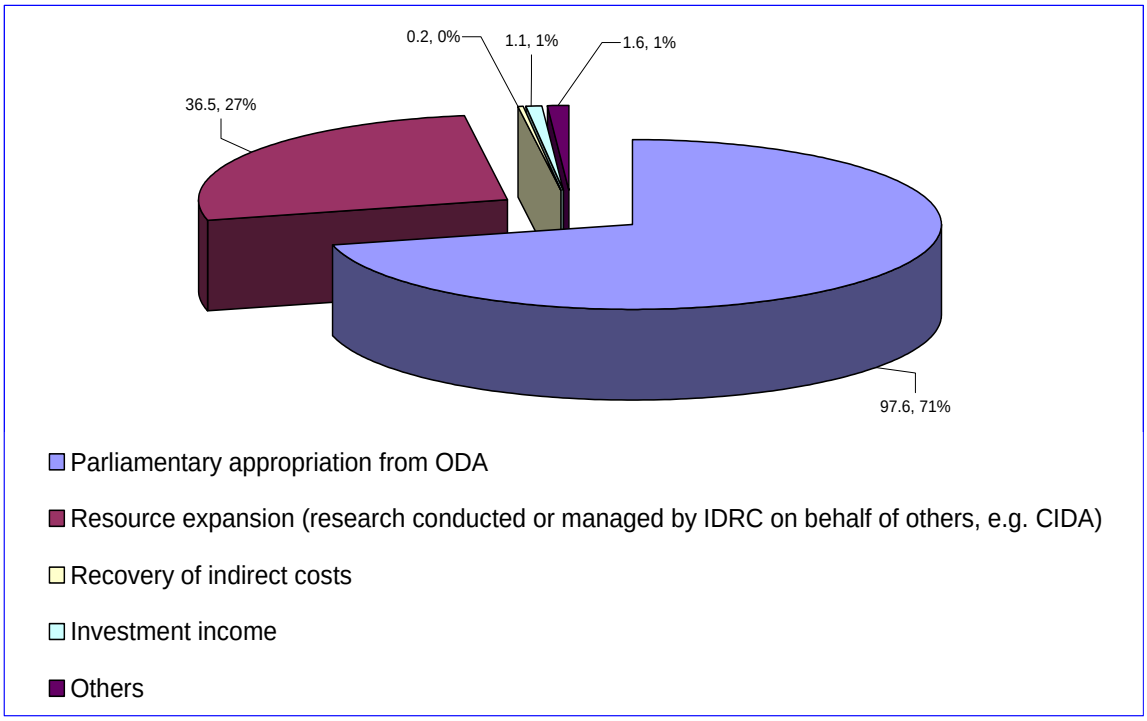

*Source*: HIDN from FY2001 EAC, PRH from expenditure report

CIDA plays the lead role for development assistance programme implementation while IDRC plays the lead role for research related to development. The DAC review of Canadian ODA noted that IDRC has realized major achievements in support of knowledge development in developing countries and that "CIDA could more explicitly draw from IDRC's work in formulating its own bilateral country strategies, especially relating to health." For 2000/01, the IDRC budget was CDN $91 million with CDN $60 million coming from the Canadian Parliament [DAC Journal, 2002, Volume 3, No. 4]. Other revenues are derived from external resource mobilization, which includes funding from CIDA, other donor agencies, and the private sector (see Figure 15).

Significant decreases in overall ODA resulted in decreased government allocations in the 1990s and the health sector suffered dramatic declines through 2000 (see Figure 16). However, funding for health research has been restored close to early 1990s levels in absolute terms. Health research disbursements in 2003/04 were at a level of CDN $9.5 million with provisional forecasts CDN $12 million for 2004/05. The health research budget has also increased as a share of the IDRC research budget. For example, in 1999/2000 health research was 6.7 per cent of the IDRC budget, and in 2002/03 had risen to 13.6 per cent [personal communication, IDRC].

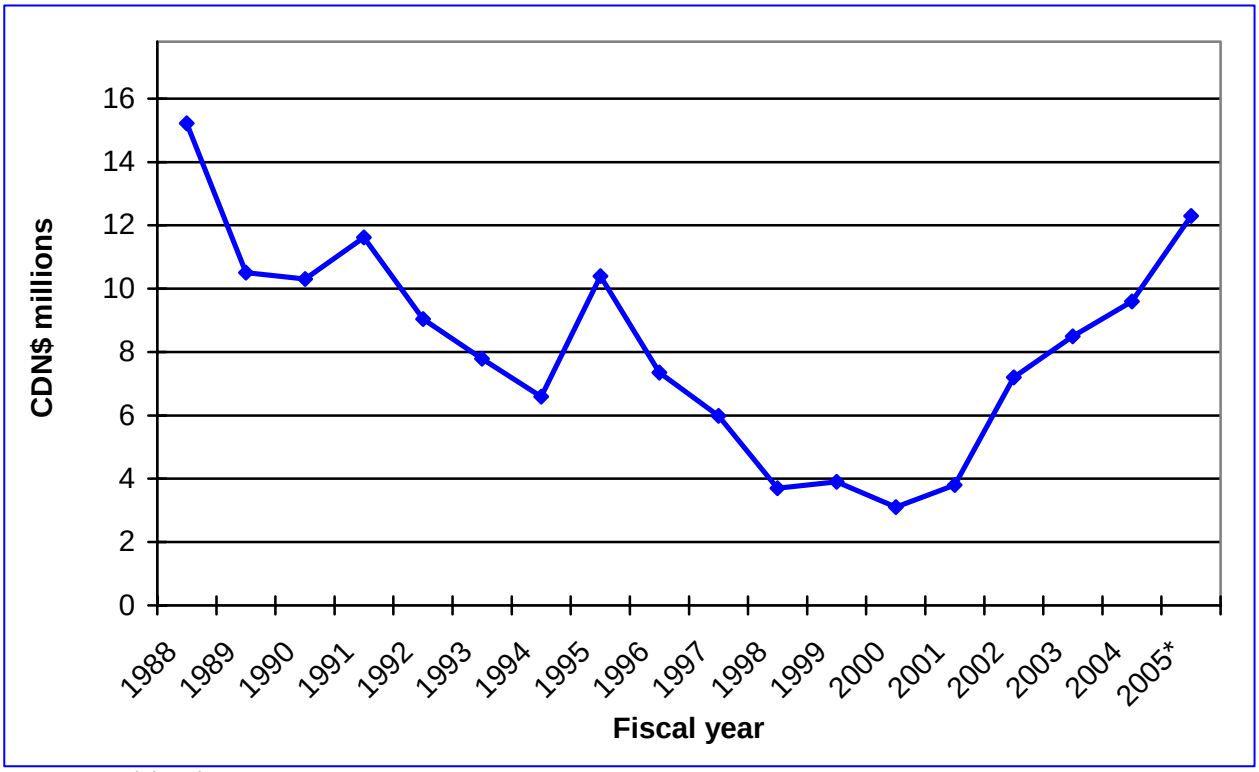
The restructuring of IDRC into interdisciplinary teams charged with implementing cross-sectoral research makes resource flows for health research difficult to track. IDRC supports health research mainly under broad areas called Program Initiatives (see **Table 4**). IDRC core health research funding is directed by two Program Initiatives – Governance, Equity and Health (GEH) and Ecosystem Approaches to Human Health (Ecohealth). Both of these initiatives have contributed to the rapid growth in health research since 2001 (Figure 16).

**Figure 15**
**Sources of income, IDRC (Canada), 2002/03** (%/CDN$ millions)




Source: Annual Report

**Figure 16**
**Health research funding trends, IDRC (Canada), 1988-2005** (CDN$ millions)




Note: * Provisional
Sources: IDRC financial reports.

**Table 4**
**Health research budget allocations by programme initiative, IDRC (Canada), 1999/00-2004/05**

| Program Initiative (PI) | 1999/00 | 2000/01 | 2001/02 | 2002/03 | 2003/04 | 2004/05 |
|---|---|---|---|---|---|---|
| Governance, Equity and Health (GEH) *Note: PI did not exist before 2001-2002* | | | 2,298,038 | 2,543,615 | 3,196,903 | 4,800,000 |
| Ecosystem Approaches to Human Health (ECOHEALTH) | 2,115,984 | 2,447,102 | 3,330,500 | 3,344,737 | 4,223,951 | 7,500,000 |
| Research for International Tobacco Control (RITC) | 540,810 | 13,984 | 483,287 | 349,596 | 24,420 | |
| Trade, Employment, and Competitiveness | | 7,792 | | 123,000 | 212,300 | |
| Micro Impacts of Macroeconomic and Adjustment Policies | | | | 490,800 | 431,420 | |
| Communities and the Information Society in Africa Program Initiative (Acacia) | 487,904 | 452,300 | 10,247 | | 600,000 | |
| Research on Knowledge Systems (ROKS) | | | 100,000 | 200,000 | 875,000 | |
| Tanzania Essential Heath Interventions Program (TEHIP) | | 550,000 | 802,507 | 1,500,000 | | |
| Other | | 304,999 | 213,636 | | | |
| **Total** | **3,144,698** | **3,776,177** | **7,238,215** | **8,551,748** | **9,563,994** | **12,300,000** |

Source: Financial reports provided by IDRC

There is a growing trend for programme initiatives that are not primarily focused on health to nonetheless direct funds to health research. For example, health projects funded under “Trade, Employment and Competitiveness” include workshops on research needs and priorities in trade in health services in Latin America and the Caribbean. Funding from the Information and Communication Technologies programme include health applications such as distance medical diagnosis in rural Mongolia and the use of ICT in anti-AIDS campaign in South Africa [personal communication, IDRC].

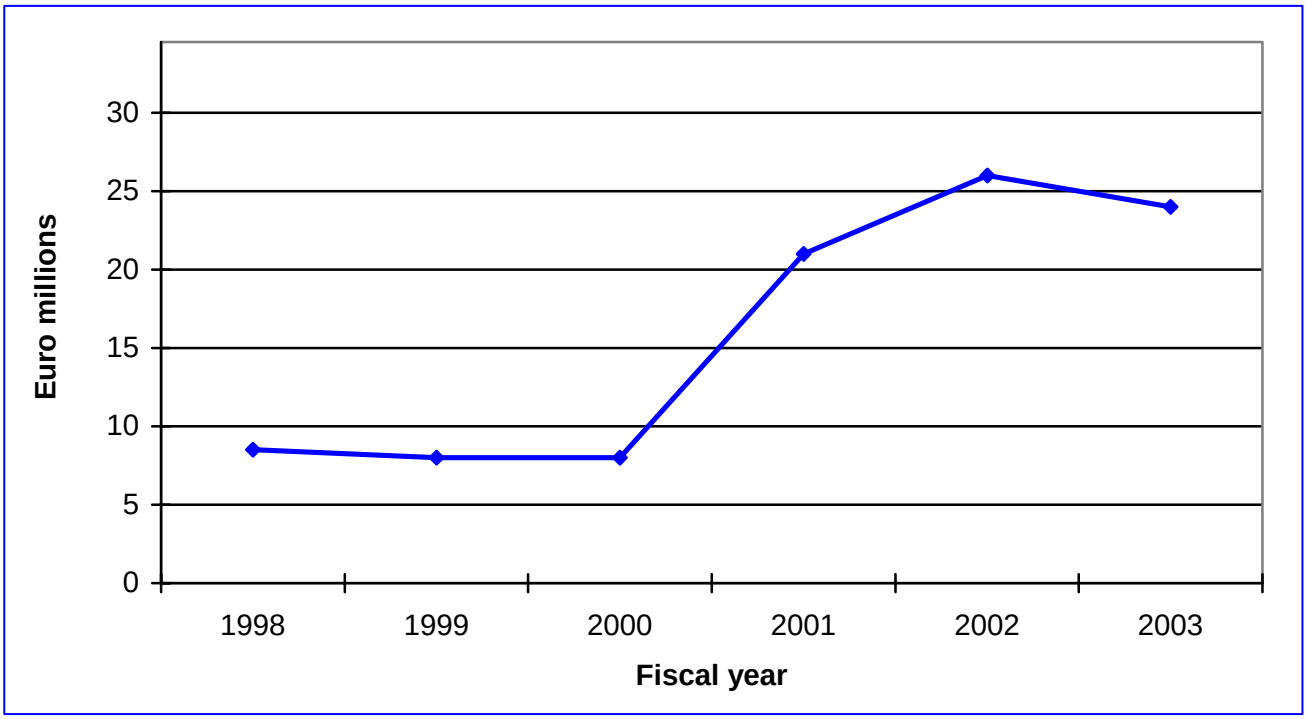
## France

ODA net disbursements (at 2001 prices and exchange rates) declined from US$ 6,726 million in 1993 to US$ 4,198 million in 2001: 5 per cent was allocated for health and population in 2001, up from 3.2 per cent in 1998. ODA rose by 22 per cent in real terms in 2002 but the allocation for health and population declined to 4.2 per cent [Development Co-operation Reports, OECD].

The Institute for Research for Development (IRD – formerly ORSTOM) is a public research institute under the joint authorities of ministries in charge of research and overseas development. IRD engages in three main science and technology activities: research, training and consultancy. Allocations from the government to IRD declined from US$ 175 million in 1998 to US$ 148 million in 2001 but increased in 2002 and again in 2003 to a level of US$ 190 million. Of the total IRD budget of about US$ 160 million, 91 per cent came in the form of institutional funds from government and the rest from other sources which were, in fact, largely other government ministries with some also from the European Union. Nearly half of IRD funds are spent in France [IRD Annual Report].

IRD is responsible for all R&D funds for health and life sciences for developing country institutions in the annual health R&D budget managed by its Societies and Health Division. For the purposes of this report, only IRD funds specified for health (not life sciences) are shown in Figure 17. By 2001, funds for health research had more than doubled from the 1998 level and by 2003 they were triple the 1998 level. There is no published breakdown by area of research.

**Figure 17**
**Health research funding trend, Institute for Research for Development (France), 1998-2003**
(Euro millions)




Sources: Report of the National R&D Survey

## Germany

ODA volume and ODA/GNI ratios declined in the 1990s due to the continuing fiscal policies of the new government and the financial burden of German reunification. There were slight increases in ODA volume in 1999 and 2000. ODA reached a level of US$ 5.3 billion in 2002 and now appears stable (see Figure 18).

ODA funds are disbursed to multiple ministries with each ministry making decisions as to its own development cooperation activities [DAC Journal, 2001, Volume 2, No. 4, OECD]. The Federal Ministry for Economic Cooperation and Development (BMZ) is the main executing agency for German aid. BMZ disburses most of its ODA to UN agencies, the European Development Fund (EDF), KfW Banking Group, Agency for Technical Cooperation (GTZ) and NGOs. Its ODA budget declined through 2002 even as its overall budget increased because of official aid directed to Central and Eastern Europe and the Newly Independent States (NIS) of the former Soviet Union. [DAC Journal 2001, Volume 2, No. 4, OECD].

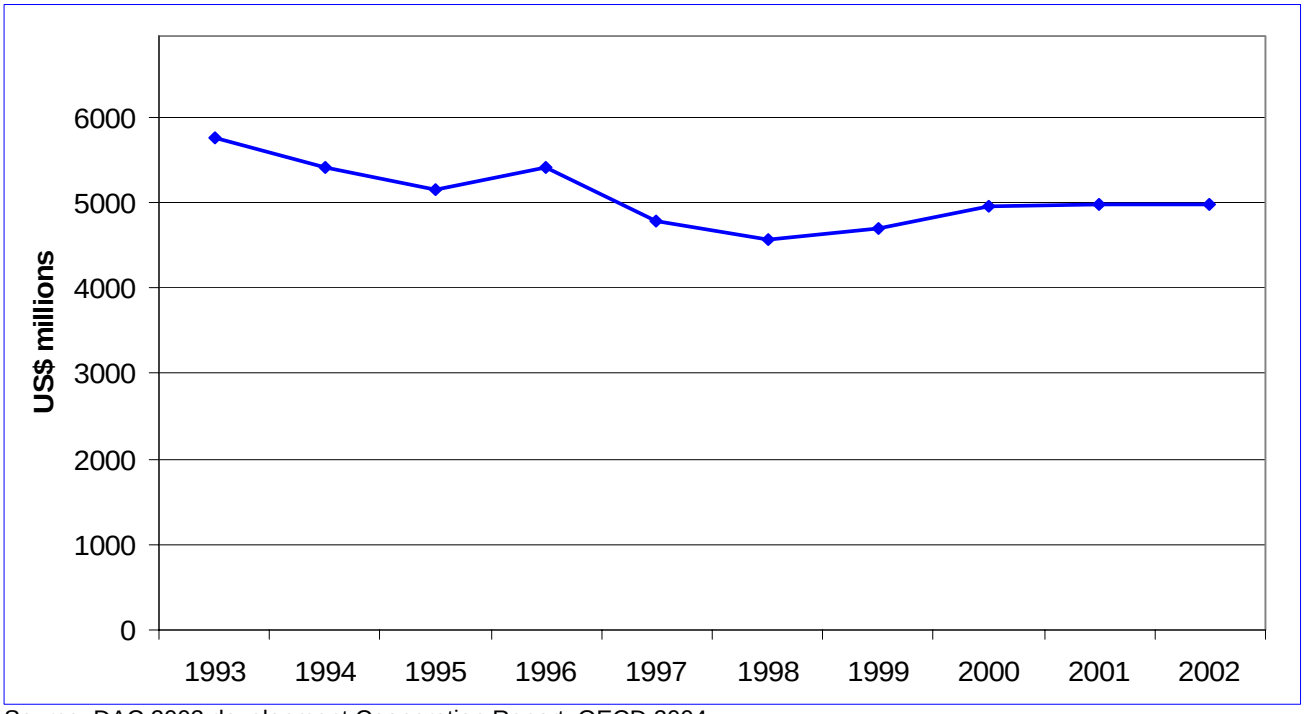
Germany's view that its development assistance should be seen within the context of globalization has led to increased cooperation with multilateral institutions, particularly the EC. Multilateral contributions (one third of ODA) favour funding the EC as a vehicle of development cooperation –

funds are disbursed directly to the EC and do not pass through BMZ. The German contribution to the EC development cooperation budget is the largest of all EC members in absolute numbers and increasing. In the past, the German contribution has gone mainly to EDF and the European Investment Bank (EIB) [DAC Journal 2001].

BMZ states that support towards the health sector is crucial to poverty reduction but actual German allocation to the sector is low (for example, 3.5 per cent of total bilateral ODA in 2001 and 4.4 per cent in 2002). Although Germany recognized the challenges of the HIV epidemic in developing countries, it contributed only US$ 199 million to the disease between 1987 and 1997 [DAC Journal 2001]. However, it budgeted US$ 133.7 million for HIV in 2003 [Progress Report on the Global Response to HIV/AIDS Epidemic, 2003] – a contribution surpassed, among HIC investors, only by the United Kingdom and the United States.

No data were obtained on total levels of health research funding within health ODA. German support for health research included contributions to UNFPA, WHO and co-sponsored programmes such as the Special Programme for Research and Training in Tropical Diseases (TRD) co-sponsored by UNICEF, UNDP, the World Bank and WHO. Voluntary contributions to these programmes have been especially affected by pressure on the German aid budget and consequently have been falling [DAC Journal 2001].

**Figure 18**
**ODA net disbursements by Germany at 2002 prices and exchange rates, 1993-2002**
(US$ millions)




Source: DAC 2003 development Cooperation Report, OECD 2004

## Norway

The Ministry of Foreign Affairs plays the lead role in administering ODA and directly manages bilateral and multilateral ODA while the Norwegian Agency for Development Cooperation (NORAD) manages the support to NGOs, civil society and development research [personal communication, NORAD]. Total development assistance, bilateral assistance and multilateral assistance have

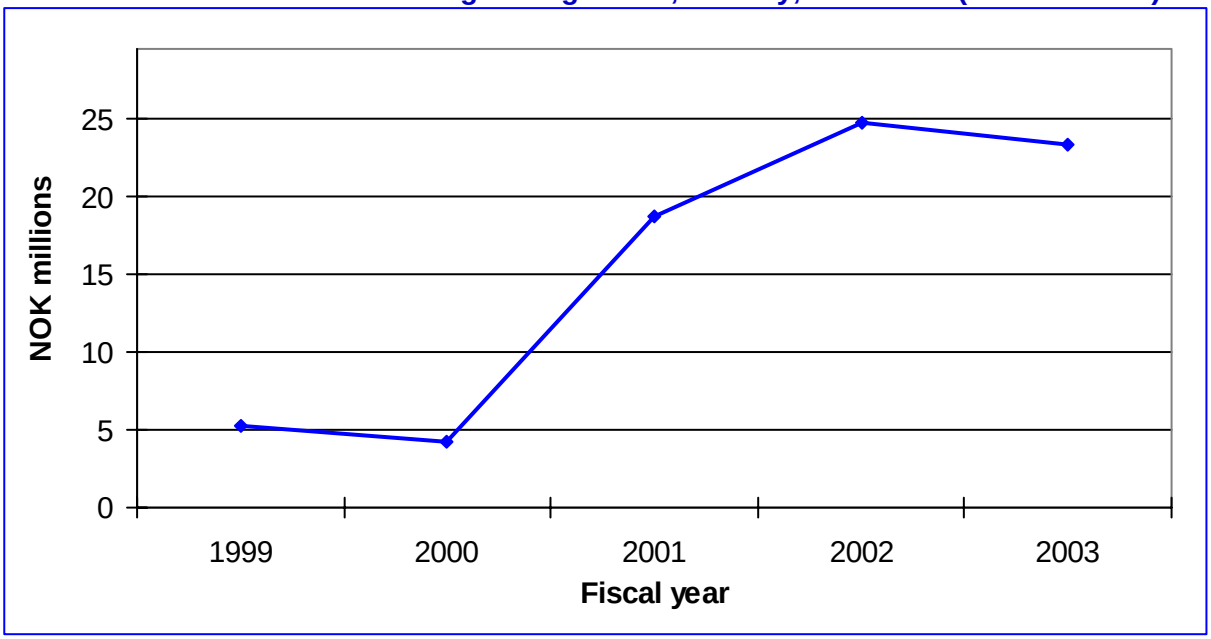
remained relatively stable since 1997. However, in 2000 Norwegian ODA decreased by 9.6 per cent, mainly due to exchange rate fluctuations, and in 2002 increased by 13 per cent in real terms to US$ 1.7 billion.

Health is one of the highest priorities for the Norwegian development cooperation. In 2001, 11.9 per cent of Norway's bilateral budget was spent on health. That year Norway contributed NOK 199.8 million to GAVI. Norway also supported efforts to combat diseases such as TB, polio and HIV/AIDS [NORAD Annual Report 2001].

NORAD cooperates with the Norwegian Council for Higher Education's Programme for Development Research and Education (NUFU) to support health research. Academic institutions in the South and Norway conduct cooperative activities in joint research, research training, development of graduate programmes, and training of technical and administrative staff. Fields of research include health and medical sciences, social science, and technology (NUFU website). Norway provides support for health research through its voluntary contributions to co-sponsored programmes such as TDR and HRP (the UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction). Norway also contributes to research through its contributions to nongovernmental partnerships and initiatives such as the Global Forum for Health Research, the Alliance for Health Policy and Systems Research, and the International AIDS Vaccine Initiative (IAVI).

NORAD does not track its health research funding broadly nor does it track research as a subset of disease funding. However, it does track general medical research. Norway's budget for general medical research increased dramatically from NOK 4.2 million in 2000 to NOK 18.7 million in 2001. General medical research increased sharply again in 2002 to a level of NOK 24.7 million, decreasing slightly in 2003 (see Figure 19) but it is expected to maintain these higher levels or rise in the future [personal communication, NORAD]. Since general medical research is only one field of health research captured and ministry funds for research managed by the Norwegian Research Council were not included in those Figures, the research allocations for Norway are underestimated.

**Figure 19**
**General medical research funding through ODA, Norway, 1999-2003 (NOK millions)**




Source: NORAD Annual Report, DAC Reports, personal communication

## Japan

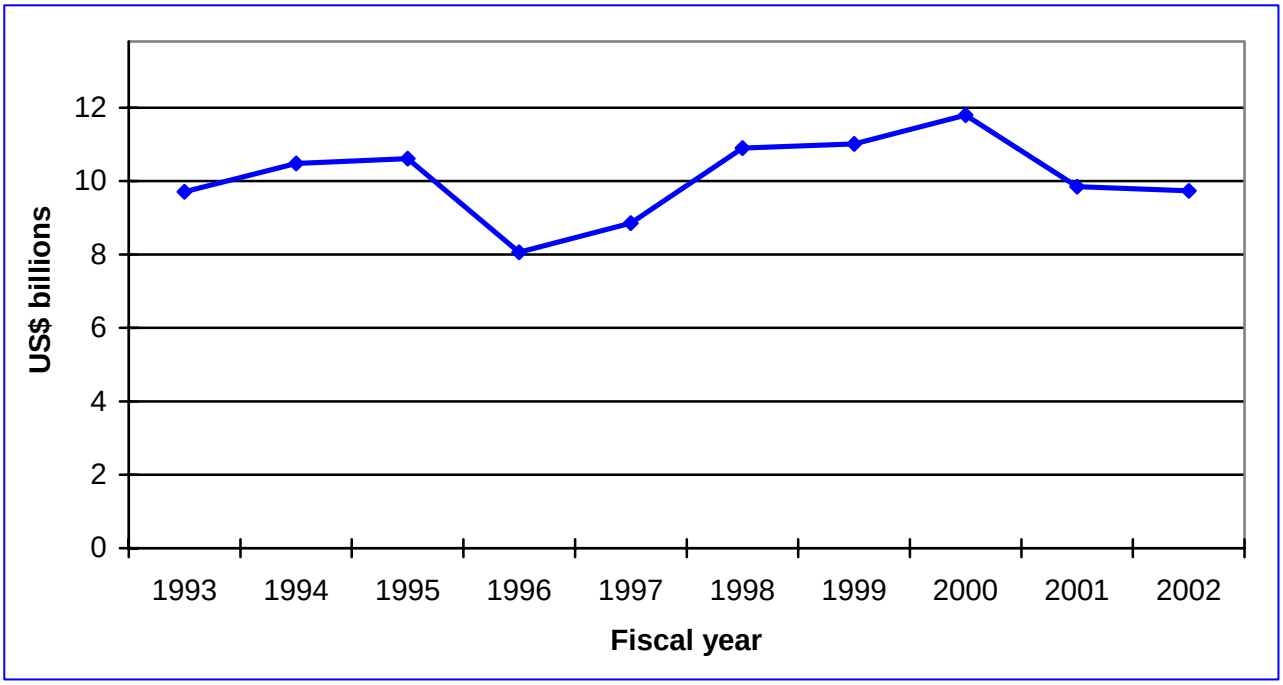
The ODA budget is allocated to 13 government ministries and agencies, which makes resource flows tracking difficult. The Ministry of Foreign Affairs (MOFA) is the largest recipient of ODA funds and channels funds to the Japan International Cooperation Agency (JICA) as well as multilaterals [JICA Annual Report, 2001]. Japan was the leading DAC donor in volume of ODA throughout the 1990s. In 2001, Japan ODA fell 17 per cent in real terms, largely due to a 12.7 per cent depreciation of the yen from 2000 to 2001.

In 2001, of total ODA of YEN 1,015,221 million in 2001, MOFA received about half and JICA received a portion of that – YEN 179,040 million [JICA Annual Report, 2001].

In 2001, Japan's ODA level (at 2001 prices and exchange rates) was US$ 9.8 million – down from a high of US$ 10.6 million in 1995 (see Figure 20). In 2001, Japan contributed 2.5 per cent of its bilateral ODA to health and 0.1 per cent to population – for a total of 2.6 per cent, among the lowest of DAC member countries. In 2002, Japan's combined contribution to health and population rose to 3.5 per cent, well below the DAC average of 8.3 per cent [Development Co-operation Reports 2003 and 2004].

In MOFA there is no official budget for health research but there are parts of budgets that include research activities and research training; some of these research funds are managed by the Ministry of Health and Welfare and Ministry of Education. Examples of ODA-supported research can be found at the following institutions: the National Institute of Health in Thailand; Kenya Medical Research Institute; Noguchi Memorial Institute for Medical Research in Ghana; University Teaching Hospital in Zambia. The major purpose of this support is technology transfer and capacity development of research and laboratory technicians. These activities are not identified and tracked as "health research" so it is not possible to report on their resource flows [personal communication, Ministry of Foreign Affairs].

**Figure 20**
**ODA net disbursements by Japan, 1993-2002, at 2001 prices and exchange rates**
(US$ billions)




Source: "2003 Development Cooperation Report" OECD 2004.

## Netherlands

The ODA budget has been growing, with an average level of 0.8 per cent of GNP over the last several years. ODA totalled US$ 3.2 billion in 2001 and US$ 3.3 billion in 2002, up from US$ 2.3 billion in 1993 (at 2001 prices and exchange rates). ODA constitutes about 73 per cent of the total International Cooperation budget. The Dutch assistance programme relies on these main delivery channels: 30 per cent is moved through multilateral organizations and 70 per cent is spent bilaterally; 35 per cent of the bilateral ODA and 23 per cent of total ODA is available for the private sector [DAC Journal Volume 2, No. 3 and Development Cooperation Report 2003, OECD].

The 30 per cent of Dutch ODA channelled through multilateral organizations in 2001 is expected to rise as a way to help disburse an expanding aid budget. This direction takes into account organizational capacity constraints and a long-standing belief in the value-added of multilateral aid knowledge and experience, reduced burden on recipient countries and ease of coordination. In 1999, multilateral contributions were allocated as follows: 25 per cent to UN agencies; 25 per cent to the World Bank; 25 per cent to EU development programmes; 25 per cent to others [DAC Journal 2001].

ODA passes through the Ministry of Foreign Affairs (MOFA) with the ministers of Foreign Affairs and Development Cooperation providing the vision and strategy for development cooperation. The Directorate General for International Cooperation (DGIS) is the organizational heart for development cooperation. Aid has been focused on a reduced number of countries to increase aid effectiveness, i.e. 53 countries in 2001, down from 1,000 in 1997. In 2001, 5.7 per cent of ODA was allocated to health and population and, in 2002, 4.9 per cent [DAC Journal 2001 and Development Co-operation Reports, OECD].

The Netherlands Foundation for Advancement of Tropical Research (WOTRO) – part of the Netherlands Organization for Scientific Research (NWO) – receives funding from NWO and MOFA. The WOTRO mission is to initiate, enhance and fund high-quality scientific research in tropical regions, with an emphasis on societal relevance. WOTRO supports multidisciplinary research related to four themes, one of which is health [WOTRO website]. WOTRO did not respond to a request for health research data.

## Spain

ODA is channelled through the Ministry of Foreign Affairs (State Secretariat for International Cooperation and Latin America, SECIPI) and through the Ministry of Economy (State Secretariat for Trade and Tourism). The main executing agency is the Spanish Agency for International Cooperation (AECI) which is attached to the Ministry of Foreign Affairs through SECIPI [DAC Journal 2002, Volume 3, No. 2].

The net ODA of Spain more than quadrupled in real terms from 1988 to 1994 but has not grown substantially since 1994. ODA volume (in terms of absolute number of dollars) decreased by 10 per cent in real terms to US$ 1.7 billion in 2002. Multilateral aid increased from 27 per cent in 1996 to 34 per cent in 2000. Increases were mainly directed towards the EC which received three quarters of Spanish multilateral aid in 2000. More than half of bilateral aid was disbursed to the social sector, with 29 per cent channelled through NGOs [DAC Journal, 2002].

In 2001, of total bilateral aid of US$ 1.7 billion, 6.7 per cent was allocated to health and 0.5 per cent to population. Most of the health aid targets tertiary health facilities and includes construction of clinics and hospitals and provision of equipment rather than basic health services and health research [DAC Journal 2002]. AECI did not respond to a request for health research data.

**Table 5**
**Top 10 country recipients of EC bilateral ODA, in order of magnitude of support, 1989/1990 and 1999/2000**

| | 1989/1990 | 1999/2000 |
|---|---|---|
| 1 | Cote d'Ivoire | F. R. of Yugoslavia (including Kosovo) |
| 2 | Cameroon | Morocco |
| 3 | Mozambique | Bosnia and Herzegovina |
| 4 | India | Ex-Yugoslavia States |
| 5 | Ethiopia | Egypt |
| 6 | Bangladesh | Tunisia |
| 7 | Sudan | South Africa |
| 8 | Egypt | Turkey |
| 9 | Congo | Albania |
| 10 | Kenya | Macedonia/FYROM |

Source: OECD

## European Commission

The evolving role of the EC in development cooperation merits special attention. The source for the following information was the review of the European Community by DAC as published in the DAC Journal, Volume 3, 2002.

EC policies on external relations, along with administrative arrangements, have been evolving as the EC has enlarged. The shift in geographic emphasis in development cooperation partly reflects the perspectives of new EU entrants as well as the changing role of development policy. Two approaches to development cooperation are evident: a regional approach based on historic linkages with former colonies and neighbouring countries and a global approach whose principal aim is the reduction of poverty in developing countries. There is an ongoing debate about the balance of these approaches.

Currently, allocations of the external relations budget reflect geopolitical considerations rather than population size and poverty. The main recipients of bilateral ODA (EC to recipient country) changed dramatically over a single decade as Table 5 shows. In 1989/90, the top 10 recipients were all LMIC countries. In 1999/2000, five of the top 10 recipients were countries in Eastern and Central Europe and four were Mediterranean neighbours (Turkey, Morocco, Tunisia, and Egypt). Of the Top 10 recipient countries in 1989-90, eight saw their budgets fall in 1999/2000.

EC reform, initiated in the 1990s, has had a major impact on the organization of the external aid programme. The Europe Aid Cooperation Office (AIDCO) manages most of the programmes for development with oversight from the directorates general of External Relations and Development. AIDCO also manages programmes funded by EDF. AIDCO programmes include health, population and HIV but the programmes are highly integrated into social-sector wide approaches (SWAPs) and national poverty reduction strategies (PRSPs). Programmes are administered by regional committees, based at EC headquarters in Brussels.

Member countries primarily contribute to EC ODA disbursements through EDF or contributions to the EC budget. The EC provides funds for External Relations, a broader category than ODA. There are two main funds for External Relations activities: External Action and Pre-accession Aid. A simplified version of the flow of resources via these two pathways is described in Figure 21. EDF provides funds to the Humanitarian Aid Office of the European Commission (ECHO) and AIDCO for African, Caribbean and Pacific countries. As of 2001/02, AIDCO was managing programmes at

US$ 6 to US$ 7 billion per annum. Implementation of external assistance in countries is organized through EU delegations.

Net disbursements by EC bilateral ODA since 1984 are shown in Figure 22. The net contributions by EU Member States to total ODA disbursements have been rising since 1990. EC net ODA in 2000 was US$ 4.9 billion, an increase in real terms of 13.4 per cent from 1999. Although total bilateral net ODA disbursements by EU Member States fell in the early 1990s, they have been rising since the late 1990s and in 2000 constituted almost half of the DAC total volume.

It has become difficult, if not impossible, to identify health funds and health research funds expended within development cooperation. However, EC does report its health allocation to DAC. In 2000, EC reported that 5 per cent of its ODA funds went to health, below the DAC average of 6 per cent. In 2002, EC reported a slight rise to 5.3 per cent while the DAC average increased to 8.3 per cent. Health research does not appear to be tracked, monitored or reported as of 2001. It is assumed that policy research and operations research occur within programmes implemented under the regional committees but this could not be documented.

**Figure 21**
**EC resource flows for Health and Health Research**

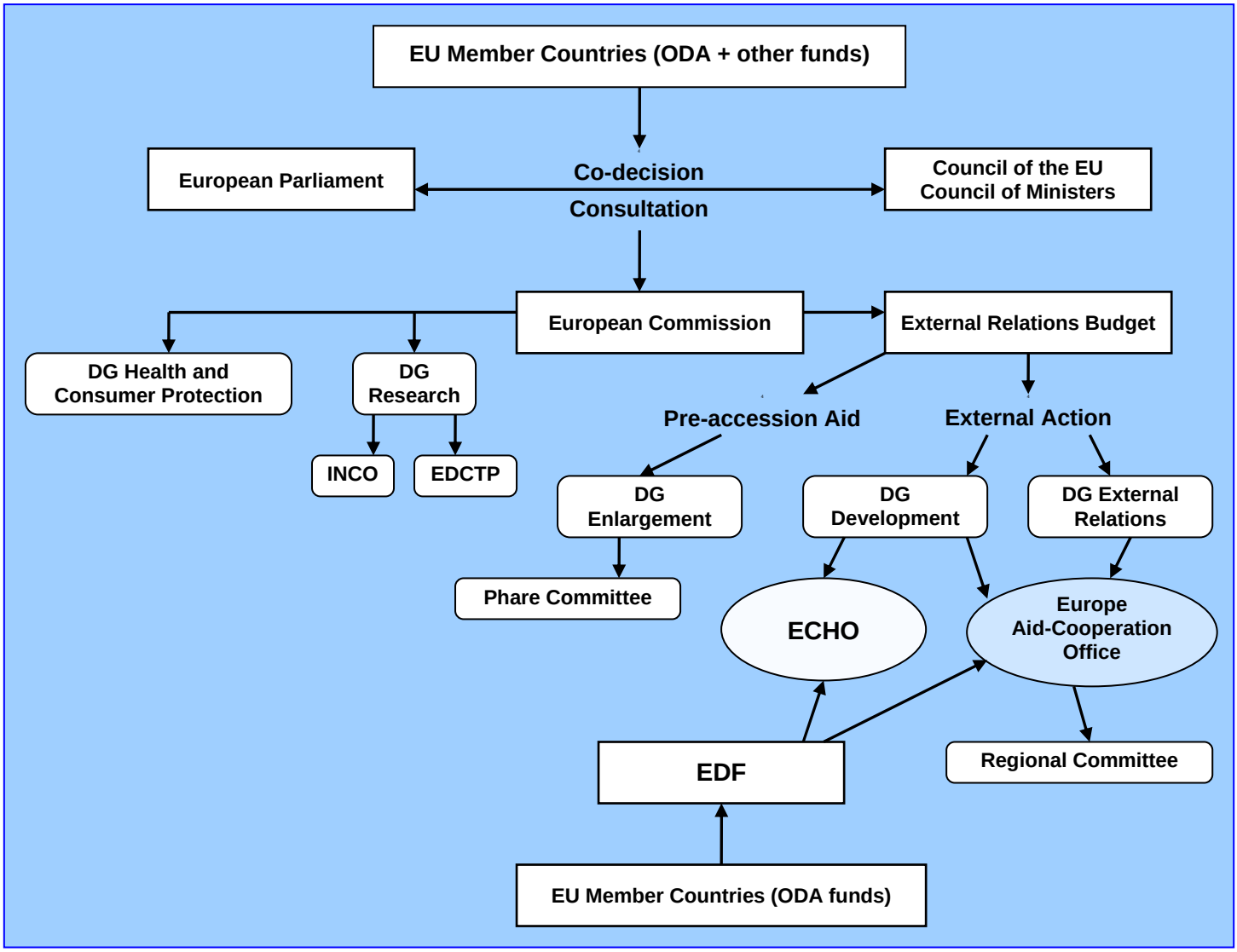
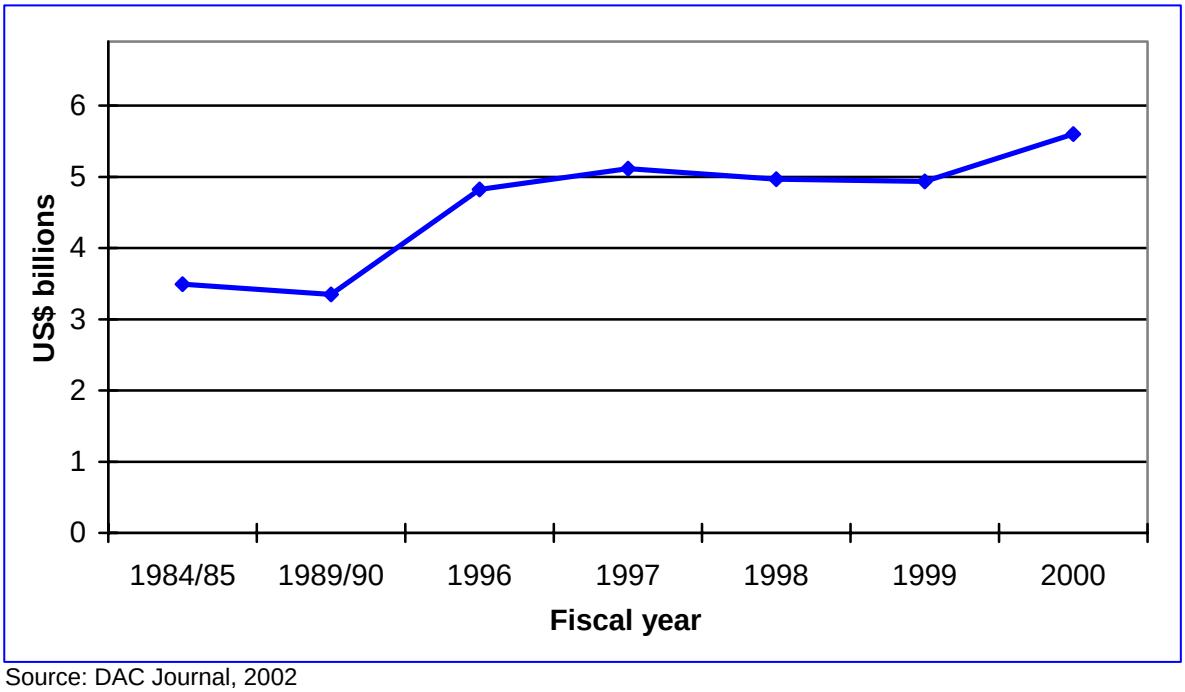


**Figure 22**
**Net disbursements through EC ODA at 1999 prices and exchange rates, 1984/85-2001**
(US$ billions)




Source: DAC Journal, 2002

The 2002-2006 International Cooperation Programme, funded and managed through the Directorate General-Research, will support health research activities relevant to external relations and development aid policies. Thus, in the future additional health research data relevant to LMIC is likely to be tracked and available. (Additional information and data for the Research Directorate is found later in this report under "Multilaterals.")

## IV. Foundation/charity/trust investment in health research

Foundations are making an ever-increasing contribution to health research, including international health research. They are not simply giving away funds; they are substantively involved in key global and country-level partnerships. Foundation centres and associations, in particular, play an increasingly important role – they often serve as representatives for the foundation sector and inform the public, other interested parties and foundations themselves about their activities.

- The Foundation Center in the United States, for example, provides courses for those interested in applying for grants from foundations; maintains extensive libraries in several cities which serve as a repository of information; publishes regular updates on foundations and their activities; maintains a foundation data base; and tracks resource flow information.
- The Association of Medical Research Charities in the United Kingdom has taken on a more expansive role that includes setting standards for peer review.
- There are also regional foundation centres, e.g., the European Foundation Centre (EFC) based in Brussels which embraces 143 foundations, including some of the largest in Europe. EFC maintains a directory of foundation and corporate members and has initiated country-level case studies of the foundation sector.
- Middle- and low-income countries with growing or sizeable foundation sectors also have the umbrella organizations. These include *Grupo de Institutos, Fundaçoes e Empresas* (GIFE) established in Brazil in 1995 and The Third Sector Foundation of Turkey (TUSEV) established in 1993.

## *A. What is a foundation?*

The foundation or charity sector is part of the private non-profit sector. However, what is defined as a foundation differs from country to country, and arises from different historical contexts and processes. In 2001 Helmut Anheier, Director of the Center for Civil Society at the University of California at Los Angeles, proposed a set of criteria that attempted to cut through the terminological tangle around definitions. According to Anheier, a foundation must be:

- an asset-based entity, financial or otherwise;
- a private entity, institutionally and structurally separate from government;
- self-governing; and
- serving a public purpose.

**Table 6**
**Number and types of foundations**

| Country | Number of Foundations | Relative share of grant-making Foundations | Relative share of operating Foundations | Mixed type of Foundations |
|---|---|---|---|---|
| Austria | 803 | | | Majority |
| Belgium | 310 | Few | | Majority |
| Canada | 1,353 | Great majority | | Very few |
| Denmark | c. 14,000 | | | |
| Finland | 2,522 | 50% | 30% | 20% |
| France | 404 | | Majority | |
| Germany | 8,312 | c. 50% | c. 25% | c. 25% |
| Greece | c. 500 | few | Majority | few |
| Ireland | 30 | 17% | 70% | 3% |
| Italy | c. 1,300 | 15% | 39% | 43% |
| Japan | 13,553 | Not known | | |
| Liechtenstein | c. 600 | | Majority | |
| Luxembourg | 143 | | Majority | |
| Netherlands | c. 1,000 | Majority | | |
| Norway | 2,989 | | | Majority |
| Portugal | 664 | | Majority | |
| Spain | c. 6,000 | 5% | 95% | |
| Sweden | c.20,000 - 30,000 | | | |
| Switzerland | c. 8,000 | 5% | Majority | |
| Turkey | 9,326 | | | Majority |
| UK | c. 8,800 | Almost 100% | Very few | |
| USA | 50,201 | Majority | 5.7% | |

(c. = circa)
Source: Foundations for the Health Sector, International Foundation Directory 2003

Foundation types can be described using different criteria. For example, they can be categorized according to source of income, field of support, or operational mode. In the United States, an estimated 99 per cent of foundations are grant-making whereas in Europe the majority of foundations are either operating organizations or pursue their objectives by combining grant-making activities with running their own programmes. Table 6 indicates the great variation in number and types of foundations in 22 countries. However, in contrast to this structural variation,

foundations globally support remarkably similar activities – 71 per cent of foundation activities include education, research and health [Foundations and the Third Sector, International Foundation Directory 2003, Europa Publications, Taylor and Francis Group, London and New York].

Public foundations differ from private foundations primarily in that they rely mainly on voluntary public subscription to fund operations.

## *B. The evolution of foundations in Europe, the United States and Japan*

In **Europe,** throughout the Middle Ages, foundations functioned as religion-based charitable institutions. As the nation-state developed, foundations became providers of quasi-public goods. In the 19th century, foundations in Britain, Germany, Italy, the Netherlands, Scandinavia and the Austrian-Hungarian Empire grew and served very highly specialized local needs. In countries such as France, the state established itself as the primary representative of the public will and kept foundations at bay (Archambault, 1996). Where the nation-state remained weak, as in Italy and Spain, foundations flourished. Early forms of public-private partnerships between state and foundations emerged in countries such as Sweden and the Netherlands. Only in Britain did foundations develop without any state interference. In the 20th century, two world wars, economic crises and the establishment of communist regimes wreaked havoc with the foundation sector. Current variations in the size of the foundation sector in different countries reflect the impact of these historical events (see Table 7). While these factors slowed development of foundations, other variables also played a role: an underdeveloped culture of private giving, lack of tax incentives, and onerous administrative hurdles (Foundations and the Third Sector, International Foundation Directory, 2003 Europa Publications, Taylor and Francis Group, London and New York).

**Table 7**
**Foundation Sector Scale and Growth Pattern in Europe**

| | | Foundation Sector Size | | |
|---|---|---|---|---|
| | | *Large* | *Medium* | *Small* |
| **Foundation Sector Growth** | *High* | Italy | Portugal<br>Spain<br>Turkey | Hungary |
| | *Medium* | Switzerland | Britain<br>Finland<br>Germany | Greece<br>Most other Central and Eastern countries |
| | *Low* | | Ireland | Austria<br>Belgium<br>France |

*Source:* Philanthropic Foundations and Development Co-operation, DAC Journal, 2003, Vol. 4 #3, OECD

In the **United States**, the growth of foundations in the first part of the 20th century highlights their function of financial re-distribution rather than service delivery, in sharp contrast to European foundations. Rather than adopting the traditional charity approach of directly addressing social problems, new foundations aimed to explore the causes of these social problems in order to generate long-term solutions. Development and growth of the foundation sector was further influenced by low government social spending, economic prosperity, tax incentives and lack of

administrative barriers. With the added factors of American proclivity towards individual achievement and the use of that personal wealth for societal benefit and the disassociation of foundations from the corporations that generated their capital, American foundations were pre-eminent by the end of the 20th century (Philanthropic Foundations and Development Cooperation, Offprint of DAC Journal 2003, Volume 4, No. 3, OECD).

In **Japan**, the first wave of foundations emerged during the 1920s. Cognizant of the Bolshevik success in Russia and the communist movements in other Western countries, the great conglomerates (the Zaibatsu) feared the rise of socialism in Japan. Thus they created foundations based on social work, hospitals and the development of new technologies. The conglomerates were dissolved at the end of World War II, but the re-establishment of Japan's national sovereignty and an economic boom accompanied by social pressure, encouraged companies to establish and revive foundations.

Since the high rate of marginal taxation and small disparity of salary levels have precluded the amassing of personal wealth on a large scale, Japanese foundations rely on corporation funds. These funds are used to support a broad range of social and cultural activities rather than activities related to their own businesses (Philanthropic Foundations and Development Cooperation, Offprint of DAC Journal 2003, Volume 4, No. 3, OECD). Foundations that specialize in grants, scholarships, and awards are designated as grant-making foundations; those that carry out their own research projects or operate art museums, social welfare activities, etc. are designated as operating foundations. Foundations are chartered and overseen by central government agencies and local governments independently so it is difficult to obtain sector statistics.

## *C. Facts and figures: foundations in the United States*

### 1. Overview 1990-2000

The economic and stock-market boom of the late 1990s enabled American foundations to dramatically expand support for the non-profit sector. Contributing to this growth was the rise of health-care conversion foundations – foundations created with the proceeds of the sale of non-profit health-care entities to for-profit corporations, such as the California Endowment – and new foundations such as the Bill and Melinda Gates Foundation.
Between 1990 and 2000, total giving by American foundations more than tripled from US$ 8.8 billion to US$ 27.6 billion. In the same period, US international giving, as a subset of these totals, nearly quadrupled from US$ 0.8 billion to US$ 3.1 billion. The number of foundations nearly doubled from 32,401 in 1990 to 56,582 in 2000 (see Table 8).

**Table 8**
**Number of US foundations, total and estimated international giving** (US$ billions)

| Year | Numbers of foundations | Total giving | International giving | International as a % of total |
|---|---|---|---|---|
| 2000 | 56,582 | 27.6 | 3.1 | 11.2 |
| 1998 | 46,832 | 19.3 | 1.6 | 8.2 |
| 1994 | 38,807 | 11.3 | 1 | 8.8 |
| 1990 | 32,401 | 8.8 | 0.8 | 8.7 |

Table provides aggregates financial information on the 56,582 active independent, corporate, community, and grant-making foundations in the USA. Estimates on international giving are based on the percentage of international giving of a sample of foundations as a proportion of total giving reported by all foundations.
*Source*: Grantmaker Information, Foundation Center Statistics, http://fdncenter.org/fc_stats/grantmakerinfo.html, October 2002, and International grantmaking II, The Foundation Center, 2000, p. 15.

Throughout most of the 1990s, the health sector accounted for 16-17 per cent of grant dollars but reached a high of 20.6 per cent in 2000 [Foundation Giving Trends, The Foundation Center, New York, 2003].

Total health research funding was not identified for the 1990-2000 period. Total medical research expenditures can be obtained from publications of the Foundation Center; however, this Figure does not include social science research, policy and operations research and other research. If a foundation's sole mandate is health research, data can often be obtained from public sources. For other foundations, the data can sometimes be obtained upon request.

## 2. Overview 2001

The 10 largest foundations for health/medical research contributed an estimated US$ 1,849 million through 2,317 awards in 2001 [Foundation Giving Trends, The Foundation Center, New York, 2003].[‡] Whereas individual levels of giving obtained by the Foundation Center survey do not correspond precisely to levels obtained directly from foundations as presented later in this report, they provide an indication of the major foundation contributions to health research.

Within the health sector, grant dollars for "medical research" the "specific disease" category (which includes research) saw an increase – mostly due to the large HIV/AIDS grants awarded by the Bill and Melinda Gates Foundation. HIV/AIDS prevention, treatment and research support nearly doubled from US$ 156 million in 2000 to US$ 307.6 million in 2001. Allocations for mental health research also more than doubled in 2001 – largely due to a grant for US$ 186.3 million from the Theodore and Vada Stanley Foundation to the Stanley Medical Research Institute (see Table 9). Private "conversion" foundations awarded US$ 320.8 million through grants in 2001 and of the 9.1 per cent marked for research, 1.7 per cent was given to medical research. Of the 96 largest grants awarded in 2001 by American foundations, 14 were predominantly health and at least eight included research [Foundation Giving Trends, The Foundation Center, New York, 2003].

## 3. Overview 2002

Foundations with assets whose value increased dramatically during the economic boom in the 1990s showed dramatic increases in giving through 2001 but this was followed by decreases in 2002. The continuing economic malaise and stock market decline led to a 5 per cent decline in giving, among foundations sampled by the Foundation Center, to a level of US$ 15.9 billion [Foundation Giving Trends; Update on Funding Priorities, Foundation Today Series, 2004 Edition, The Foundation Center, New York]. About half of the recipients of foundation giving in 2002 were universities; the rest included government, other trusts and foundations, and community groups.

Foundation grant dollars for health posted a 15 per cent decline between 2001 and 2002 (see Figure 24). However, some of the largest contributors to health had considerable health research portfolios. The Gates Foundation was by far the top-funding foundation in health and the Robert Wood Johnson (RWJ) Foundation ranked second in giving to health/medical research [Foundation Giving Trends; Update on Funding Priorities, Foundation Today Series, 2004 Edition, The Foundation Center, New York].

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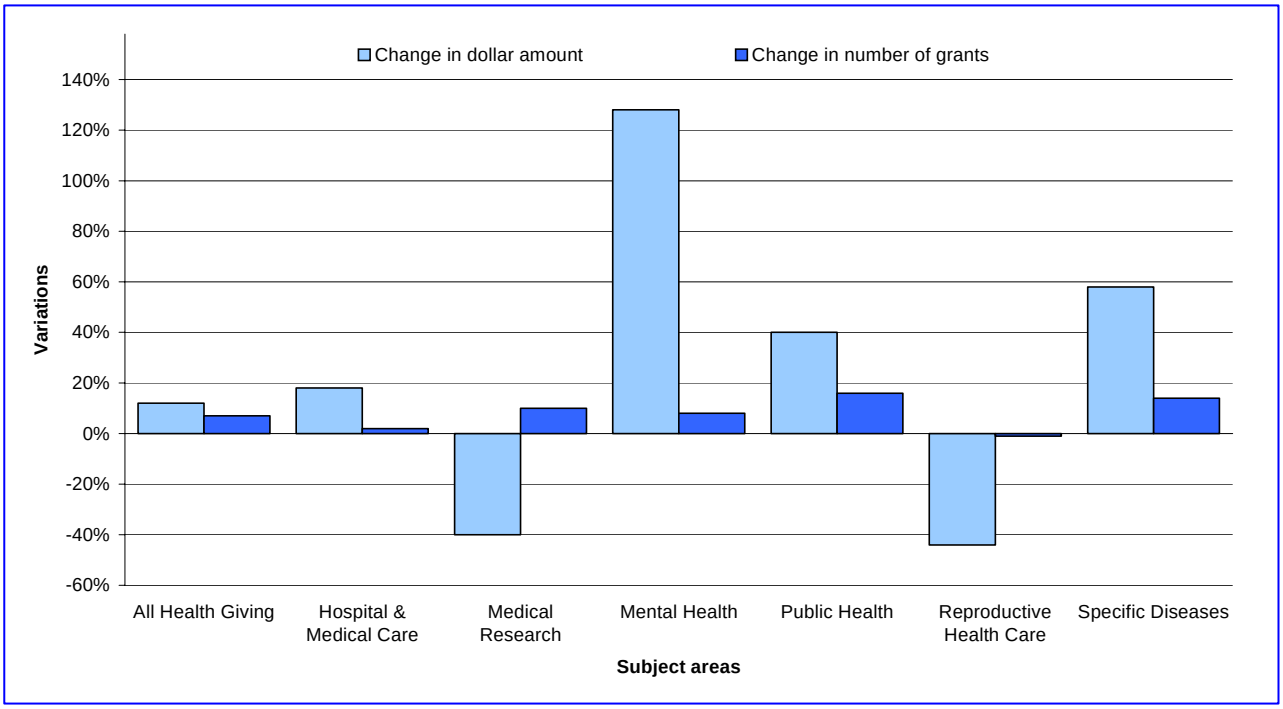
[‡] The Foundation Center's grants sample, circa 2001, includes 124,844 grants of US$ 10,000 or more awarded by 1,007 larger foundations between June 2001 and July 2002, totalling US$ 16.8 billion and representing more than half of the total grant dollars awarded by all American independent, corporate, community and grant-making operating foundations. Complete sampling information: Foundation Giving Trends, Appendix A, The Foundation Center 2003.

## Figure 23
## Growth of Giving for Health, 2000 to 2001*




Notes: *Includes subject areas accounting for at least 6 per cent of grant dollars or grants.
(1) Includes Civil Rights and Social Action, Community Improvement and Development, Philanthropy and Voluntarism, and Public Affairs.

Source: The Foundation Center, Foundation Giving Trends, 2004. Based on a sample of 1,005 larger foundations.

## Table 9
## Ten largest foundations by giving for health/medical research subcategory, 2001

| Foundations |
|---|
| 1. Bill and Melinda Gates Foundation |
| 2. Robert Wood Johnson Foundation |
| 3. David and Lucile Packard Foundation |
| 4. Theodore and Vada Stanley Foundation |
| 5. California Endowment |
| 6. Whitaker Foundation |
| 7. Starr Foundation |
| 8. Ford Foundation |
| 9. Duke Endowment |
| 10. John A. Hartford Foundation |

Source: Trends in giving 1980-2001, Foundation Giving Trends 2003, The Foundation Center 2001 and Foundation Giving Trends; Update on Funding Priorities, Foundation Today Series, 2004 The Foundation Center.

The Gates Foundation focuses on diseases with the highest burden on health worldwide; the RWJ Foundation supports a large portfolio of policy research but its activities are mainly confined to the United States. Although grant dollars for health as a general category declined between 2001 and 2002, grant monies for research climbed from 8.5 per cent to 10.6 per cent. Medical research was the only sub-category of health to show positive growth (up 1.3 per cent in 2002). The 30 largest grants in 2002 included five related primarily to health research [Trends in Giving 1990-2002, The Foundation Center, New York].

1. US$ 31.7 million from the Gates Foundation to the University of California/San Francisco for research on the protection of the cervix as a method of HIV/AIDS prevention.
2. US$ 200 million from the Gates Foundation to the Foundation for the National Institutes of Health to develop a programme to address diseases of poverty.
3. US$ 81.1 million from the Robert W. Woodruff Foundation to the Robert W. Woodruff Health Sciences Center Fund for the Winship Cancer Institute and Whitehead Biomedical Research Building.
4. US$ 70 million from the Gates Foundation to the University of Washington Foundation for the capital campaign for the Genome Sciences Project.
5. US$ 55 million from the Gates Foundation to the International Vaccine Institute in South Korea to develop effective and affordable vaccines for dengue fever, an infectious tropical disease.

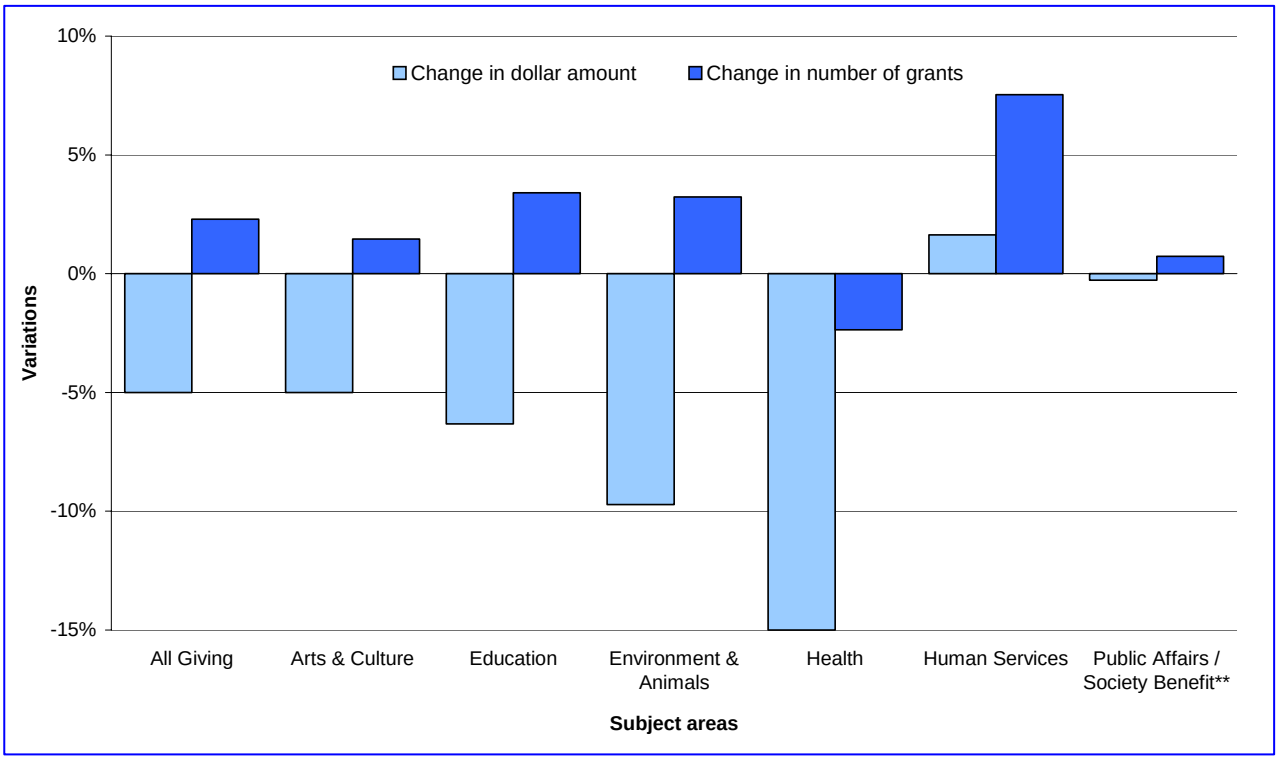
## 4. Long-term trends and prospects for health research for selected US foundations

During the 1960s and 1970s, many endowments experienced substantial declines in real value as a result of high inflation and low investment returns. These trends reversed in the 1980s and 1990s with a sustained period of unprecedented returns in financial markets. From 1995 through 1999, the endowments of private foundations increased, with many peaking in 2001 and then decreasing following negative returns in the stock market. For example, the Rockefeller Foundation endowment increased by US$ 1.7 billion in the period 1995-99, making record-level grants and related expenditures of US$ 700 million. In 2001, the Foundation's assets declined by 6.7 per cent and in 2002, the third consecutive year of negative returns in the American stock market, assets dropped 11.1 per cent and significantly reduced grant-making capacity. Similar patterns of declining value of assets, followed by decreases in grant-making expenditures are evident for other foundations. With an improvement in the economic climate by 2004, asset losses have slowed or disappeared and if the economic climate continues to be favourable, grant expenditures can be expected to stabilize and rise.

The Foundation Center's "Foundation Giving Forecast Survey" reported that one fifth of its respondents expected their giving to increase in 2003 and two fifths expected their giving to remain the same. Larger foundations were more likely to report declines because in general the largest foundations are more likely to have endowments that include major equity holdings. Those reporting declines expected their reductions to be modest, ranging from 1 per cent to 10 per cent [Foundation Yearbook: Facts and Figures on Private and Community Foundations, Foundations Today Series, 2003, The Foundation Center]. In 2003, overall giving by American foundations was shown to be down 2.5 per cent – to US$ 29.7 billion – with a small increase expected for 2004 [Foundation Center website 2004].

Financial flows for selected foundations/charities in 2001 are summarized in **Table 10.**

## Figure 24
## Changes in grant dollars of US foundations between 2001 and 2002*




* Includes subject areas accounting for at least 6 percent of grant dollars or grants.
** Includes Civil Rights and Social Action, Community Improvement and Development, Philanthropy and Voluntarism, and Public Affairs.
Source: The Foundation Center, Foundation Giving Trends, 2004. Based on a sample of 1,005 larger foundations.

## Table 10
## Summary of financial flows for selected foundations/charities/trusts, 2001 (US$)

| | Total Giving | Health Giving | Estimated Health Research Giving |
|---|---|---|---|
| Bill & Melinda Gates Foundation | US$ 1,116,995,305 | US$ 855,317,807 | US$ 131,472,082 |
| Sir Halley Stewart Trust | UK£ 1,006,000 | UK£ 314,000 | UK£ 175,000 |
| Medicines for Malaria Venture | US$ 8,274,147 | US$ 6,710,000 | US$ 6,710,000 |
| Wellcome Trust | UK£ 388 million | UK£ 387 million | UK£ 387 million |
| Packard Foundation | US$ 652,565,610 | US$ 98,641,106 | US$ 2,948,000 |
| Rockefeller Foundation | US$ 195,104,000 | US$ 26,430,077 | US$ 6,244,930 |

Sources: Annual reports, personal communication

## Rockefeller Foundation

The strategic direction focuses explicitly on the challenges faced by poor and excluded people. Health research is supported mainly under the theme of health equity. The root causes of inequities are addressed through three areas of work:

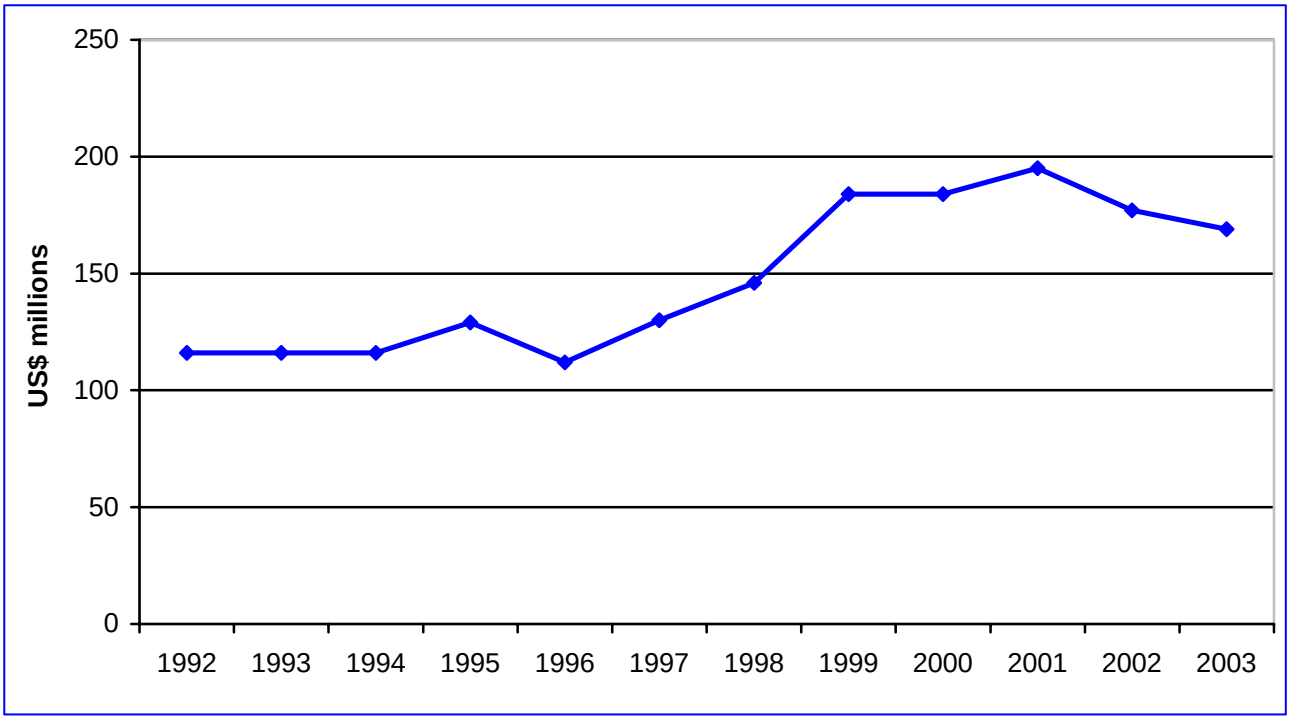
- accelerating development of and access to vaccines and medicines for diseases of the poor by creating public-private partnerships to overcome the lack of commercial interest in these products;
- developing appropriately skilled human resources and better management of information to improve health care in poor populations;
- rising to the challenge of HIV/AIDS through the development of preventive technologies, accelerating access to care and mobilizing greater resources within the foundation community.

Research grants that support this work include biomedical research, research capacity-strengthening, policy research and dissemination of research results.

In 2001, the market value of the Rockefeller Foundation endowment was US$ 3.1 billion, falling to US$ 2.6 billion in 2002 and recovering to a level of US$ 3 billion in 2003. Following a long rise in spending since 1996-7, total budget expenditures for the Foundation reported to the Global Forum for Health Research declined from US$ 195 million in 2001, US$ 177 million in 2002 and US$ 169 million in 2003 (Figure 25).

Rockefeller Foundation provided estimated levels of resource flows directly to the Global Forum for Health Research for health budget expenditures; health research expenditures were estimated by the Global Forum based on a review of projects supported for the years 2001-03. These data are combined in Figure 26.

**Figure 25**
**Rockefeller Foundation spending history, 1992-2003**




Source: Annual reports, Rockefeller Foundation, and personal communication.

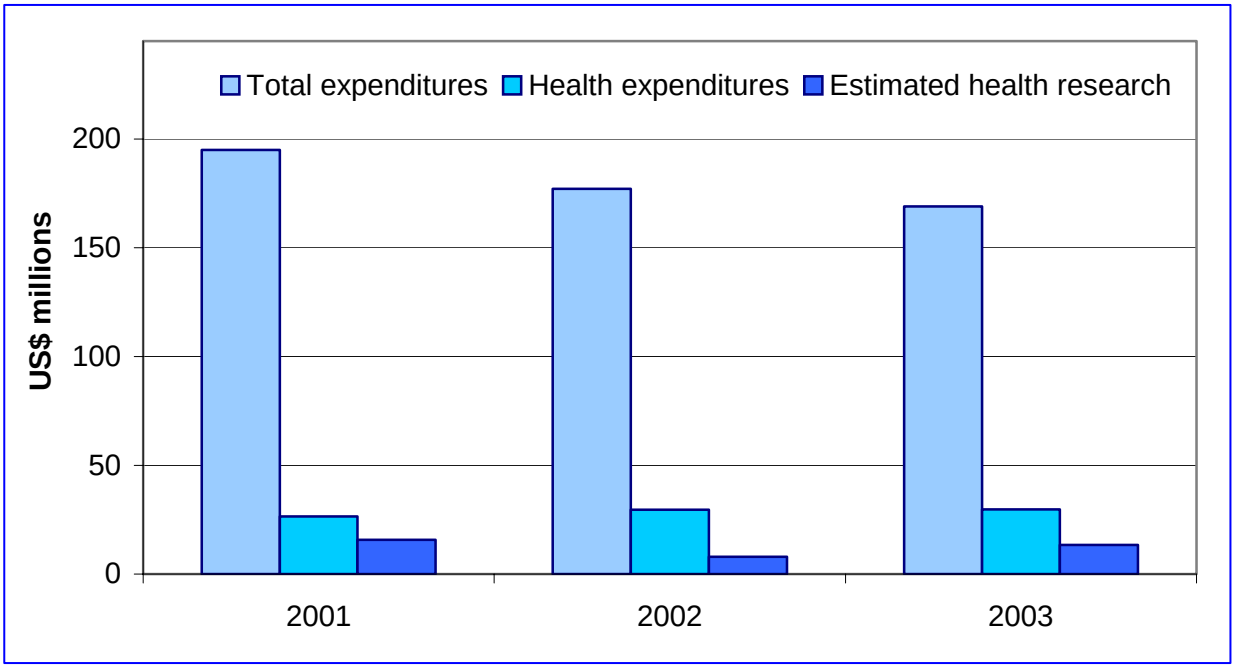
Health budget expenditures were US$ 26.4 million in 2001 of which an estimated US$ 15.7 million went to health research; health funding included support for tuberculosis drug development (US$ 3.7 million), HIV/AIDS (US$ 3.9 million), vaccines (US$ 1,668,080) and dengue (US$ 248,000).

In 2002, despite declines in the market value of the endowment and total spending, the foundation grants for health climbed to US$ 29.7 million, of which health research was an estimated US$ 7.9 million. Health activities included funding for dengue, malaria and HIV/AIDS vaccines (US$ 1.1 million), tuberculosis ($421,410) and HIV/AIDS ($7.9 million).

In 2003, health grant expenditures remained stable at US$ 29.7 million, of which health research reached an estimated US$ 13.4 million. Health activities included US$ 8.8 million for HIV/AIDS, US$ 6.3 million for the International Partnership for Microbicides, US$ 2 million for the Medicines for Malaria Venture, and US$ 500,000 for the International Vaccine Institute in Korea.

The majority of health funding goes directly to developing country institutions or to developed country institutions collaborating with developing country institutions.

**Figure 26**
**Total, health and estimated for health research expenditures by Rockefeller Foundation, 2001-2003** (US$ millions)

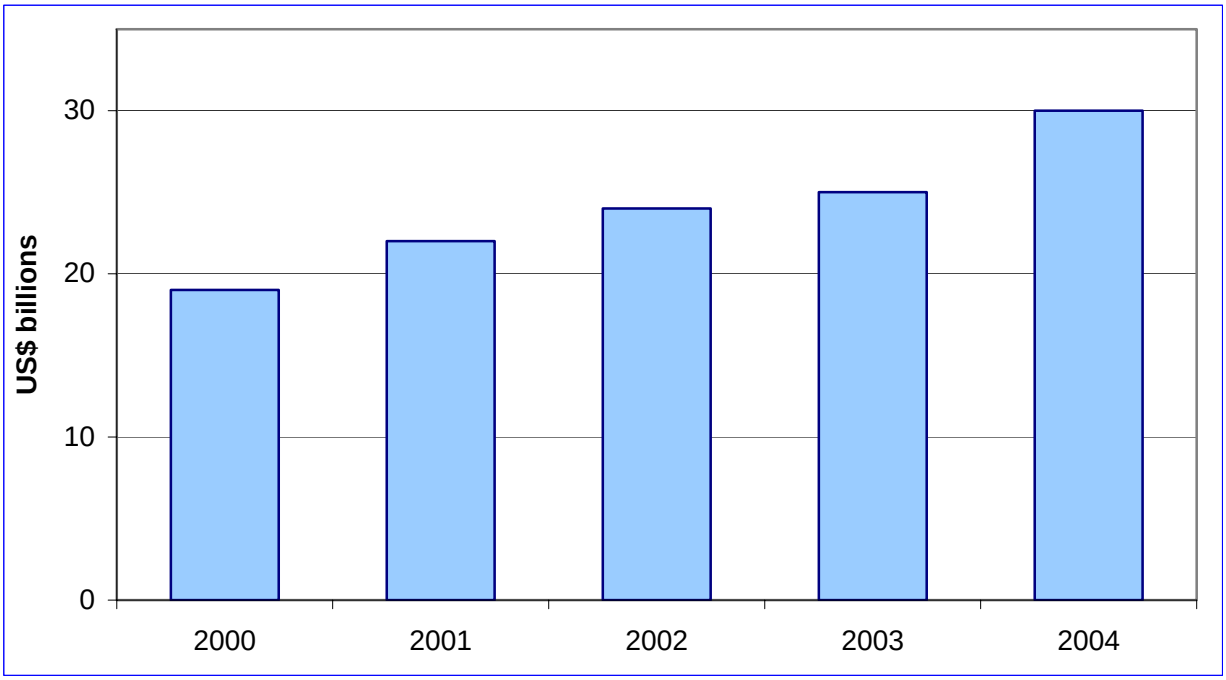



*Source:* Total and health expenditure data, personal communication Rockefeller Foundation; health research data estimate, Global Forum based on review of health equity projects.

## Bill and Melinda Gates Foundation

The foundation is organized as a charitable trust. It was created in 2000 by a merger of the Gates Learning Foundation and the William H. Gates Foundation, with unrestricted assets valued at US$ 19 billion. As of 2003, its assets were valued at US$ 26.8 billion. A slow but steady increase in asset valuation took place from 2000 to 2003 (see Figure 27). It is anticipated that asset valuation will increase over the near term, in part due to contributions of US$ 3.2 billion from dividends from Bill Gates as announced in July 2004.

**Figure 27**
**Assets of the Bill and Melinda Gates Foundation, 2000-2004** (US$ billions)




Note: Data for 2004 are provisional
Source: Annual reports, Gates Foundation website

'Global health' is one of the four programme areas supported by the Foundation. The Global Health Program is focused on reducing global health inequities by accelerating the development, deployment and adoption of health interventions that will save lives and dramatically reduce the burden of disease in developing countries. The programme provides support on several issues, including infectious diseases, vaccines, HIV/AIDS, tuberculosis, reproductive health, and child health.

In 2001, Foundation grant expenditures totalled US$ 1,146,958,000 of which Global Health Program expenditures were US$ 855,567,000. In 2002, Foundation grant expenditures totalled US$ 1,157,465,000 of which Global Health Program expenditures were US$ 506,984,000. Health expenditures for the years 2001-2003 that were of particular relevance to developing country health issues are listed in Table 11.

Health research grant expenditures by the Bill and Melinda Gates Foundation and its predecessor the William H. Gates Foundation have risen sharply from a low of US$ 600,000 in 1995 to a high of US$ 306,602,412 in 2003 as shown in Figure 28. In 2001, research and development expenditures were estimated at US$ 131,472,082 of which US$ 101,617,016 is classified as international research because it relates to conditions of greatest global disease burden. [Gates Foundation, personal communication].

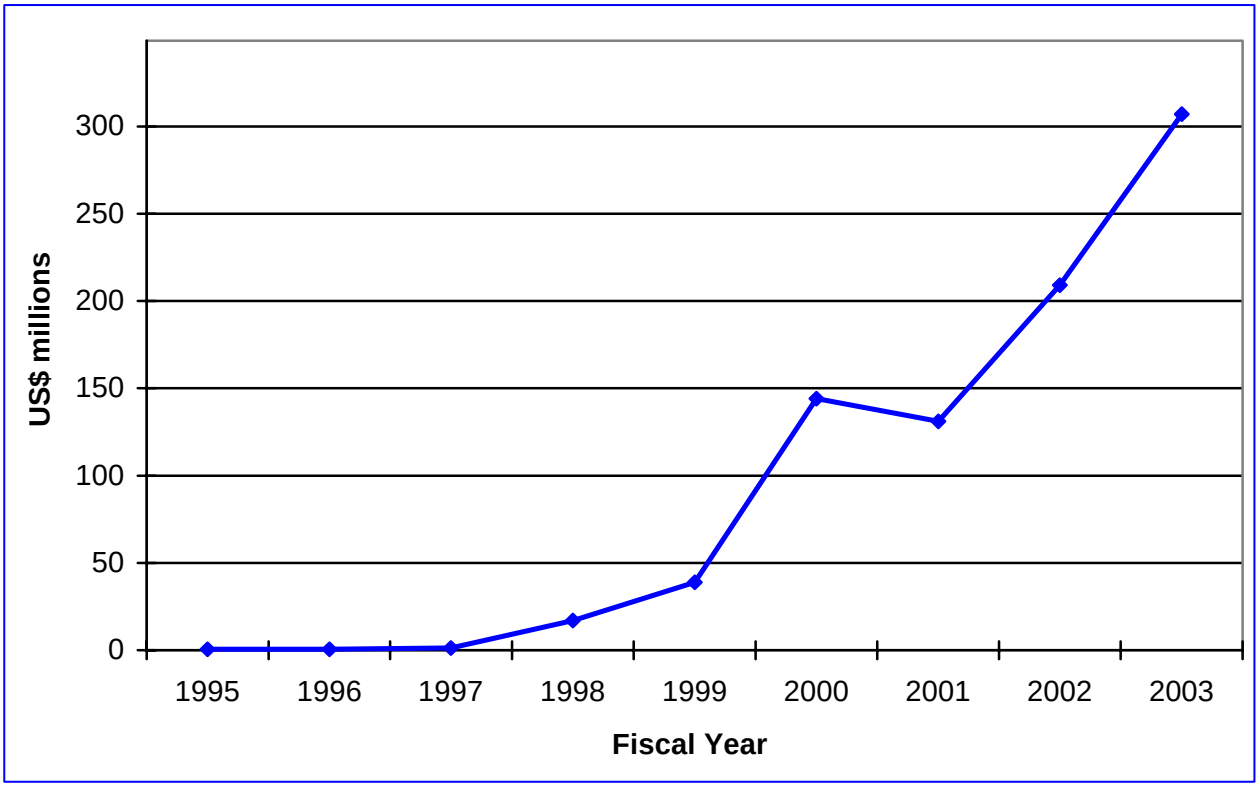
The largest grants with major research components in 2002 are listed in Table 12. Adding to its portfolio of health research projects, the Gates Foundation announced in July 2004 a US$ 44.7-million grant to a research consortium to evaluate new strategies to fight HIV-related tuberculosis. The Consortium to Respond Effectively to the AIDS/TB Epidemic (CREATE) led by Johns Hopkins University Center for Tuberculosis Research supports research on two potential interventions: improved case finding and preventive therapy with the drug isoniazid in three large-scale community studies in Africa and South America.

**Table 11**
**Expenditures for selected health conditions, Bill & Melinda Gates Foundation, 2001-03** (US$)

| Health Condition | 2001 | 2002 | 2003 |
|---|---|---|---|
| Acute respiratory infections | 386,000 | 0 | 386,000 |
| Cervical cancer | 11,422,892 | 10,461,732 | 9,985,608 |
| Child health | 10,349,225 | 6,770,554 | 4,581,584 |
| Family planning | 11,934,422 | 14,623,349 | 7,448,524 |
| HIV/AIDS | 56,643,962 | 232,324,070 | 130,760,758 |
| Infant health | 41,325,000 | 947,000 | 2,809,146 |
| Malaria | 40,255,000 | 23,111,791 | 19,928,306 |
| Maternal health | 39,665,762 | 20,334,572 | 6,006,800 |
| Micronutrient deficiencies | 13,141,140 | 41,302,000 | 7,181,595 |
| Reproductive health | 29,944,109 | 26,183,816 | 49,518,436 |
| Tuberculosis | 19,221,632 | 24,488,293 | 24,470,210 |

Source: Bill & Melinda Gates Foundation

**Figure 28**
**Trends in health research funding, Bill and Melinda Gates Foundation*, 1995-2003** (US$ millions)




Note: *1995-1999 William H. Gates Foundation, 2000-2003 Bill & Melinda Gates Foundation
Source: Gates Foundation, personal communication

**Table 12**
**Selected grants awarded by the Bill and Melinda Gates Foundation, 2002**

| **Grantee** - objective of grant | **Amount** |
|---|---|
| **Foundation for the National Institutes of Health** - to develop a funding mechanism that will accelerate scientific progress in addressing the diseases of the most impoverished. | $200,000,000 |
| **University of California** - to support the Women's Global Health Imperative in researching the protection of the cervix as a method of HIV prevention. | $28,085,176 |
| **University of Aberdeen** - to improve the health and survival of women in developing countries during and after pregnancy by identifying effective and affordable strategies of care. | $15,000,000 |
| **PATH** - to develop screening technologies to advance rapid testing for HPV for cervical cancer prevention in developing countries. | $13,020,848 |
| **CONRAD/CICCR** - to support clinical trials of hormonal combinations for male contraception and contraceptive agents for vaginal use. | $11,912,100 |
| **World Health Organization** - to evaluate aerosol measles vaccination versus syringe. | $6,859,000 |
| **Family Health International** - to support a coordinated research approach to determine the safety and effectiveness of Tenofovir Disoproxil Fumarate (TDF) for HIV prevention. | $6,556,395 |
| **Columbia University** - to support a randomized trial of male circumcision for prevention of HIV and STD infection in women in Rakai, Uganda. | $5,897,265 |
| **World Health Organization** - to build mapping tools for rapid analysis of infectious disease incidence and prevalence. | $5,000,000 |
| **PATH** - to reduce the impact of HIV/AIDS and STIs by increasing the range and quality of women's choices of prevention methods. | $5,000,000 |
| **Institute for One World Health** - to support the Phase III drug development programme for visceral leishmaniasis. | $4,260,000 |
| **Johns Hopkins University** - to support consortium organization, protocol development and site preparation (Phase I) for the evaluation of novel strategies in the reduction of HIV-related tuberculosis. | $3,000,000 |

*Source:* 2002 Annual Report, Gates Foundation

## David and Lucile Packard Foundation

The Foundation provides support in two main areas: conservation and family planning. In the area of family planning, the foundation focuses on culturally appropriate ways of delivering family planning methods and informing families about reproductive options. After the death of David Packard in 1996, the foundation was named beneficiary of a major portion of his estate. In 2001, total foundation assets were valued at US$ 6,196,520,868 [Foundation Yearbook, Facts and Figures on Private and Community Foundations, Foundation Today Series, 2003 Edition, the Foundation Center, New York] with giving of US$ 652,565,610 of which US$ 98,641,106 was allocated for population. Population research constituted US$ 2,948,000 with 97 per cent (US$ 2,852,383) going to researchers in developing countries [personal communication, Packard Foundation].

In 2002, assets fell to US$ 4,793,893,254 and giving also fell – to US$ 350,058,020. Although assets returned to the US$ 6 billion mark at the end of 2003, giving continued to decline to US$ 214 million.

## Foundation for the National Institutes for Health

Established by the Congress of the USA as the National Foundation for Biomedical Research, the foundation was incorporated as a non-profit organization in 1996. In 1999, the Foundation's name was changed to Foundation for the National Institutes of Health to reflect its purpose more accurately: to develop new knowledge through biomedical research. The Foundation fosters collaborative relationships between NIH, industry, academia, and non-profit organizations in these areas: basic and clinical research; training and advanced education programmes; and educational programmes about medical research.

In 2003, the Bill and Melinda Gates Foundation (see above) announced a US$ 200 million grant to the FNIH to establish the Grand Challenges in Global Health Initiative. "Grand Challenges" are defined as specific scientific or technical innovations that would remove a critical barrier to solving an important health problem in the developing world – innovations that are feasible and have a high likelihood of global impact. NIH agreed to provide scientific advice, expertise and support for the initiative. The initiative has identified critical scientific challenges in global health (see **Table 13**) and initiated a programme to address those challenges. The first grants were to be awarded early in 2005.

**Table 13**
**Grand Challenges 2004, Foundation for the NIH**

| | |
|---|---|
| **GOAL** | **To improve childhood vaccines:** |
| GC#1 | Create effective single-dose vaccines that can be used soon after birth; |
| GC#2 | Prepare vaccines that do not require refrigeration; |
| GC#3 | Develop needle-free delivery for vaccines. |
| **GOAL** | **To create new vaccines:** |
| GC#4 | Devise reliable tests in model systems to evaluate live attenuated vaccines; |
| GC#5 | Solve how to design antigens for effective, protective immunity; |
| GC#6 | Learn which immunological responses provide protective immunity. |
| **GOAL** | **To control insects that transmit agents of disease:** |
| GC#7 | Develop a genetic strategy to deplete or incapacitate a disease-transmitting insect population; |
| GC#8 | Develop a chemical strategy to deplete or incapacitate a disease-transmitting insect population. |
| **GOAL** | **To improve nutrition to promote health:** |
| GC#9 | Create a full range of optimal, bioavailable nutrients in a single staple plant species. |
| **GOAL** | **To improve drug treatment of infectious diseases:** |
| GC#10 | Discover drugs and delivery systems that minimize the likelihood of drug resistant micro-organisms |
| **GOAL** | **To cure latent and chronic infection:** |
| GC#11 | Create therapies that can cure latent infections; |
| GC#12 | Create immunological methods that can cure chronic infections. |
| **GOAL** | **To measure disease and health status accurately and economically in developing countries:** |
| GC#13 | Develop technologies that permit quantitative assessment of population health status; |
| GC#14 | Develop technologies that allow assessment of individuals for multiple conditions or pathogens at point-of-care. |

*Note:* GC = Grand Challenge
*Source:* Grand Challenges in Global Health Initiative

### William and Flora Hewlett Foundation

The Foundation seeks to promote the well-being of humanity by focusing on the most serious problems facing society in two ways: providing risk capital where, responsibly invested, it may make a significant difference over time; and sustaining and improving institutions that make a contribution to society [Hewlett Foundation Guiding Principles]. In its grant-making decisions and interests, the foundation is wholly independent of the Hewlett-Packard Company and the Hewlett-Packard Company Foundation. The foundation awards half of its grant dollars for general operating support. Its net assets totalled US$ 5,459,549 in 2001 and US$ 4,521,510 in 2002 – experiencing investment losses both years due to the weakened economic climate [Annual Report 2002].

The Population Program is one of six programmes supported by the foundation. The purpose of the programme is to help reduce population growth in countries, regions, and among groups that have high fertility rates by helping couples and individuals access a full array of high-quality family planning and reproductive health information, services and fertility-regulation technologies [Annual Report 2002]. Activities are focused on developing countries with high fertility rates.

Research includes: policy-oriented research on issues such as migration; the study and implementation of human development activities and interventions that affect fertility; the impact, including costs, of education on fertility; applied research to develop new and better methods of controlling fertility.

### The United Nations Foundation

In 1997, American businessman and philanthropist Ted Turner announced a gift of US$ 1 billion to support UN causes and the Foundation was created as a mechanism to manage the gift. The Foundation engages in four types of activities: grant-making for UN programmes; strengthening UN institutions; educating the public about the UN; and raising funds for the UN. In 2001, funds awarded through the grant-making programme were distributed as follows: child health 34 per cent; women and population 23 per cent; environment 19 per cent; peace, security and human rights 10 per cent; other 14 per cent. Contributions to the UN are channelled through the UN Fund for International Partnerships which also coordinates and monitors the grants.

The Foundation has supported health research: for example, in 2001, a US$ 3.5 million research grant was awarded to WHO Department for Child and Adolescent Health. The research examined the effects of daily zinc or iron, or of both, on the survival of children less than two years of age in New Delhi, India and Pemba Island, Zanzibar. However, for the most part, the Foundation does not focus on funding research. Indeed, the Foundation disclosed that current levels of health research supported are less than US$ 100,000 per year and it is unlikely the Foundation will spend more on health research in the future [personal communication, UN Foundation].

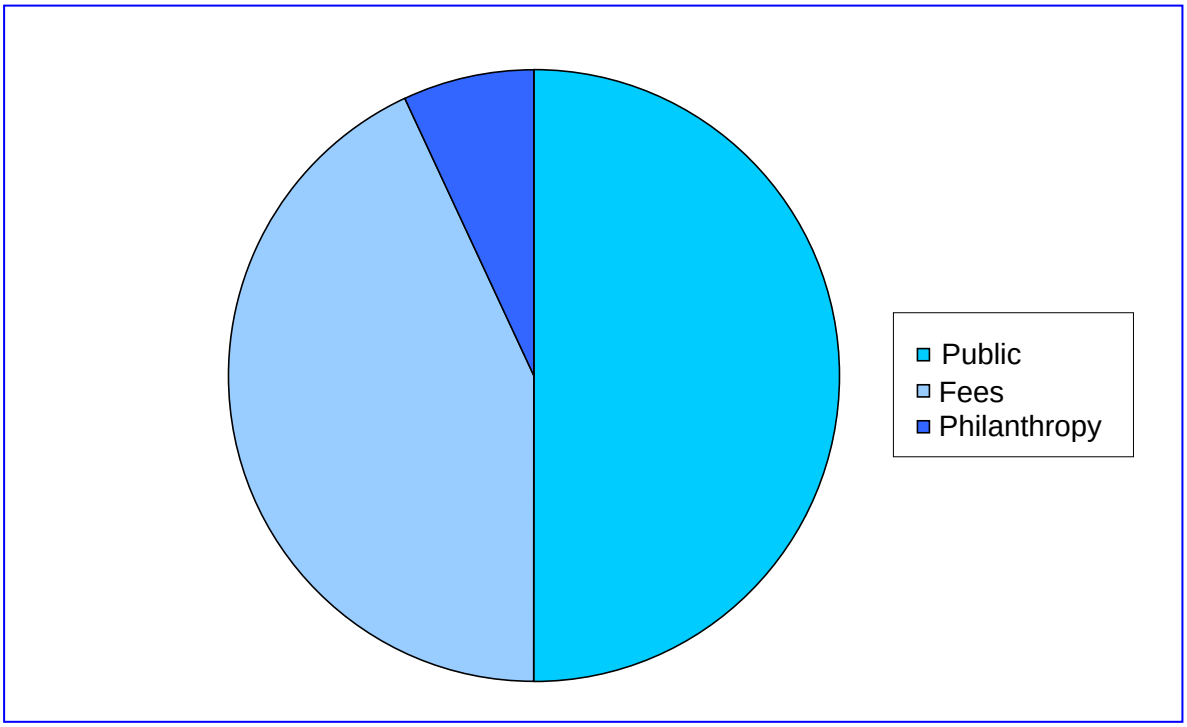
Other USA-based foundations active in international health research include the John T. and Catherine D. MacArthur Foundation, the Burroughs Wellcome Fund, the Pew Charitable Trusts, the Edna McConnell Clark Foundation, Ford Foundation and the Open Society Institute.

## *D. Facts and figures: European foundations*

The 143 foundations of the European Foundation Centre include many of the largest and most prominent in the philanthropic sector. Total annual expenditures amounted to about US$ 3.98 billion in 2002 [DAC Journal 2003, Volume 4, No. 3, OECD]. As some EFC members are non-European and some are supported primarily by governments, they are excluded from this total. There are approximately 105 European foundations (which are EFC members) that are privately funded, with annual expenditures of about US$ 2 billion. This finding is supported by a 1995 study

[Global Civil Society at a Glance, Major Findings of the JHU Comparative Non-profit Sector Project, Johns Hopkins University] that showed that half of non-profit revenue in the European third sector is public, 43 per cent comes from fees, and 7 per cent from philanthropy (see Figure 29). There are about 85,000 foundations in Western Europe that meet the aforementioned definition. If Central and Eastern Europe are included, the number increases to about 120,000. Of the 85,000 foundations in Western Europe, Sweden has the greatest number followed by Denmark (see Table 14).

**Figure 29**
**Non-profit revenue for Europe's Third sector, 1995**




*Source:* Global civil society at a glance, Major findings of the Johns Hopkins University comparative non-profit sector project, 1995

**Table 14**
**Number and per cent of Foundations by country (Europe)**

| Country | Number of Foundations | Percentage of Europe's total number of Foundations |
|---|---|---|
| Sweden | 25,000 | 29.4 |
| Denmark | 14,000 | 16.5 |
| Britain | 8,800 | 10.3 |
| Germany | 8,312 | 9.8 |
| Switzerland | 8,000 | 9.4 |
| Others | 20,000 | 23.5 |

Source: Philanthropic Foundations and Development Cooperation, DAC Journal, 2003, Vol. 4, No. 3, OECD

**Table 15**
**Giving in the Netherlands, 1995-2001 (Euro millions)**

| | 1995 | 1997 | 1999 | 2001 |
|---|---|---|---|---|
| Total giving | 2.494 | 2.467 | 4.900 | 4.334 |
| % GDP | 0.84 | 0.75 | 10 | 1.20 |
| International | 0.393 | 0.410 | 0.663 | 0.535 |

Most foundations are operating-only but in seven countries foundations engage in grant-making. In Britain, all foundations are grant-making.

European foundations have grown rapidly over the past 30 years. Table 7 shows sector scale and growth pattern by country. Highest-growth countries include Hungary, Italy, Portugal, Spain and Turkey. Highest growth was associated with legal reforms in dealing with the non-profit sector and changes in the political environment. Growth was also shown by countries whose economic situation became increasingly favourable. Giving by foundations in the Netherlands increased from Euro 2.5 million in 1995 to Euro 4.3 million in 2001 (see Table 15). Foundations boomed in Germany in the second half of the 1900s.

Although there is very little information on giving by activity, more than two thirds of foundations work in education and research, health and social services.

## 1. United Kingdom

In the United Kingdom, the Association of Medical Research Charities (AMRC) was established in 1987 to improve the effectiveness of the charity sector in medical research. AMRC not only represents the sector but provides information, fosters collaboration, sets standards, and serves as a network for members to share concerns. A presentation by AMRC [The Charity Sector and the Healthcare Research Agenda, Diana Garnham, 2000] included the following important facts about the role of the charity sector in the United Kingdom.

Most charity funding for research goes to universities and medical schools – 74 per cent in 2004 up from 58.5 per cent in 1990/91. Charities are the single-most important source of funding for research in universities and they support approximately one third of British medical research or 13 per cent of total R&D. Charity sector contributions for medical research has grown from UK£ 138 million in 1987/88 to an estimated UK£ 500 million for 2004. Six charities account for 83 per cent of the charity sector contribution but only three have international programmes: Wellcome Trust, Cancer Research UK and the Leukemia Research Fund.

The mission of the Charities Aid Foundation (CAF) is to enable individuals and organizations to improve the quality and value of their donations to charity and to provide services to charities for raising and managing funds more efficiently. It issues annual reports on charity trends in the United Kingdom.

Factors affecting the financial trends of independent trusts and foundations in the United Kingdom over the last decade include:

- rise and fall of the stock market;
- impact of the *Trustee Act 2000* that allows trustees more diverse investments;
- withdrawal of advanced corporate tax relief that let charities with permanent endowments keep some capital and income gains to boost expenditures; and
- new trusts and large new corporate foundations.

Annual growth trends among the CAF Top 500 grant-making trusts and foundations showed significant increases over the five-year period from 1994/95 to 2001/02. The value of grants increased by 20 per cent while assets rose by 27 per cent (see Table 16).

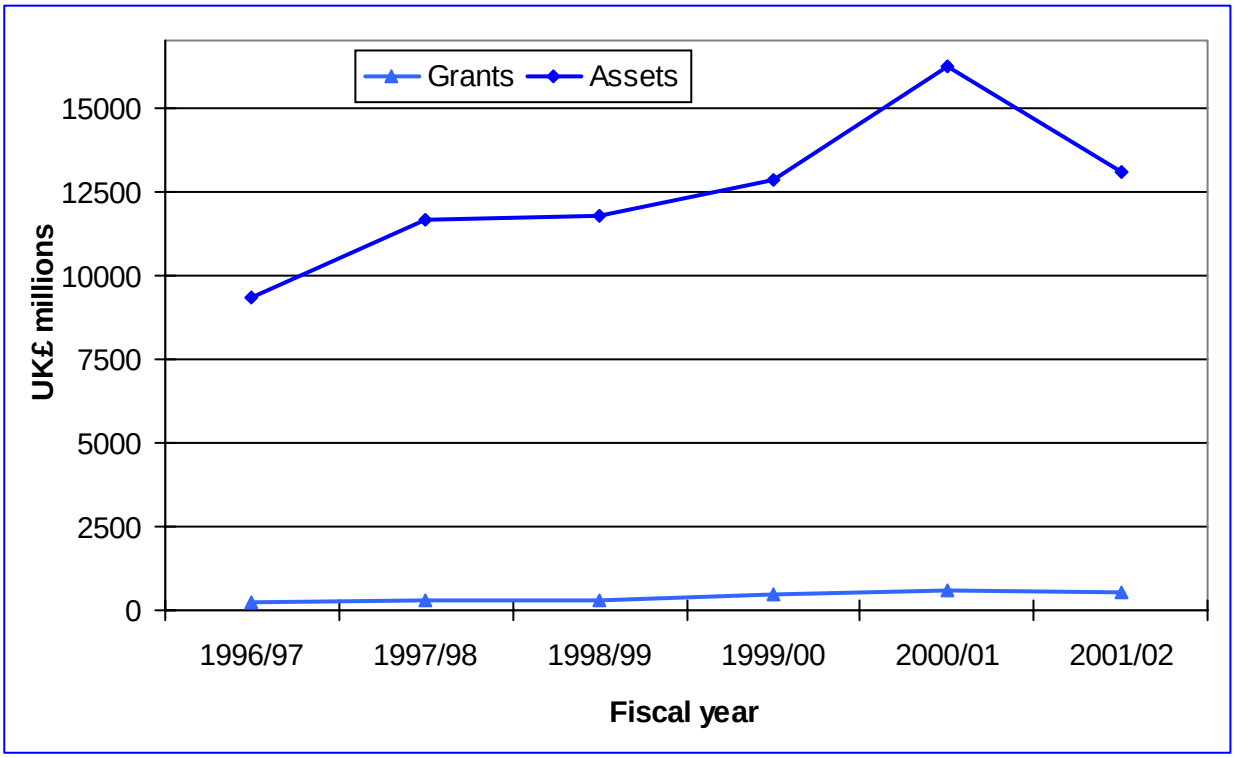
In 2001/02, large academic and scientific trusts constituted about 25 per cent of grant-making dollars and almost half of assets of all grant-making trusts and foundations in the United Kingdom. Annual trends from 1996/97 through 2001/02 demonstrate that the value of assets grew until 2001 and then fell by more than 20 per cent in 2001/02 (see Figure 30). During the same period, the level of grant-making dropped by 14 per cent in real terms. A similar response in foundation grant-making and assets took place in the United States, reflecting a weak global economy.

**Table 16**
**Annual growth trends of the Top 500 grant-making trusts and foundations, CAF (UK), 1994/95 to 2001/02** (UK£ thousands)

| | 1994/95 | 1996/97 | 2001/02 | Change in real terms 1996/97 to 2001/02 |
|---|---|---|---|---|
| Grants | 746,000 | 1,470,000 | 2,045,000 | 20% |
| Assets | 13,222,000 | 20,108,000 | 29,492,000 | 27% |

*Source:* "Charity Trends 2003", CAF

**Figure 30**
**Annual trends in finances of academic research and scientific trusts, UK, 1996/97-2001/02**




Source: "Charity Trends 2003", CAF

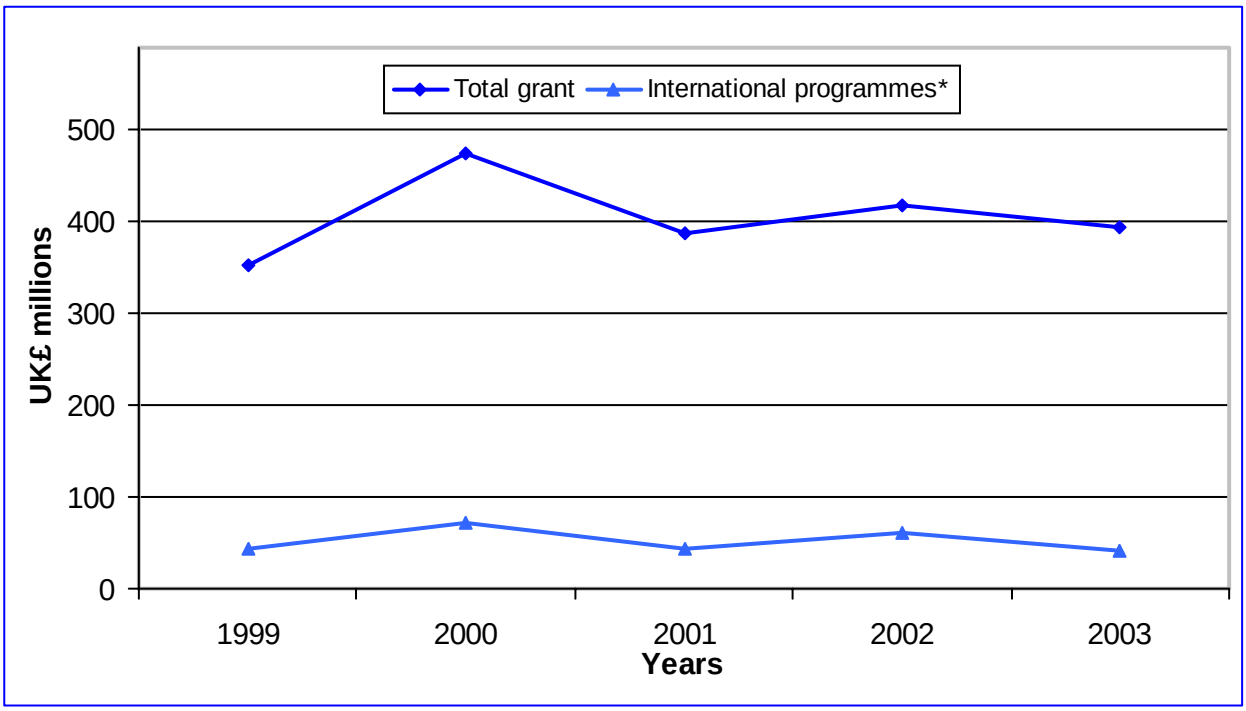
The **Wellcome Trust** dominates the academic and science trusts category in the United Kingdom with assets valued at UK£ 12.1 billion in 2001 and a grant expenditure of UK£ 388 million in 2000/01. The Trust grant expenditure increased during the 1990s and peaked in 1999/2000 at a level of UK£ 480 million. The trust plans its expenditure targets to reflect the value of its investment assets on a weighted average basis over three years. It has, therefore, phased down expenditures to the current level of around UK£ 400 million per year as of 2003 (see Figure 31). Expenditures for international programmes do not include all spending on research relevant to developing countries and should be interpreted as estimates only.

Wellcome Trust supports research across the biomedical sciences through the provision of research grants, career and training awards, and infrastructure support. It also funds research in medical humanities and supports a wide range of activities to foster public engagement in science.

The majority of Wellcome Trust funding is vested with research institutions in the United Kingdom. However, the trust also funds a wide range of activities to foster research and research capacity-building in developing and restructuring countries. The Trust's international activities support research into infectious and noncommunicable diseases, reproductive health, health services, and the impact of demographic change. The trust also supports activities to foster the translation of research outcomes into changes in health policy.

Wellcome Trust has a long-standing commitment to fostering tropical medicine research with an estimated UK£ 300 million (see Table 17) spent on infectious tropical diseases from 1992-2002, much of it in developing countries. This includes a commitment of more than UK£ 100 million to malaria research alone. The trust has also offered long-term support for major programmes in Kenya, Malawi, South Africa, Thailand and Vietnam.

**Figure 31**
**Grant expenditures by Wellcome Trust, 1999-2003** (UK£ millions)




* These totals will not include all spending on research relevant to developing countries, so should be treated as estimates only of Wellcome Trust support for international activities.
Source: Wellcome Trust, personal communication

**Table 17**
**Estimated spending on research on tropical diseases by Wellcome Trust, 1992-2002**

| Disease | Estimated total spending (UK£ millions) |
|---|---|
| Malaria | 101.30 |
| HIV/AIDS | 41.22 |
| Trypanosomiasis | 34.17 |
| Tuberculosis | 31.77 |
| Respiratory infections | 26.27 |
| Leishmaniasis | 18.54 |
| Diarrhoeal diseases | 92 |
| Schistosomiasis | 8.84 |
| Hepatitis | 8.70 |
| Filariasis | 4.97 |
| Chagas | 2.75 |
| Pertussis | 2.20 |
| Measles | 1.83 |
| Dengue | 1.76 |
| Typhoid | 0.95 |
| Other tropical diseases | 6.10 |
| TOTAL | 300.38 |

Source: Wellcome Trust, personal communication

The Wellcome Trust has recently restructured its scientific programme. From 1 October 2004 funding activities will be organized around science-driven streams. The trust will maintain its commitment to supporting research internationally, considering international applications via the most scientifically relevant stream, as an intrinsic element of these streams.

Many other trusts and foundations that support health research are active in the United Kingdom. The **Sir Halley Stewart Trust** provides grants for research in tropical and infectious diseases at British universities with field research projects in Africa. In 2002, giving for health totalled UK£ 314,000 and of that UK£ 175,000 went to health research [personal communication, Sir Halley Stewart Trust]. The **Health Foundation** supports mental heath, water and sanitation, and child health. Its giving level in 2001 was Euro 1,104,960. The research portfolio includes a three-year grant to reduce the risks of indoor air pollution to mothers and children in Tanzania [Directory of Foundation and Corporate Members, EFC, 2002]. **GlaxoSmithKline plc (**GSK) focuses on R&D for diseases of developing countries, particularly those in sub-Saharan Africa. Medicines and vaccines for malaria, tuberculosis, HIV/AIDS and lymphatic filariasis are important research areas. In 2001, GSK established a research site in Tres Cautos, Spain for research into drugs for diseases of the developing world [Annual Report, 2002]. In 2000/01, GSK giving totalled

US$ 78 million [Directory of Foundation and Corporate Members, EFC, 2002 and DAC Journal 2003, OECD].

## 5. Belgium

There is new momentum in the foundation sector as Belgium takes part in the global trend in individual philanthropy and corporate social responsibility. It also now has the favourable legal framework necessary to grow the foundation sector. More than three quarters of foundations are independent foundations established by individuals. There are few community and corporate foundations. Less than 20 per cent are linked to government. The top 15 foundations account for about 85 per cent of total assets held by Belgian foundations, according to a recent study commissioned by the EFC and King Baudouin Foundation.

Of total foundation expenditures, 42 per cent go to self-operated programmes and 41 per cent go to third parties; 37 per cent of third-party grants are administered by the **King Baudouin Foundation** and 49 per cent by the **Institute for Tropical Medicine**, Antwerp. Health accounts for 9 per cent of total support or Euro 11,147,144; 13 per cent of giving goes abroad but this percentage does not include partnerships abroad or domestic giving that has an international mission. Five of the top 10 foundations, as measured by assets, address health issues (see Table 18). Two of these provide funding for international health research. For example, King Baudouin Foundation is providing Euro 1 million for HIV research in Rwanda, Burundi and Democratic Republic of Congo. The Institute of Tropical Medicine provides funding for malaria and other parasitic diseases.

**Table 18**
**Top foundations supporting health, Belgium, 2002**

| Foundations | Assets (Euros) |
|---|---|
| Fondation Roi Baudouin | 206,366,803 |
| Fondation Médicale Reine Elizabeth | 56,082,013 |
| Institute of Tropical Medicine, Antwerp | 20,252,901 |
| Centre Neurologique William Lenox | 14,535,722 |
| Œuvre Belge du Cancer | 4,644,950 |

Source: “Foundations in Belgium”, 2002

## 6. Switzerland

**Medicines for Malaria Venture (MMV)** was established as a non-profit foundation in 1999. Its mission is to discover, develop and deliver new affordable anti-malarial drugs and natural products. Of its expenditures, 88.7 per cent were project-related in 2003, with 0.5 per cent for governance and 10.8 per cent for operations [Annual Report, 2003]. As of April 2004, 39 partnerships had been mobilized in three areas:

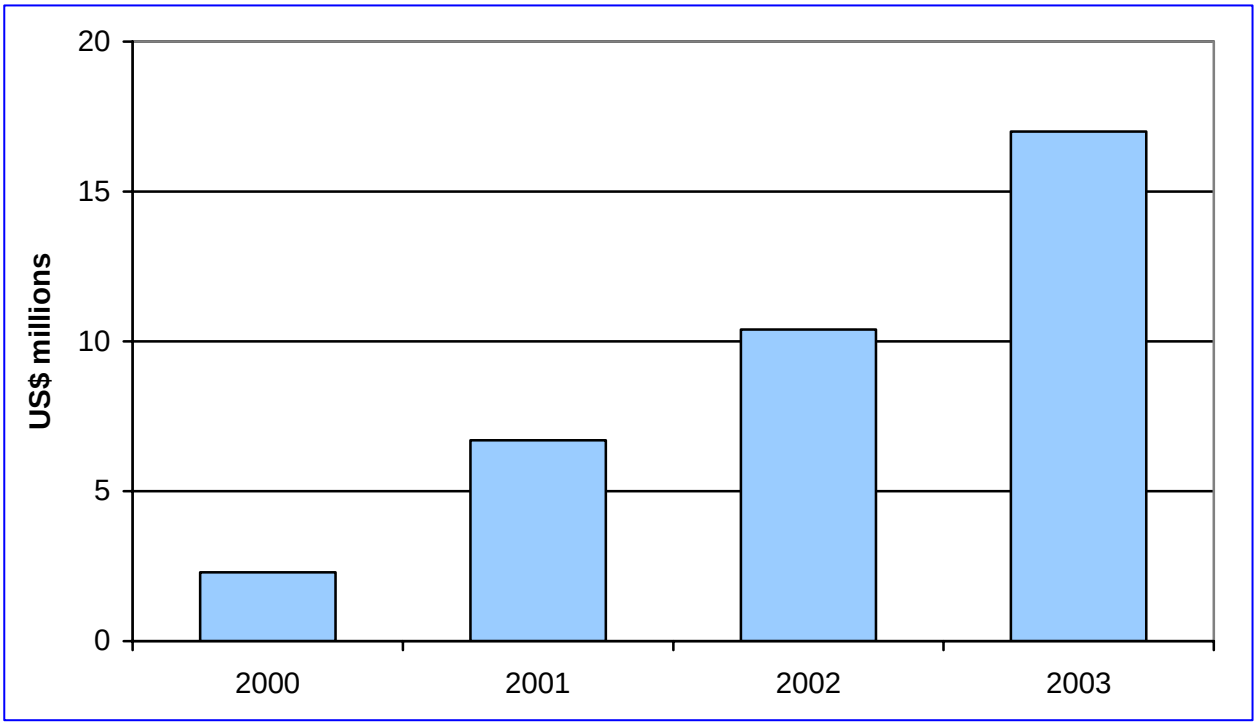
- exploratory – one research institute, two pharmaceuticals;
- discovery – eight academic institutions, three pharmaceuticals, three research institutes;
- development – nine academic institutions, 10 pharmaceuticals, two research institutions, one international organization.

Other important MMV partnerships include the joint GSK/MMV portfolio of projects, collaboration with the Swiss Tropical Institute to screen potential compounds and support individual projects, and with the European and Developing Countries Clinical Trials Partnership Programme (EDCTP)

of the European Commission to assure that clinical trial sites for these projects meet the International Conference on Harmonisation for Good Clinical Practice (ICHGCP). In 2001, MMV assets were US$ 14 million and expenditures were US$ 6.7 million, almost triple the 2000 level of US$ 2.3 million [Annual Report, 2001]. Donors included the Rockefeller Foundation, Gates Foundation, DFID in the United Kingdom, Roll Back Malaria (a global partnership of UN, NGO and private-sector entities), the World Bank and ExxonMobil Corporation.

In 2003, grant income doubled over 2002, largely due to a donation by the Gates Foundation for US$ 40 million over five years. Malarial drug research and development expenditures increased by 70 per cent. Non-grant income, mainly interest on investments, fell from 2002 to 2003 reflecting the continuing decline in interest rates on international money markets. Resource flows for research expenditures from 2000 to 2003 are shown in Figure 32.

**Figure 32**
**Research expenditures, MMV, 2000-2003 (US$ millions)**




Source: Annual Report

The Aga Khan Foundation, established in 1967 by His Highness the Aga Khan with its head office in Switzerland, is supported by Aga Khan, donations, income from an endowment and grants from development agencies. The Foundation had a budget of US$ 103 million in 2002 and made grants in the following countries: Afghanistan, Bangladesh, Canada, India, Kenya, Kyrgyz Republic, Mozambique, Pakistan, Portugal, Syria, Tajikistan, Tanzania and Uganda. In 2003, the Foundation funded over 140 projects in 16 countries with a budget of US$ 139 million. Grants promote new and effective solutions to well-defined problems that impede social development in developing countries [International Foundation Directory, 2003]. Research funding is only a small share of total funding [personal communication, Aga Khan Foundation].

## 7. Germany

The expansion of the foundation sector in Germany has already been mentioned. Examples of foundations that provide funding for health research include the **German Foundation for World** Population [Directory of Foundation and Corporate Members, EFC, 2002] which gave US$ 1.8 million for HIV and STI research in 2001. **Volkswagen Stiftung** is interested in health research, medicine and Knowledge for Tomorrow Co-operative Research projects in sub-Saharan Africa. In 2001, it expended Euro 1,026,420 for 17 projects [Directory of Foundation and Corporate Members, EFC, 2002]. **Robert Bosch Stiftung** assets totalled Euro 5.2 billion in 2003. Project and research grants in the same year were Euro 38 million with Euro 4.9 million directed to research. Although 70 per cent of the projects funded were international (Central and Eastern Europe, France, Turkey, United States), health research projects were not among them [Annual Report, 2003].

## 8. France

Charitable giving is increasing in France [l'Actualite November 2002: les dons declarés des Français en 2000, Fondation de France (FdF) website] despite administrative and legal obstacles. Nevertheless, France lags well behind other countries both in number of foundations and size of assets [DAC Journal, 2003, OECD]. Traditionally, the French state has been stronger and the foundation sector weaker in health research. That began to change in 1965 when French bureaucrat Michel Pomey was charged with looking into the successful American culture of foundations and giving; by 1969, he had raised FrF15 million from French financial institutions to establish the **Fondation de France** to support scientific and medical research. In 2001, giving totalled Euro 58 million. Health giving is mainly focused on domestic issues but donors can designate their contributions for "international solidarity" for which the Fondation invites proposals, especially from NGOs in developing countries [FdF website].

**Fondation Merieux**, founded in 1967, promotes research and education in biology, immunology and epidemiology but no financial data were made available.

The **Institut Pasteur** was incorporated as a foundation in 1887 to promote research in infectious and parasitic diseases, immunity from disease, and research training. The Institute has 21 branches worldwide, but the Institute in Paris is the largest. The network of Pasteur Institutes abroad is managed from Paris.

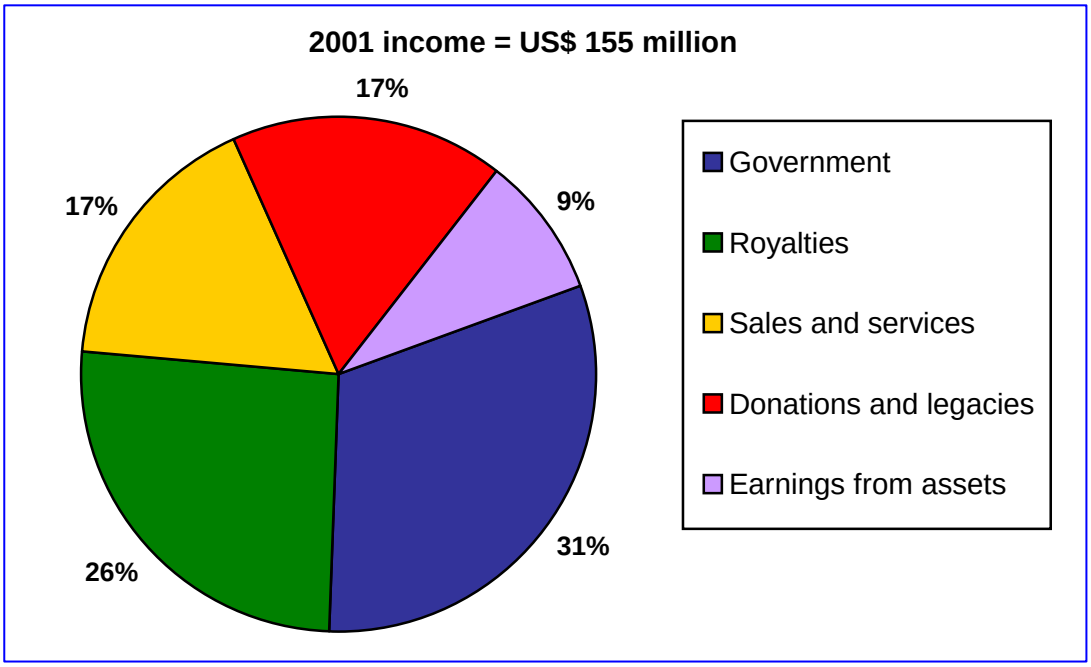
The Institut Pasteur is a semi-governmental organization broadly integrated into the public health system. For the purposes of international R&D surveys they are included in the non-profit sector and the International Foundation Directory lists them as a foundation. The Institute is financed by donations, bequests, profits from manufacturing assets and a grant from the government. Income distribution is shown in Figure 33. Since 1965, the Institut Pasteur has received a grant from the government which accounts for about 26 per cent of its total income. While total expenditures for the Institute as a whole were not made available for this report, public funding for the Institut Pasteur, Paris is presented in Figure 34: in 2001 the Institute's budget was US$ 155 million, an increase of 4.9 per cent over 2000.

## 9. Spain

International cooperation is an important activity of foundations in Spain. It is estimated that Spanish foundations provided Euro 106 million to developing countries in 2000, 12.8 per cent more than in 1999. Health accounts for more than one third of total giving, largely due to the contribution of ANESVAD Foundation. **Fundacio La Caixa** in Spain supports research for neurodegenerative diseases, HIV/AIDS and cancer. The foundation has an international cooperation programme that supports 145 projects worldwide. Most of its grant-making in developing countries is accomplished through social projects that are focused on poverty reduction and HIV/AIDS. Social programmes

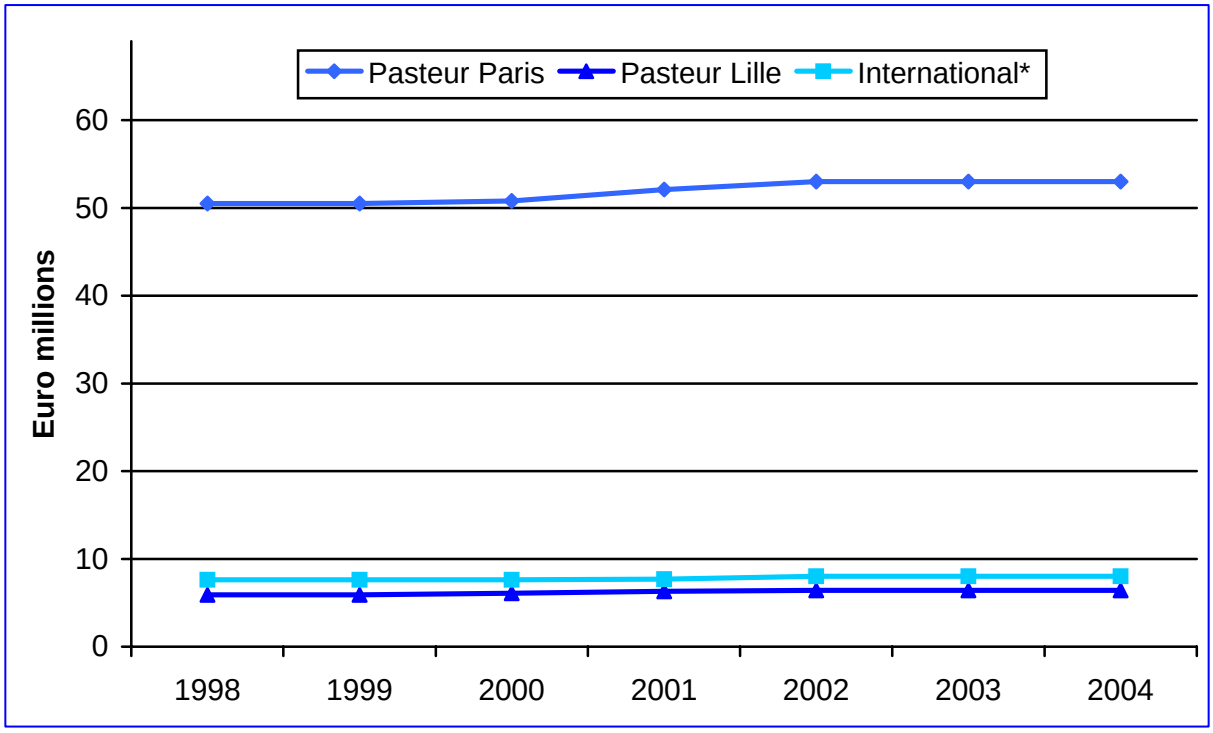
make up 49 per cent of the foundation budget. In 2001, giving to social programmes was Euro 60.3 million out of a total giving of Euro 152.8 million [Annual Report, 2002].

**Figure 33**
**Sources of income by share, Institut Pasteur (France), 2001** (US$ millions)




Source: 2001 Annual Report, the Institut Pasteur

**Figure 34**
**Public funding trends, Institut Pasteur (France), 1998-2004 (Euro millions)**




*Source:* BCRD (Government civil R&D budget)

## 10. Others

Additional data for European foundations and trusts are available from EFC, websites and other sources. In general, however, health and health research data are difficult to obtain and require direct follow-up with the foundations/trusts. Limited time and resources precluded direct follow-up with most foundations except for the largest. It is anticipated that expanded efforts by the EFC to carry out country-specific studies will result in greater public availability of relevant data in the future.

**Bernard van Leer Foundation** in the Netherlands supports projects concerned with the development of children aged 0-8 years in socially and economically deprived circumstances. Many of the integrated projects in countries where the foundation works include health and nutrition aspects of early childhood development (ECD). Total grant-making in 2001 was Euro 14 million for 150 projects in 41 countries [personal communication, BVL Foundation].

**Compagnia di San Paolo** in Italy expended Euro 108.5 million in 2003 that included grants for scientific research and health, including malaria and HIV/AIDS [Planning Guidelines for 2003].

## *E. Facts and figures: Asian foundations*

A summary of Asian philanthropy is provided in Table 19. It should be noted that the legal environment in Asia is an impediment to philanthropy and limits NGO independence. In Japan, a lengthy bout of reduced economic performance has stunted the relatively young foundation sector. The number of newly established grant-making foundations has been declining since 1991. In 1999, only two new foundations were established compared to 56 in 1990. For the 135 foundations for which there are long-term data available, there has been a slow down in the increase ratio of assets since 1997 and annual grant spending has been decreasing since 1996 [Japan Foundation Center (JFC) website] Figure 35. Low interest rates on savings accounts have hampered foundations which draw their main funding resources from interest on bank deposits.

A list of Japan's largest foundations and their asset and spending levels in fiscal 1999 is provided in Table 20**.** As of 2001, the 623 grant-making foundations who responded to the JFC survey had total assets value of ¥1.4 trillion. For comparison, the 20 largest American foundations had combined assets of ¥16.2 trillion – about 33 times the combined assets of Japan's 20 largest foundations which amounted to about US$ 487 billion [Japan Foundation Center Survey 2001].

The **Nippon Foundation** was founded in 1962 as the Sassakawa Foundation for general philanthropic purposes. It supports programmes at WHO and UNICEF and for leprosy through the Sassakawa Memorial Health Foundation. It has directly supported research institutions such as the International Center for Health and Population in Bangladesh.

## *F. Facts and figures: foundations in other geographic areas*

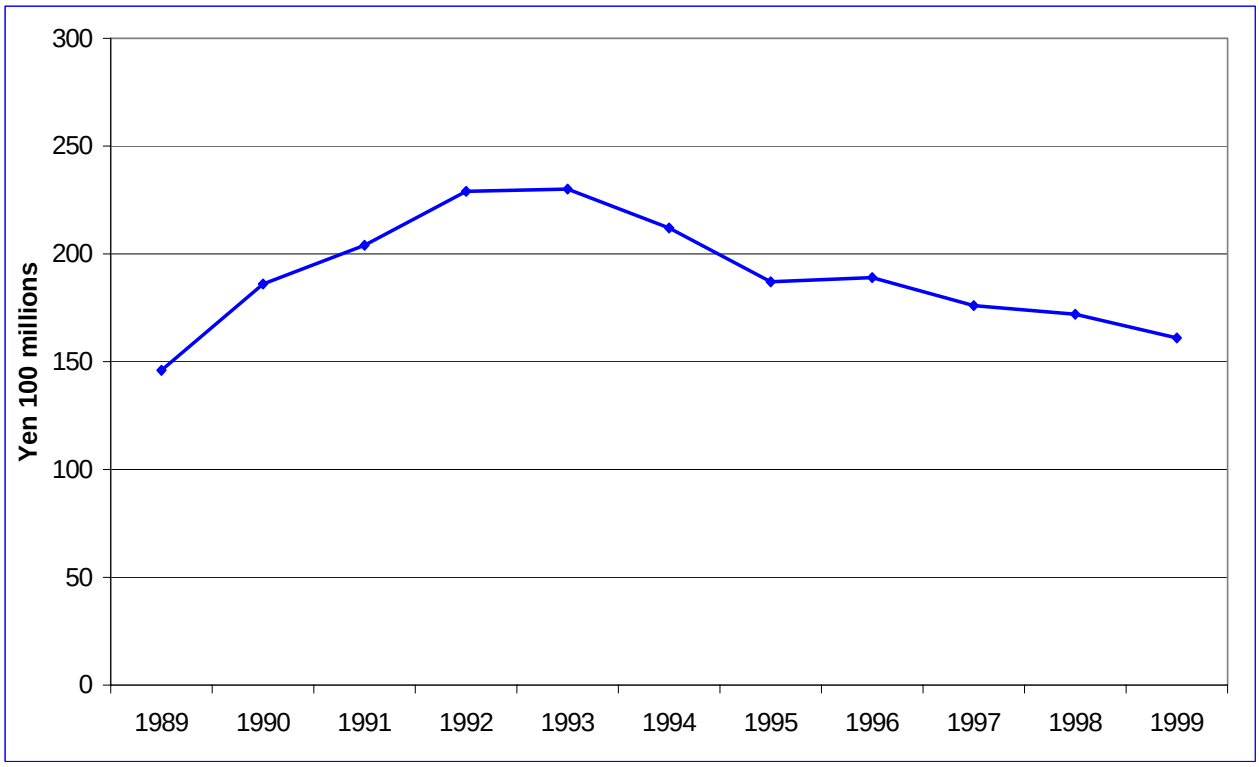
Foundations outside North America, Europe and Japan provide resources for health research but they generally focus on national giving. These include high- and middle-income country foundations such as **Fundação Oswaldo Cruz** in Brazil, **Vehbi Koc Vakvi** (The Koc Foundation) in Turkey and **Fundación Mexicana para la Salud** (Funsalud) in Mexico. These foundations and others support health research relevant to global issues and may play a more visible role in international health research giving in future years.

## Table 19
## Summary of Asian Philanthropy by Country and key variables (all amounts given in US dollars)

| Country | Nos. and Type of foundations | Giving by Corporate Philanthropy | Giving by Individual Philanthropy | Giving by Sectors |
|---|---|---|---|---|
| **Australia** | | Total income for Australia's NPO in 1995-96 was US$ 14.2 billion | In 1997 US$ 2.1b to non-profit; US$ 180m to governmental orgs. Total volunteer time (374 million hours) valued at US$ 5.6b | Religion – 37%; Social service – 17%; Education and Research – 16.4% |
| **Bangladesh** | Individual; Corporate (22,000 registered NGOs); Foundation/Trust; Religious | Estimated at 05% of total revenues | | Main activity is in social welfare. By individuals: predominantly to religious organizations (on average, 80% of households). Education and research (on average, 29.3% of households). |
| **China** | About 1,800; estimated 5% at the national level. | | In 1998 US$ 1.39b; 769.57 million volunteered 19 billion hours | Most is given locally. It is not accustomed to giving to strangers |
| **Hong Kong** | Mostly gov. funded NGOs; The Hong Kong Jockey Club Charities Trust and the Community Chest charities are the dominant philanthropic entities. Philanthropic entities total allocation: US$ 163m in 2000/01. | 10% of total giving; US$ 109m in 1999; other estimates say as high as US$ 333.3m. The largest contributor to charitable causes (70%) | | Education, health, and social services |
| **India** | | | 96% of upper and middle class urban households donate to charitable causes a total of US$ 338.6m | "To relief distress of victims of calamity" (21%). Most individual contributions are made to religious organizations |
| **Indonesia** | | $11.53m in 2001 | Based on the Muslim tradition of *Zakah*, which amounts to 2.5% of annual savings. Mostly to religious organizations | Social service 34.1%; Education 25.4%; Most of individual giving is to religious organizations |
| **Japan** | Since 1998, about 3,500 NPOs have been incorporated number of newly-established grant-making foundations has been declining since 1991 | $1.14 billion (with 64% giving, and 36% volunteering). | Mostly done through the *chonaikai* (community groups), which collected US$ 150m | |
| **Korea** | 4000; 89 corporate foundations involved in grant making. Type: Corporate or company sponsored; scholarship; government-funded. | In 1995, total budget was US$ 410m, 22.5% increase from 1994. | According to one study 10.8% of taxpayers claimed negligible tax deductions. 63% reported that they donated an average of US$197.95 to charity in 1999 | Individual is geared towards social welfare and education. Corporate-founded medical and cultural institutions (86.5%), social welfare programs (4.9%), education (4.3%), and scholarship and research (4.3%). |
| **Philippines** | | 92 corporations contributed US$ 13.14m in 1994 (increase of 77.5% from 1992). | Undocumented. But most generous cash donations from individuals are to churches | Religion. Community-based needs. Top 3 in 1994: Education – 18%; Economic development – 16%; Health – 11% |
| **Taiwan** | 3,014 | | Mostly to family members and close acquaintances | Culture and education (70.6%), welfare (15.9%), healthcare (4%). Individuals give mainly to relatives and for religious reasons. |
| **Thailand** | | | | Mostly to or through the local Buddhist temple. Geared mostly towards community welfare, education and health |
| **Vietnam** | 200 as of July 2001. Type: Many are coordinated through social organizations to help the local community | | | Most are set for local community purposes, especially to help the poor. |

Source: Philanthropic Foundations and Development Cooperation, DAC Journal, 2003, Vol.4, No. 3, OECD

**Figure 35**
**Trends in Total Grant Spending of 140 Foundations 1989-1999, Japan**




*Source:* Japan Foundation Center

## *G. International giving by foundations*

International giving includes both grants that go directly abroad and to domestic institutions that benefit populations in developing countries and/or address the main diseases and conditions responsible for the greatest disease burden globally.

Global trends for international foundation grant-making indicate that:

- the numbers and types of grant-making organizations are growing;
- transnational funding among European foundations/charities is increasing; and
- community foundations are increasing.

The estimated annual financial contribution of private foundations to international/development activities in recent years has been estimated at US$ 3 billion annually, although it was probably higher than that in 2000 and 2001 due to large contributions from the Gates Foundation [Philanthropic Foundations and Development Cooperation, offprint, DAC Journal 2003, Volume 4 No. 3, OECD]. More than half of this amount comes from foundations in the United States. The majority of foundations have no overseas activities; most international funding comes from a small number of foundations that directly fund activities abroad (e.g., Wellcome Trust and Gates Foundation) and/or the activities relevant to international issues are addressed through giving to domestic institutions. In principle, foundation expenditures on international/development activities are reported in OECD/DAC statistics as part of the roughly US$ 7 billion attributed to NGOs. However, under-reporting within countries is evident; attempts to improve data collection are underway.

**Table 20**
**Largest foundations by asset size and grant spending, Japan, fiscal year 1999**
(Yen in hundreds of millions)

| Rank | Foundations | Total assets | Grant spending |
|---|---|---|---|
| 1 | The Sasakawa Peace Foundation | 732.82 | 3.41 |
| 2 | Heiwa Nakajima Foundation | 518.59 | 3.95 |
| 3 | The Inamori Zaidan | 438.13 | 1.99 |
| 4 | Scholarship Fund for Orphans | 343.30 | 13.71 |
| 5 | The Toyota Foundation | 314.96 | 4.23 |
| 6 | Foundation of River and Watershed Environment Management | 280.38 | 4.81 |
| 7 | The Sumitomo Foundation | 170.74 | 3.61 |
| 8 | The Mitsubishi Foundation | 1701 | 4.51 |
| 9 | Ishibashi Foundation | 167.22 | 0.65 |
| 10 | The Vehicle Racing Commemorative Foundation | 1592 | 10.59 |
| 11 | Nagao Natural Environment Foundation | 131.95 | 0.14 |
| 12 | The Japan International Cooperation Foundation | 126.65 | 5.73 |
| 13 | Nippon Life Insurance Foundation | 119.80 | 4.67 |
| 14 | The Asahi Glass Foundation | 1182 | 4.35 |
| 15 | Research Institute of Innovative Technology for Earth | 116.98 | 8.47 |
| 16 | East Japan Railway Culture Foundation | 108.29 | 0.23 |
| 17 | Expo ’90 Foundation | 105.27 | 0.4 |
| 18 | The Saison Foundation | 104.10 | 0.98 |
| 19 | Yoshida Scholarship Foundation | 103.79 | 2.52 |
| 20 | Hyogo Chiiki Fukushi Zaidan | 101.83 | 2.45 |
| | Total | 4,431.86 | 81.43 |

Source: The Japan Foundation Center - http://www.jfc.or.jp/eibun/index.html

## 1. American foundations and international giving

Bolstered by favourable financial markets and a huge rise in the value of foundation assets, international giving by American foundations grew rapidly in the late 1990s reaching an estimated US$ 1.6 billion in 1998, a 66 per cent increase over 1994 levels [International Grant Making: An Update on US Foundation Trends, The Foundation Center, NY, 2000].

In 2000, the 15 foundations shown in Table 21 accounted for 61 per cent of total international giving in the United States. In 2001, international giving grew to US$ 2.5 billion but declined in 2002 (see Figure 36). In 2001, nearly two fifths of international grant-makers awarded grants to overseas recipients. Of the nearly US$ 771 million in cross-border giving, one third went to agencies based in Western Europe such as GAVI, MMV and Marie Stopes International.

**Table 21**
**Total and international giving as per cent of total, 2000 (US$ millions)**

| Foundation | Total giving | International giving | International giving as % of total |
|---|---|---|---|
| Bill and Melinda Gates Foundation | 995 | 929 | 93 |
| The Ford Foundation | 829 | 339 | 41 |
| The David and Lucile Packard Foundation | 429 | 137 | 32 |
| The Rockefeller Foundation | 127 | 121 | 95 |
| John D. and Catherine T. MacArthur Foundation | 164 | 73 | 45 |
| The William and Flora Hewlett Foundation | 136 | 47 | 35 |
| The Star Foundation | 246 | 41 | 17 |
| The Andrew W. Mellon Foundation | 182 | 40 | 22 |
| Charles Stewart Mott Foundation | 140 | 35 | 25 |
| W. K. Kellogg Foundation | 179 | 35 | 20 |
| Open Society Institute | 155 | 26 | 17 |
| The Freeman Foundation | 68 | 24 | 35 |
| Carnegie Corporation of New York | 56 | 23 | 41 |
| Turner Foundation, Inc. | 44 | 21 | 48 |
| The Harry and Jeanette Weinberg Foundation | 103 | 20 | 19 |

Note: International giving includes grants that go directly to developing countries and those that benefit developing countries
Source: Grants for Foreign and International Programs, The Foundation Center 2001/2002

Health was the top priority for international funding by American foundations in 2001 (see Figure 37). Grant dollars for health more than quadrupled to US$ 715 million and health's share of international giving reached 29 per cent.

Grant making for international health research was led by the Gates Foundation, followed by the Ford Foundation and the Rockefeller Foundation (The Foundation Center Special Survey, 2004). Gates Foundation giving was estimated at US$ 101.6 million [personal communication, Gates Foundation] with India and sub-Saharan Africa receiving most attention. The Rockefeller Foundation continued to devote an estimated 95 per cent of its health research funding, estimated at US$ 15.7 million for 2001, to international activities [Philanthropic Foundations and Development Cooperation, DAC Journal 2003, Volume 4 No. 3, OECD; personal communication, Rockefeller Foundation]. International health research giving for the Packard Foundation was an estimated US$ 2.9 million in 2001 with family planning one of two major areas of support: 97 per cent of the international funding supported researchers in developing countries [personal communication, Packard Foundation]. Grants in family planning were made in eight focus countries: Ethiopia, India, Mexico, Myanmar, Nigeria, Pakistan, the Philippines, and Sudan.

## 2. European foundations and international giving

EFC surveys do not report what share of giving by European foundations is international or what proportion goes to developing countries. However, there are estimates [unpublished, Michael Brophy] that about 40 per cent of foundations surveyed have some international activities. Of 35 foundations surveyed, the majority directed less than 25 per cent of their giving outside their own or EU countries. Applying that quarter share to the US$ 1.4 billion in international giving yields a

high-end estimate of US$ 350 million that Europeans foundations give to non-EU countries every year.

Some of the leading international-giving foundations identified which include health research in their portfolios include Wellcome Trust, Institut Pasteur, Fundação La Caixa, Compagnia di San Paolo and GlaxoSmithKline. While estimates of international health research funding trends have been provided for Wellcome Trust and for the Institut Pasteur, these estimates do not include all of the international health research expenditures for these institutions and thus have limited value.

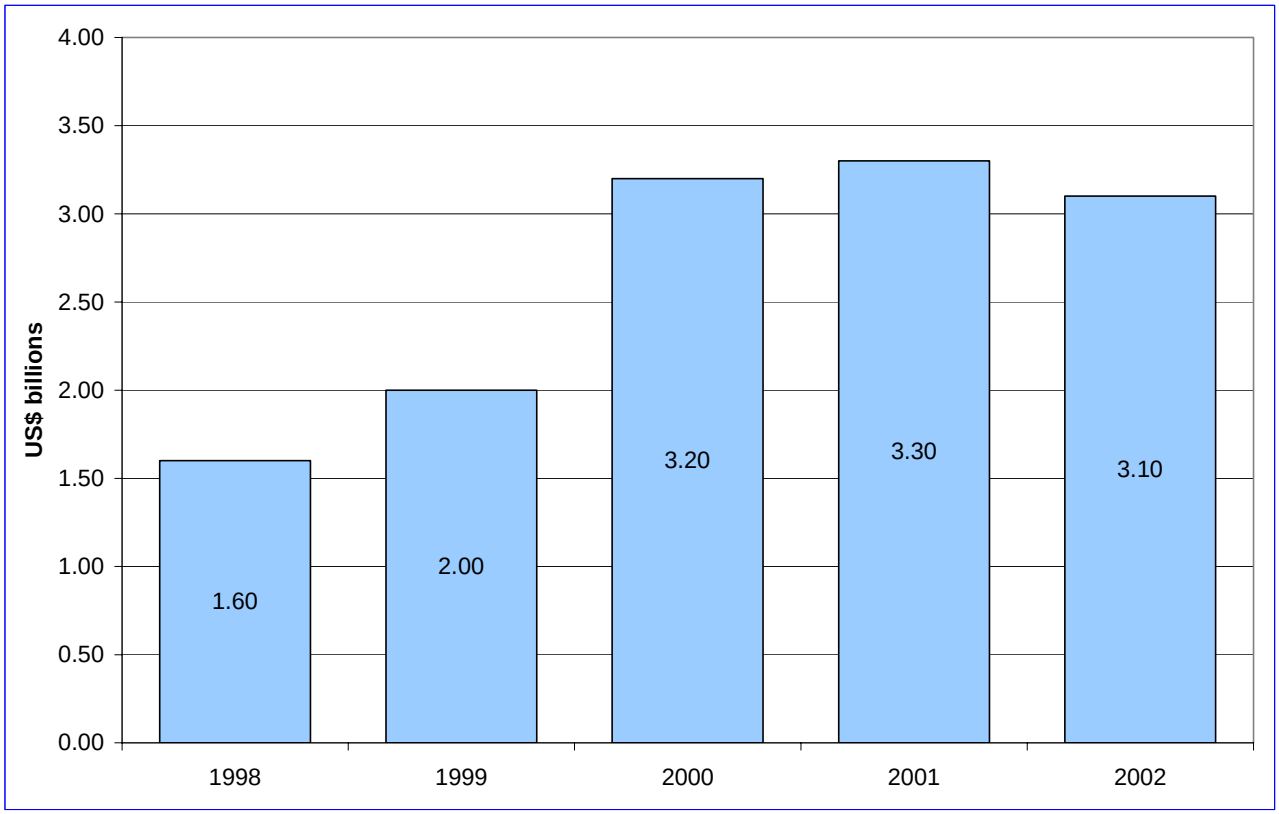
## 3. Asian foundations and international giving

International philanthropy by Asian foundations is relatively limited due to cultural and religious traditions that favour local giving. Contributions by the Nippon Foundation were previously discussed.

## 4. Corporate foundations and international giving

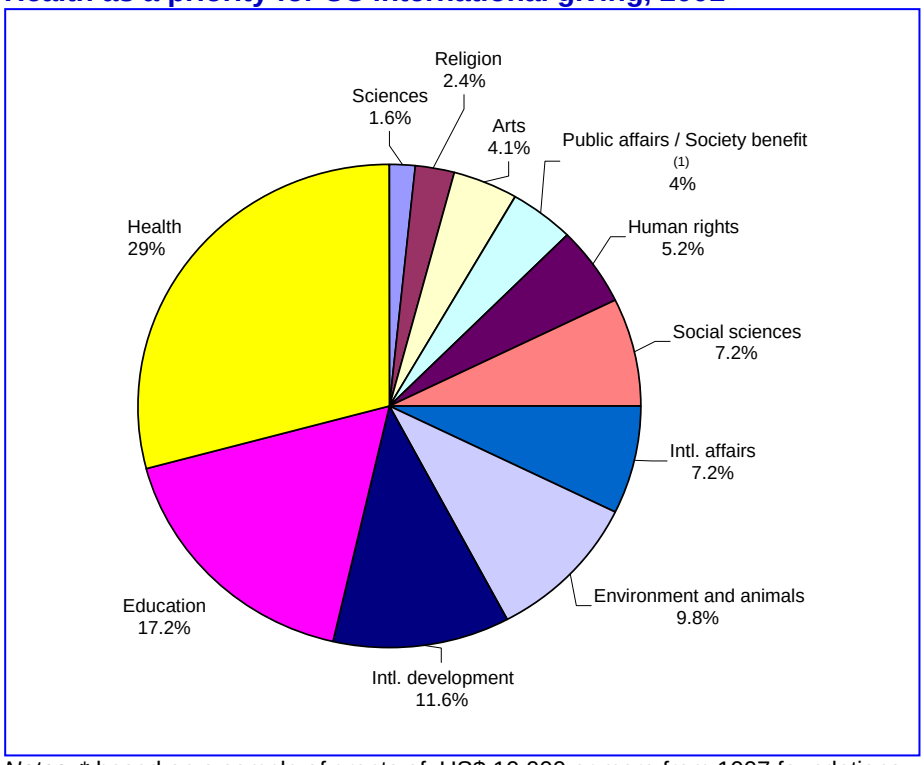
A number of corporate foundations provide funding for health research related to developing country health issues. They include Johnson and Johnson, Levi Strauss, Hoffman-LaRoche, Nestle, ExxonMobil and Shell Foundations as well as GSK whose contribution has been described previously. Financial data were obtained from the recipients of corporate foundations in their annual reports but direct inquiries to corporate foundations were unsuccessful.

**Figure 36**
**Growth of International Giving by US Foundations 1998-2002**




*Note:* All Figures based on unadjusted dollars
Source: International Grantmaking Update 2003, The Foundation Center

**Figure 37**
**Health as a priority for US international giving, 2001***




*Notes*: * based on a sample of grants of US$ 10,000 or more from 1007 foundations.
1 Includes grants for public affairs, philanthropy, and general grants to promote civil society. Civil society grants are also found in other categories, such as human rights and international development.
2 Includes grants for peace and security, foreign policy, promoting international understanding, and international affairs research/policy.
*Source*: The Foundation Center, International Grantmaking Update, 2003

## *H. Foundations and development cooperation*

The paper on Philanthropic Foundations and Development Cooperation published in the OECD DAC Journal in 2003 describes the inter-relationships and synergies between development cooperation and foundations. Foundations have shifted their areas of interest over the years in parallel with and sometimes in advance of shifts in ODA agency priorities. For example, social action and environment have been significant areas of interest for foundations for at least 30 years whereas ODA agencies have increased their involvement in these areas only over the last 15 years. On the other hand, ODA agencies have led the way towards broader approaches to population with an emphasis on reproductive health, while many foundations remained focused on narrow vertical approaches such as family planning. To some extent this may be because foundations are filling a gap left by the public sector.

Foundation work over the past decade has emphasized promotion of democracy, social participation and peace-building. However, recent new initiatives involve agricultural crop and disease research and health and infectious diseases, marking a decisive return of foundation interest to LMIC. The American contribution to health and health research has been led by the Gates Foundation which has formed partnerships with USAID and other bilateral aid agencies as well as multilateral agencies administering ODA. Whereas Japan has a large official aid programme, the resources available to foundations are small. Therefore, foundations concentrate on filling the gaps of ODA programmes. In Europe, foundations participate actively with ODA agencies especially where they have long-term mutual interests (e.g., the Wellcome Trust and DFID in malaria).

The most successful foundation initiatives in LMIC share these characteristics:

- They have been long-term programmes, sustained for 15-25 years.
- Their planning has combined vision and sound scientific understanding.
- Project implementation has been participatory and built upon trust and respect with local authorities, technical staff and populations.
- Initiatives were bold and involved accepting a risk of failure.

ODA agencies have limits to the extent to which they can take on these approaches due to the fact that they are public agencies, responsible to the taxpayer for results within a shorter time frame than foundations. However, the best foundation projects provide lessons learned that bilateral agencies might consider:

- Tap the best scientific advice early in the development of new programmes.
- Bring more rigour to the assessment of projects aimed at behavioural change and the social sciences through evaluation of economic and social rates of return.
- Improve knowledge of foundation activities that could be extended by ODA agencies.

In some industrialized countries, foundations have been established to carry out international development work in the field of health. The Japan International Cooperation Foundation was established in 1997 to contribute to development activities in medical and health care [Directory of Grant-making Foundations in Japan, 2000].

In some low- and middle-income countries, ODA agencies have provided sizeable contributions to indigenous foundations using debt swaps. The *Fundación Mexicana para la Salud (Funsalud),* a private institution established by a Mexican businessman in 1985, is an example of a foundation that has taken advantage of debt swaps. The mission of the foundation is to contribute to scientific and technological development through the support of research, development of human resources, technological innovation, and institutional development. The Mexican government has contributed to the Foundation's endowment, leased land for the foundation building and authorized debt swaps. Carnegie Corporation, WHO regional office for the Americas and USAID are among those that have provided financial support for *Funsalud* research projects. *Funsalud* patrimony has grown to more than 30 million pesos as reported in its Biennial Report 2001-02. Historically, contributions from founding, active, honorary and institutional associates have constituted 29.9 per cent of the total income with external debt exchanges accounting for 42.9 per cent and the federal government 6.1 per cent.

## V. Research institution investments in health research

National research institutions in industrialized countries are continuing to expand their role in international health research, although it is unclear what the magnitude of their contribution is in strengthening the capacity of developing country researchers.

In some cases, there has been a re-organization of the research landscape, e.g., the consolidation of research institutions in Canada into the Canadian Institutes of Health Research (CIHR) and, in the process, institutionalizing a global health co-ordinating office. In the Netherlands, two research organizations have been consolidated; however, at this time, legal issues preclude the Netherlands Organization for Health Research and Development (ZonMw) from giving research support outside the Netherlands. The United States National Institutes of Health (NIH) have institutionalized "internationalism" by having an international coordinator in each Institute.

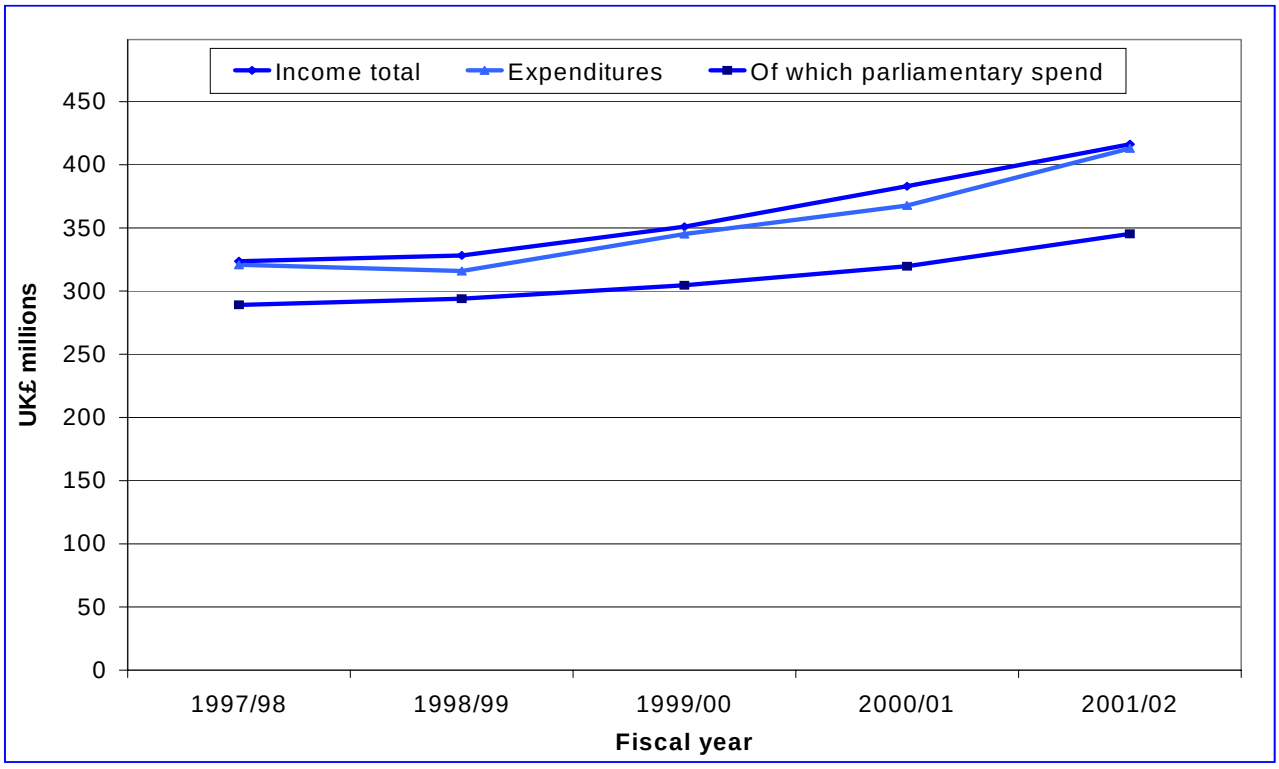
The level of collaboration among national research institutions appears to be increasing, especially as health and science issues continue to evolve at a global level. Although some of the collaboration is stimulated by the ever-increasing number of global initiatives and partnerships, there is also considerable institution-to-institution collaboration on issues of mutual interest. Financial flows for selected research institutions are found in the following sections.

## Medical Research Council (MRC), United Kingdom

The MRC is one of six research councils, all funded by an annual grant in aid from Parliament via the Office of Science and Technology within the Department of Trade and Industry. The institutional grant in aid provides about 83 per cent of total MRC funding annually. Funding from the government has increased from UK£ 276 million in 1998/99 to UK£ 423 million in 2001/02, an increase of 36 per cent (see Figure 38). A level of UK£ 421 million is forecast for 2003/04 [Forward Look, 2003]. The rest of MRC income is generated through transfers from other public sources (7 per cent), charities (1 per cent), and from abroad (2 per cent). Public transfers include UK£ 4.2 million from DFID for research related to the health of developing societies [MRC Annual Report, 2001-2002].

In 2001, the MRC spent about UK£ 403.2 million on research. Net expenditures by subject area are shown in Figure 39. About half of funds are spent intramurally in MRC institutes and universities (mostly for basic research), 40 per cent goes to universities, and 2 per cent goes abroad as contributions to several international biomedical organizations, e.g., European Molecular Biology Laboratory in Heidelberg and International Agency for Research on Cancer in Lyon [MRC Annual Report 2001-2002].

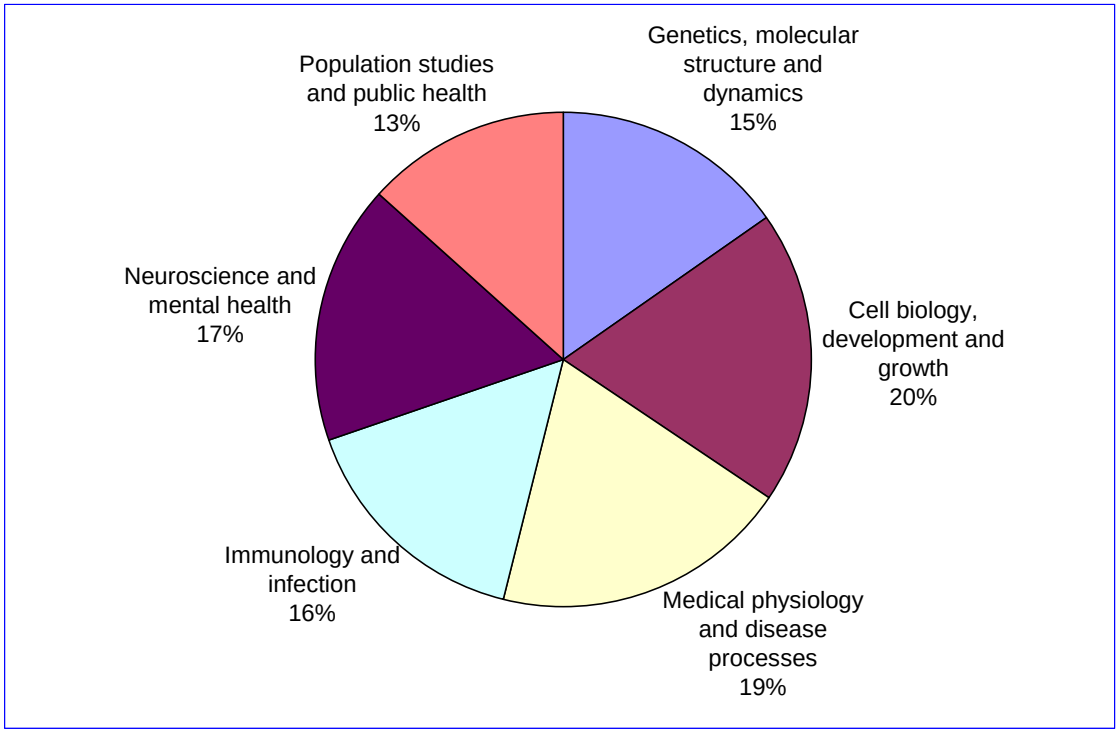
**Figure 38**
**Income and expenditure 1997/1998 to 2001/2002, Medical Research Council, UK**
(UK£ millions)




Source: Annual report 2001-2002

The MRC is engaged in numerous international research collaborations with other European countries, Canada and the United States. MRC funding for research in developing countries is focused on combating infectious diseases including malaria, HIV, TB and childhood infections. Research on these poverty-related health issues is being supported in the Gambia, Kenya, Tanzania, and Uganda. MRC Laboratories in the Gambia have had and continue to play an important role in the understanding of hepatitis, malaria, acute respiratory infections and schistosomiasis and in the development of effective interventions. MRC supports a narrower range of research in other regions, including reproductive health, nutrition and sickle cell disease in China, India and Jamaica. The MRC is taking a lead role in establishing the European and Developing Countries Clinical Trials Partnership Programme launched in 2002 and it sponsors the Global Forum for Health Research on Bioethics in Research that brings together researchers and ethicists from developing and developed countries [MRC Annual Report, 2001-2002].

**Figure 39**
**Percentage net expenditure by scientific field 2001/2002, Medical Research Council, UK**




Source: Annual report 2001-2002

## Canadian Institutes for Health Research (CIHR), Canada

CIHR was created in 2001, replacing the former Medical Research Council. The Institutes are financed by the Government of Canada through parliamentary appropriations. The budget for the MRC and its successor grew throughout the period 1997/98 to 2003/04 as shown in Figure 40. In 2001/02, the first full year of operation for CIHR, expenditures totalled CDN$ 523 million of which grants and awards totalled CDN$ 494 million. Distribution of funds to the Institutes is shown in Figure 41. Since this reorganization of publicly funded research, strategic research has increased from 16.2 per cent of the total budget in 2000/01 to 29.5 per cent in 2003/04.

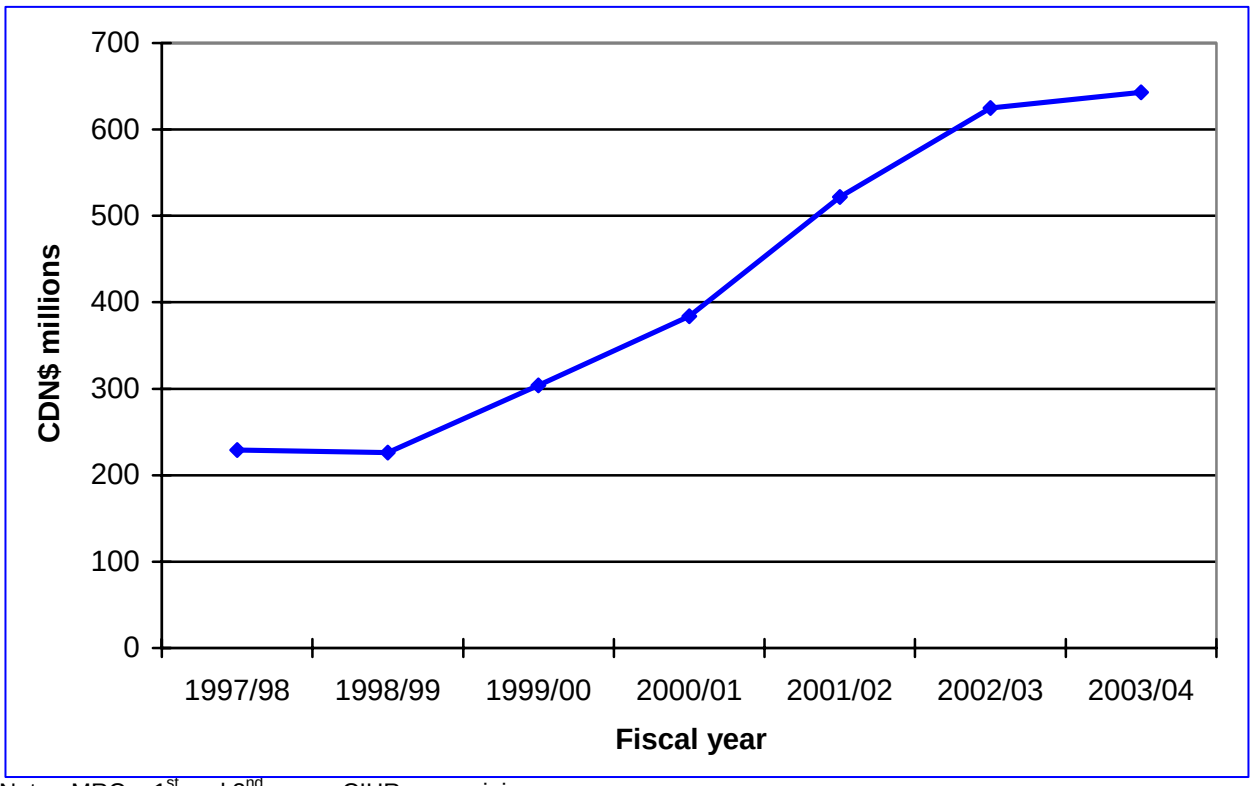
The CIHR mission is to create and translate new knowledge to improve the health of Canadians, provide more effective health products and services, and strengthen Canada's health care system.

CIHR integrates research through a unique interdisciplinary structure that comprises 13 virtual institutes undertaking research in four areas – biomedical, clinical, health systems and services, and population health [2001-2002 Annual Report, CIHR].

CIHR engages in international research through numerous collaborations and its research on issues of global importance, including those important to developing countries. For example, collaborations with Germany's Max Planck Institute for Molecular Genetics have focused on shared development and application of genomic technologies, and agreements with research agencies in Australia and New Zealand have focused on indigenous health collaborations. CIHR initiatives in HIV/AIDS research totalled CDN$ 12.8 million and in Hepatitis CDN$ 803,000 in 2001 [2001-2002 Annual Report, CIHR].

CIHR has also established a new initiative for global health for fiscal year 2004/05 – Global Health Research Program Development and Planning. Grants totalling CDN$ 2.3 million have been awarded to Canadian institutions with partners in developing countries [CIHR website].

**Figure 40**
**Funding trend for health R&D, MRC/CIHR (Canada), 1997/98-2003/04** (CDN$ millions)



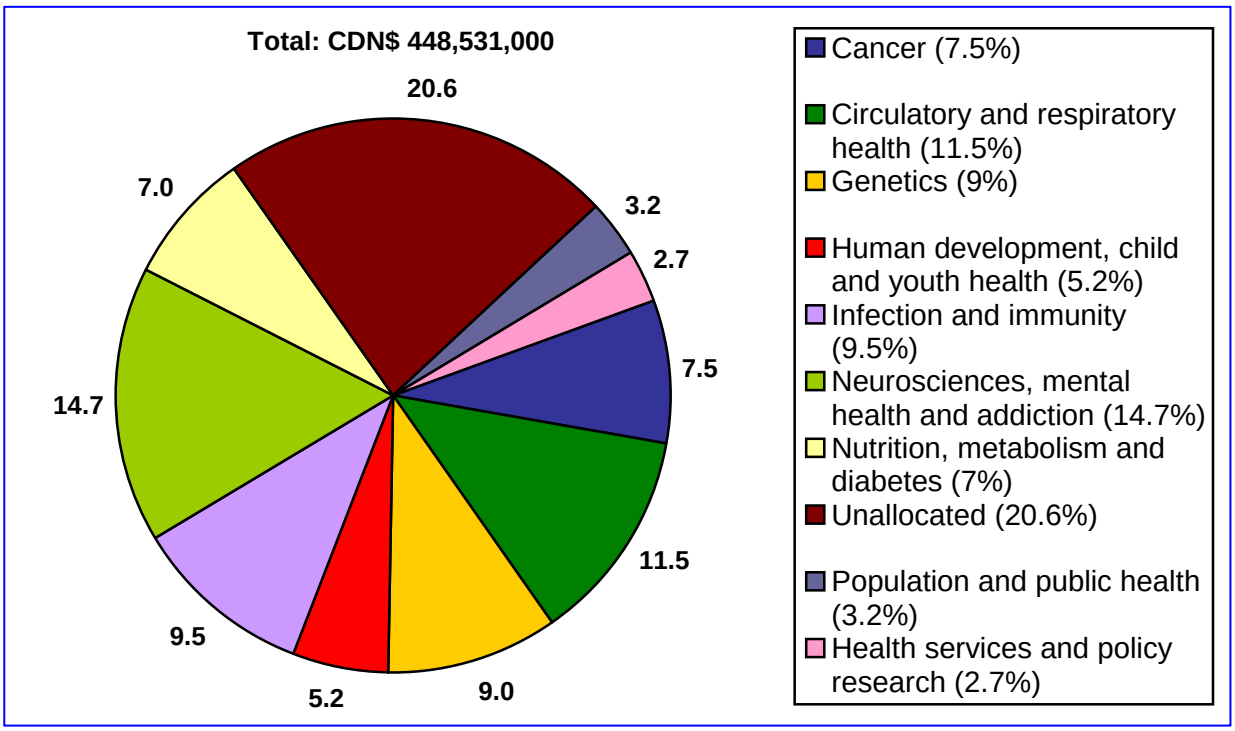

Note: MRC = 1st and 2nd years, CIHR = remaining years.
Source: "Federal Government Expenditures on Scientific Activities", Statistics Canada 2001

## National Agency for AIDS Research (ANRS), France

ANRS main role is as a funding agency. It receives all of its funds from the government and funding levels have been stable since 1998 (see Figure 42). In 2002, it distributed funds to the National Institute of Health and Medical Research (INSERM), the National Centre of Scientific Research (CNRS), the Institut Pasteur, universities, hospitals and other institutes and public agencies [Annual Report, 2002]. Trends in the distribution of ANRS research grants by theme in the period 2000-2002 are presented in Figure 43. Of particular note is the rise in the share of

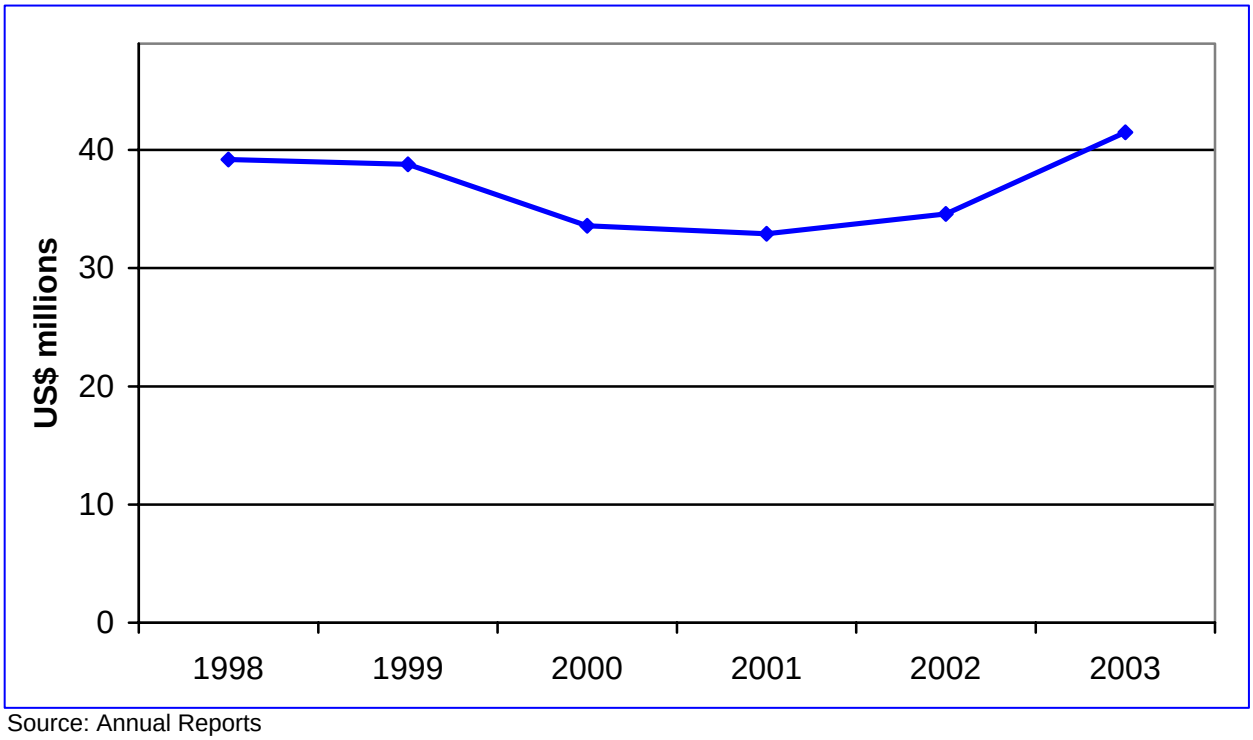
funding for HIV/AIDS research in developing countries – from 13 per cent in 2000 to 21 per cent in 2002.

**Figure 41**
**Distribution of research grants and awards by institute, CIHR (Canada), 2001 (% of total)**



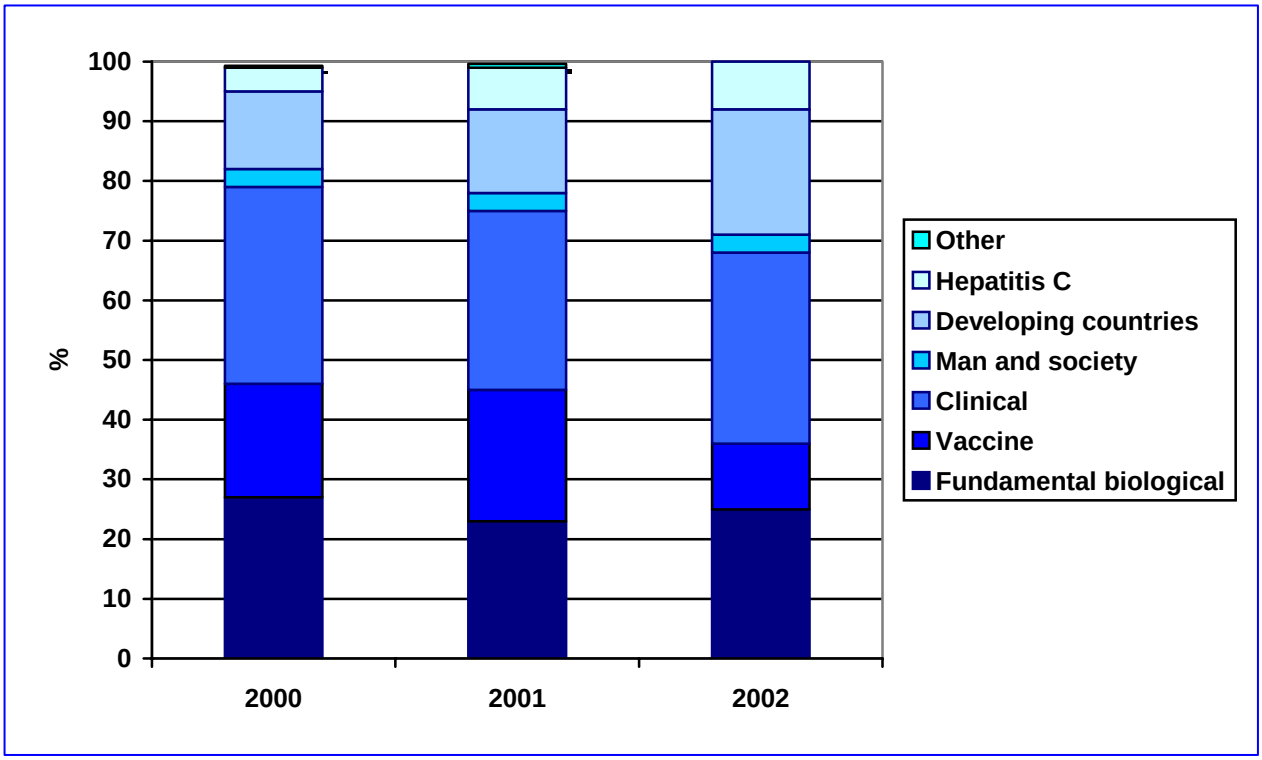

Source: CIHR Annual Report 2001-2002

**Figure 42**
**Funding trend, ANRS (France), 1998-2004 (US$ millions)**




Source: Annual Reports

**Figure 43**
**Trends in the distribution of ANRS research grants by subject, 2000-2002**




Source: Annual reports, ANRS

## Netherlands Organization for Health Research and Development (ZonMw), Netherlands

ZonMw was created in 2001 from the merger of Health Research the Netherlands (Zon) and the Council for Medical and Health Research of NWO, Mw-NWO. Over the last three years, systems have been integrated but the internal budget has not changed. Total expenditures for 2001 were Euro 83 million, including Euro 75 million for health research. As ZonMw is not yet allowed to fund non-Dutch researchers outside the Netherlands, its spending for international research totalled only Euro 216,000. Disease-specific and long-term data were not available.

## National Institutes of Health (NIH), United States

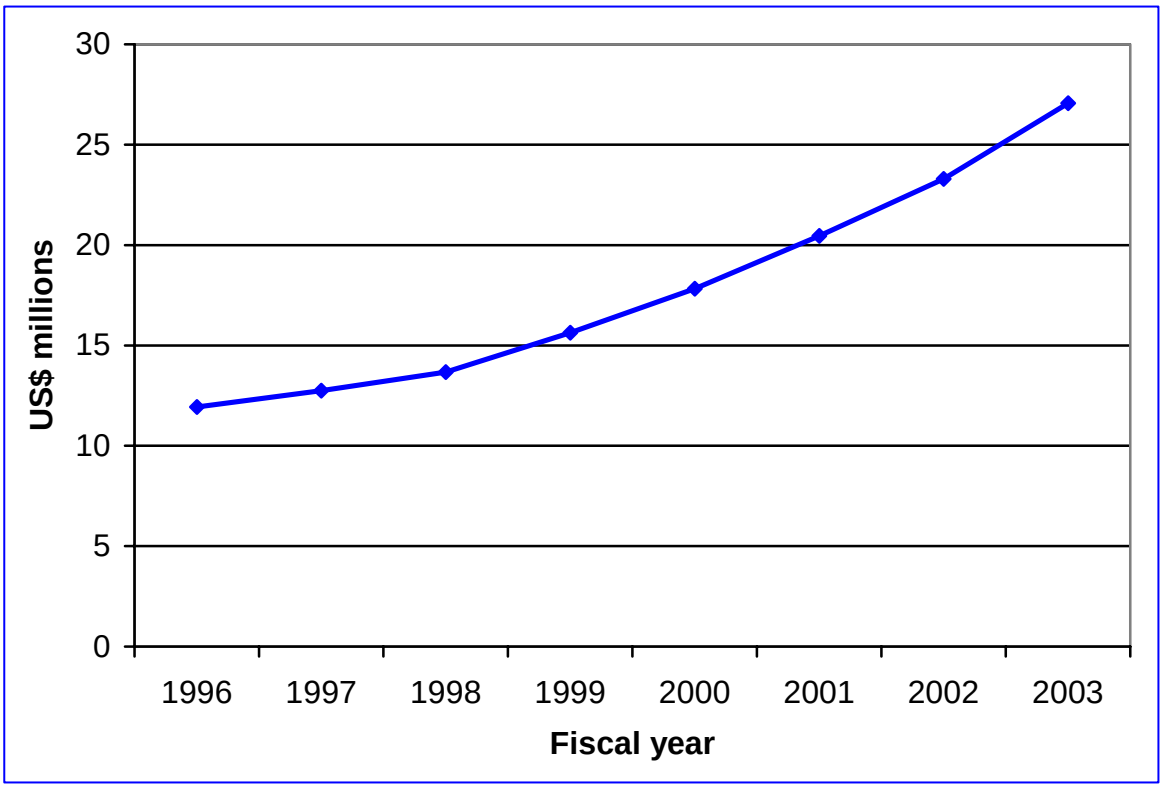
Directing most US government investment in medical research, NIH is composed of 27 Institutes and Centers each with its own broadly defined mission. NIH appropriations from the Congress have risen greatly – almost doubling from US$ 11.9 billion in 1996 to US$ 23.3 billion in 2002. The year 2003 saw the biggest increase for a single year – to US$ 27.1 billion. NIH appropriation trends are shown in Figure 44.

In fiscal year 2001, NIH appropriation totalled US$ 20.5 billion, of which US$ 353.5 million funded international activities. These expenditures include grants and contracts to foreign institutions, foreign components of domestic grants, the NIH Visiting Program (foreign scientists working and training at NIH) and training grants primarily for scientists in developing countries. The latter totalled US$ 41.5 million in 2001 up from US$ 23.3 million in 1998.

NIH conducts intramural research and provides research and research-training grants through its extramural programmes. The major categories of science supported in 2003 through both programmes are listed in Table 22. Research funded may be attributed to more than one category, so funding levels are not additive. Table 23 provides examples of funding levels in 2003 for diseases and conditions that impose the greatest global disease burden. As indicated in Table 23, funding for several conditions/diseases could not be extracted because of the way NIH data is categorized; this by no means indicates that NIH does not provide funding for these areas.

The Fogarty International Center (FIC) is the focal point for international activities within NIH. The FIC Director also serves as Associate Director for International Research for NIH. FIC convenes regular coordinating meetings of Institute international representatives. FIC priorities include biodiversity, ecology of infectious diseases, HIV/AIDS, population and health, emerging and re-emerging infectious diseases, malaria, tuberculosis, medical informatics, bioethics, stigma, brain disorders, trauma and injury, and tobacco use. Capacity-building for biomedical researchers in developing countries is an important FIC objective, especially for basic and clinical research. A number of research centres in American universities participate as training centres for developing country researchers. FIC also operates a research grant programme for north/south partnerships and serves as the coordinating point for international activities such as the Disease Control Priority Project.

**Figure 44**
**Funding trend*, NIH (USA), 1996-2003** (US$ millions)




* NIH appropriation
Source: Financial reports, NIH

**Table 22**
**Funding estimates for top-funded diseases, conditions, research areas, NIH (USA)* 2003**

| Diseases, Conditions, Research Areas | Fiscal Year 2003 US$ millions |
|---|---|
| Ageing | 2,211 |
| Behavioural and social science | 2,684 |
| Biotechnology | 9,893 |
| Brain disorders | 4,740 |
| Cancer | 5,432 |
| Cardiovascular | 2,286 |
| Clinical | 8,028 |
| Genetics | 4,236 |
| HIV | 2,716 |
| Infectious diseases | 2,441 |
| Neurosciences | 4,711 |
| Paediatrics | 3,066 |
| Prevention | 6,546 |
| Women's health | 3,498 |

* This table includes estimates for research in many diseases / conditions / research areas, which are also included under other diseases/conditions/research areas because the research contributes to multiple fields of research. Funding is not additive.
Source: NIH Disease Funding Table, Updated 2004, NIH

**Table 23**
**Examples of NIH (USA) funding levels for diseases/conditions representing Top 12 burden of disease* globally** (US$ millions)

| Diseases, conditions | Funding In 2003 |
|---|---|
| Cancer | 5,432 |
| Unintentional injuries** | 349 |
| Cardiovascular diseases | 2,286 |
| Acute respiratory infection*** | 184 |
| HIV/AIDS | 2,716 |
| Malaria | 72 |
| Tuberculosis | 122 |
| Nutritional deficiencies | 1,016 |

* Neuropsychiatric, perinatal, maternal and diarrhoeal diseases have been identified as top diseases/conditions responsible for global burden of disease but could not be attributed to single, specific categories used by NIH.
** Includes all accidents/adverse effects.
*** Includes pneumonia and influenza
Source: NIH Disease Funding Table, Updated 2004, NIH

In fiscal year 2003, FIC budget (a subset of NIH budget) for international activities totalled US$ 63.4 million, up greatly from US$ 28.3 million in 1998. Training grants constituted a large part of the international budget at US$ 51.2 million in 2003 up from US$ 21.2 million in 1998.

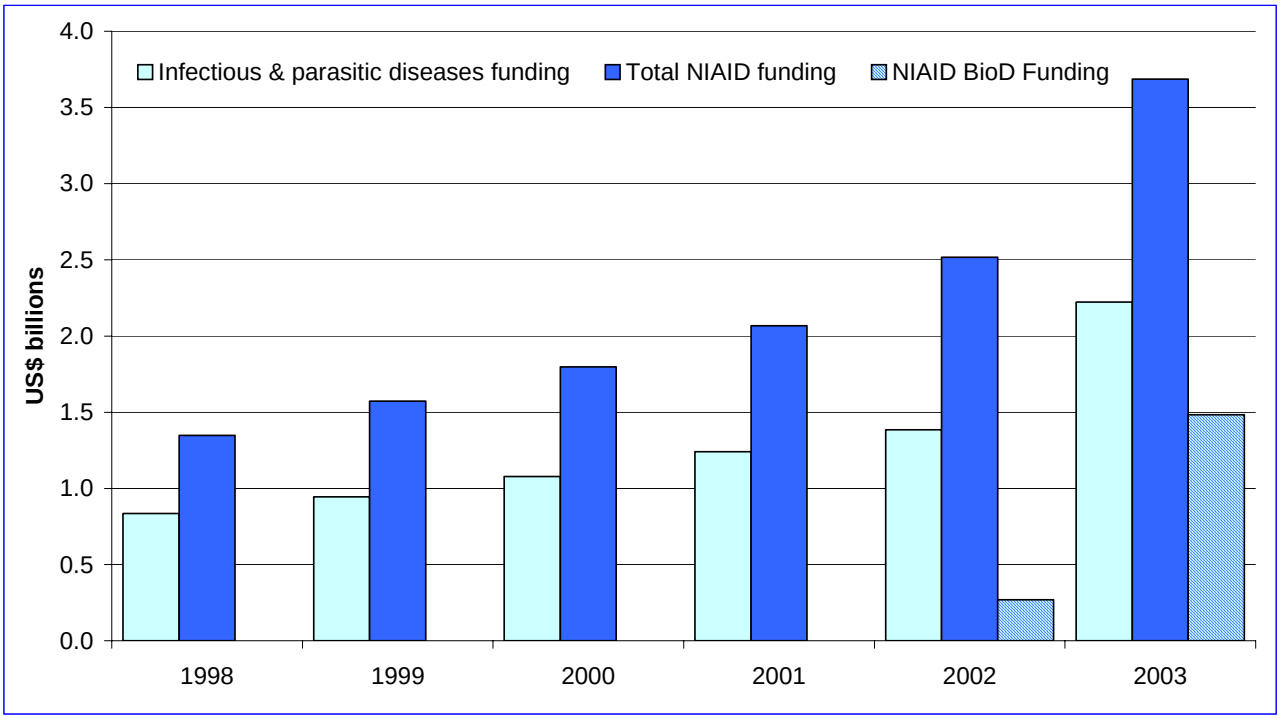
Research on infectious and parasitic diseases is supported through the National Institute of Allergy and Infectious Diseases (NIAID). Actual dollar expenditures on research for infectious and parasitic diseases have more than tripled since 1998; research includes subject areas of particular relevance to the 10/90 gap, including HIV/AIDS and tropical diseases. However, the NIAID share of total NIH spending has declined since 1988 and the share of expenditures for biodefence has increased dramatically since 2002 (see Figure 45).

Trends for NIH and FIC international funding are shown in **Figures 46** and **47.**

## Howard Hughes Medical Research Institute (HHMI), United States

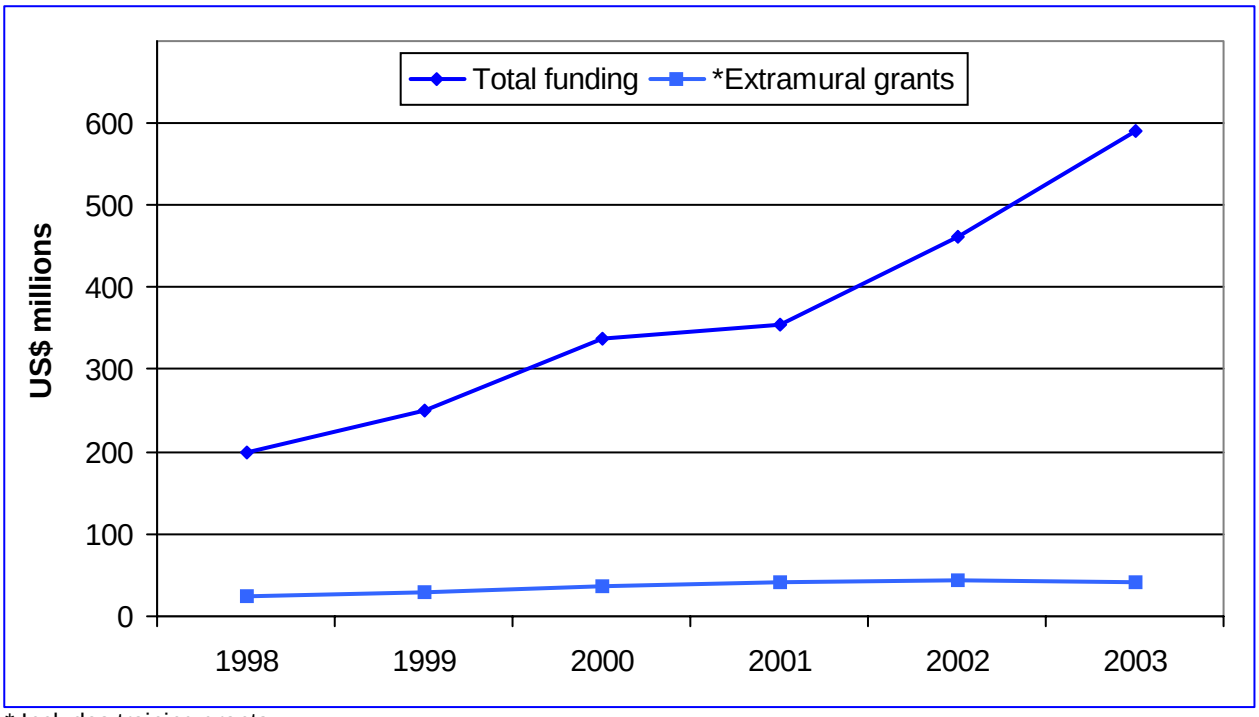
HHMI is classified as a medical research organization. Due to its large grant-making role, it is often mistakenly referred to as a foundation. In 2001, the Institute spent US$ 515 million on research by HHMI investigators compared to US$ 389 million in 1998 and US$ 114 million on grants to support pre-college and undergraduate science education, graduate science education and research training, and international research and education compared to US$ 95 million in 1998 (Annual Reports 1998 and 2001). In 2004, US$ 459 million was spent on research by HHMI investigators and US$ 80 million on grants (Annual Report 2004). The decrease in spending on research may be attributed to the poor economic climate in the United States which decreased the value of assets in the late 1990s and early 2000s (see Figure 48).

**Figure 45**
**Funding in infectious and parasitic diseases, NIAID (USA), 1998-2003** (US$ billions)



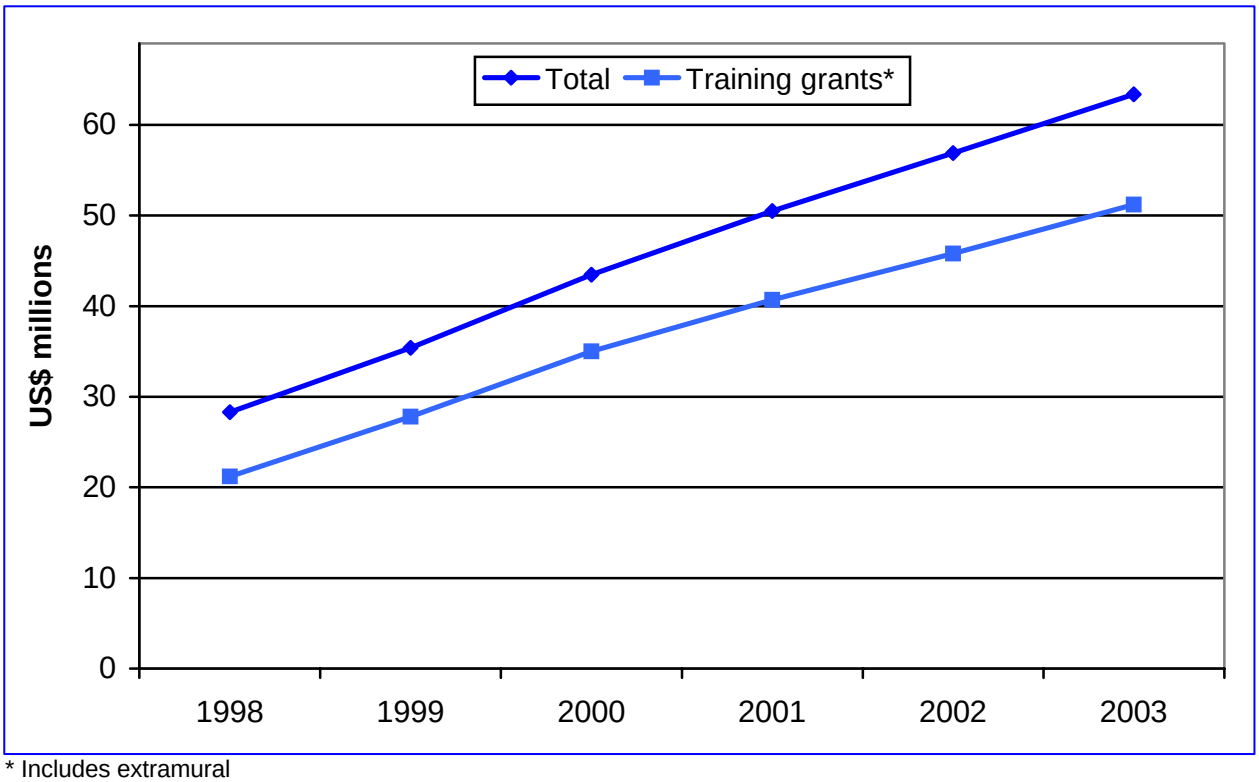

Sources: The World Report 2004, Changing History, Statistical Annex, Table 3, Burden of disease in DALYs by cause, sex and mortality stratum in WHO regions, estimates for 2002

**Figure 46**
**Funding for international activities, NIH (USA), 1998-2003** (US$ millions)




* Includes training grants.
Source: NIH financial report

**Figure 47**
**Funding for international activities, FIC (USA), 1998-2003** (US$ millions)



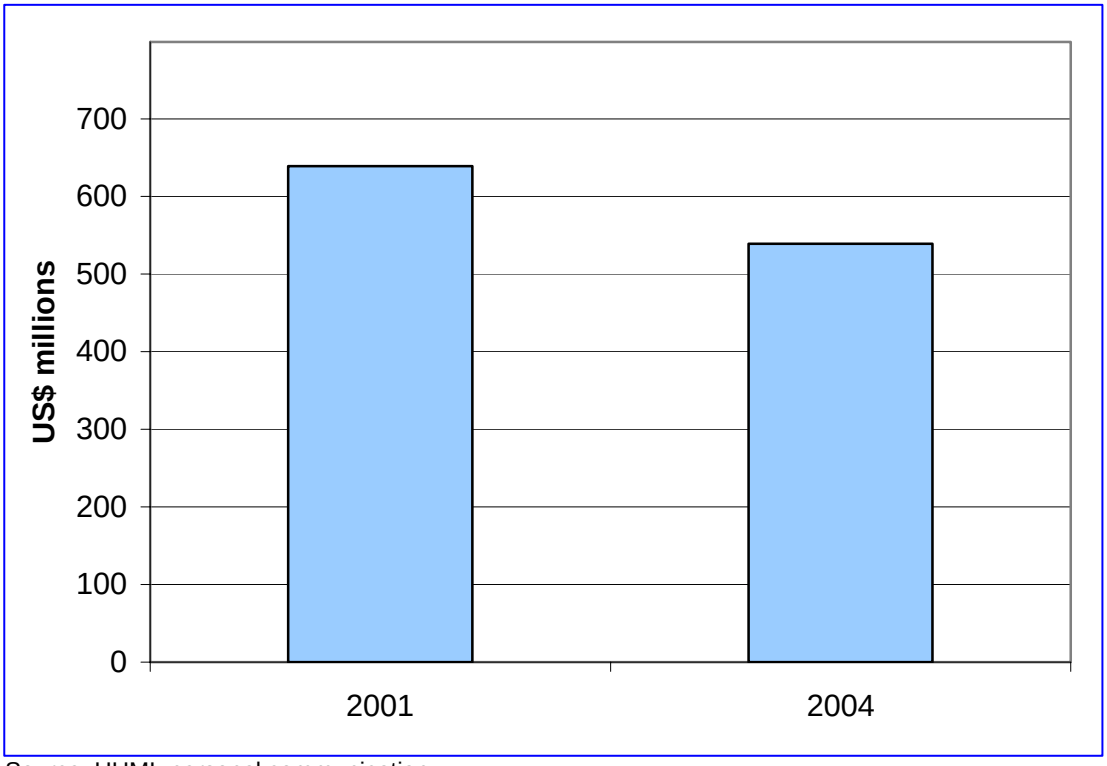

* Includes extramural
Source: Financial reports, FIC

Annual grant-spending for international research and education is approximately US$ 10 million; 95 out of 132 scholars receiving international grants are in LMIC, representing an estimated 70 per cent of the total international budget [personal communication, HHMI]. The Institute's endowment at the close of fiscal year 2003 was US$ 11.3 billion and rose to US$ 12.7 billion in 2004, following a pattern similar to that of endowed foundations.

## VI. Multilateral investments in health research

A multilateral institution is an international institution with governmental representation. Multilateral institutions include multilateral banks, United Nations agencies, and regional groupings such as the European Union and its Commission. A contribution to such an agency is defined as multilateral if it is pooled with other contributions and disbursed at the discretion of the agency. Multilateral agencies and organizations, in their role as secondary investors, provide support for health research through loans (development funds/banks) and grants (development banks, UN agencies) to universities, research institutes, NGOs and LMIC governments. Resource flows are difficult to understand and document given the size and complexity of the organizations.

**Figure 48**
**Health research spending, Howard Hughes Medical Research Institute (USA), 2001 and 2004**
(US$ millions)




Source: HHMI, personal communication

The overall share of multilateral aid in DAC-member programmes has been relatively constant at 30 per cent over the last decade, despite shifts within the total (refer back to **Table 2**). European countries are increasing their EC contributions but it could not be documented that those funds contributed to health research. Funding to some UN programmes has increased through voluntary

contributions by ODA agencies, foundations, and companies. Non-DAC members of OECD are also contributing to selected UN agency programmes. Voluntary contributions, especially to WHO and co-sponsored programmes such as TDR, are often designated for a specific research topic. They do not, therefore, fully conform to a strict interpretation of the definition of a multilateral contribution. Several years ago a survey of research conducted at WHO was carried out; the report from the survey was not published and the surveys were not continued. However, the level of resources committed to research from the regular budget is estimated to be very low.

## European Commission

The flow of resources within the EC system is very complex to the outsider. A simplified flow of funds for health research has already been presented in Figure 21. In brief, subsequent to joint decision-making between the European Parliament and the Council of the EU/Council of Ministers, funds pass to the European Commission. Funding for health can potentially go to five directorates-general: Health and Consumer Protection; Research; Enlargement; Development; and External Relations. Funds from the European Development Fund pass directly to the implementing units of Development (ECHO and AIDCO).
The majority of international health research funding is accomplished by the Research Directorate through programmes such as the International Cooperation (INCO) Programme. In the past, the Development Directorate has supported health policy and operational research closely related to the programmes implemented in developing countries. It is unclear to what extent this will continue under the new EU Sixth Framework Programme (FP6).

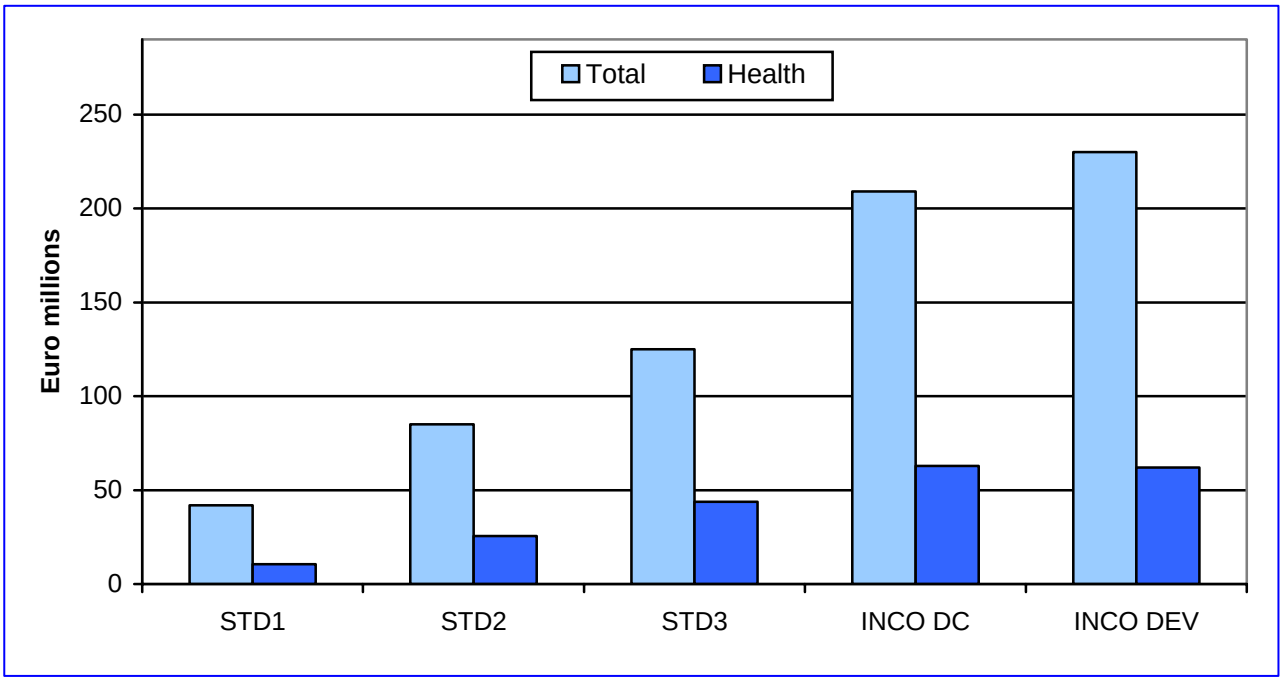
Under FP6, the Research Directorate will implement programmes for specific research activities in support of the European community's foreign policy and development aid policy. These activities will include three groups of countries: Mediterranean "third" countries including the Western Balkans; Russia and the other NIS countries; and developing countries.

International Scientific Cooperation Programs (STD and INCO) that include health research have been part of the EC agenda under its regular research budget for 20 years. Research cooperation with developing countries on human health issues continues to be a priority area for the Research Directorate. The evolution of the health budget within the international scientific cooperation programmes (see Figure 49) shows a steep rise in funding levels every four years from the STD Programme initiated in 1983 through the INCO/DEV Programme initiated in 1998. Between 1983 and 2002, the total budget spent on health research projects was Euro 204.7 million.

Under the INCO/DEV Programme 1998-2002, there were 63 research contracts with the participation of 418 scientific teams. Of the Euro 62 million for health research in this programme, Euro 17.9 million were expended for health systems and policy research. Also included in the programme were projects to develop tools for improved health – vaccines, drugs, diagnostic tools – and projects related to the biological and clinical aspects of disease control. During the course of the INCO/DEV programme, the share of funding for developing country researchers increased steadily compared to the proportion of funding for EU-member country researchers. (see Figure 50).

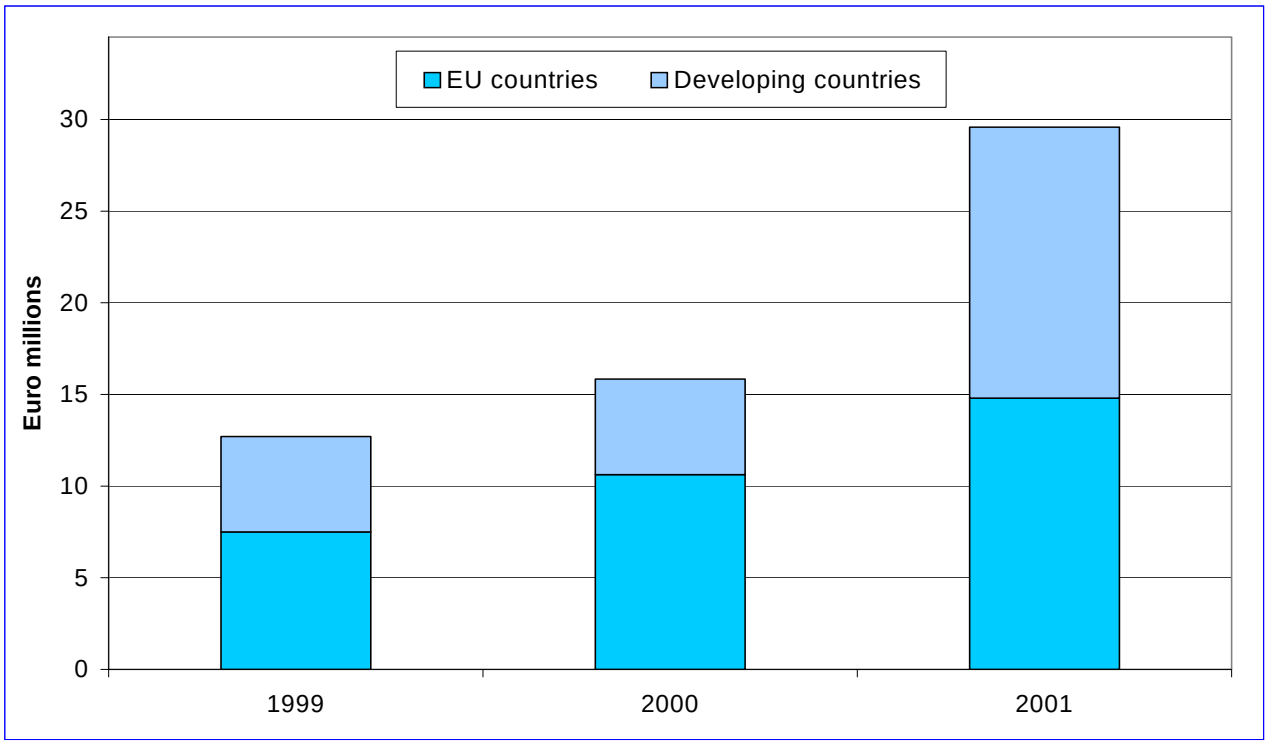
The INCO programme under the 6$^{th}$ Framework Programme is ongoing. From a total of Euro 315 million, about Euro 45-50 million will be allocated for health research projects. Whereas this appears to be a decrease of about 20 per cent from previous INCO health research levels, in fact it is not because malaria, tuberculosis and HIV/AIDS research has been transferred to another unit dealing with poverty related diseases, leaving no net change in funding levels. Priority areas for health research include: reproductive health, child health and nutrition; health care systems, health policy, and management; knowledge and technologies to improve the control of neglected communicable diseases.

**Figure 49**
**Evolution of international cooperation research budget, EC Research Directorate General, 1983-2002**




Source: INCO Briefing Paper, 2004

**Figure 50**
**Allocation of funding for health research for INCO/DEV, EC, Research Directorate General, 1999-2001**




Source: EC Financial Reports

The structure and philosophy of FP6 will encourage participation of developing countries. For the first time, developing country researchers will be able to participate in all programs, not just INCO. Under the new programme, international research cooperation activities will be carried out in three areas, totalling Euro 710 million:

- research in seven priority areas, several relating to health – Euro 285 million earmarked for third country organizations;
- international cooperation activities to be carried out under INCO for areas outside the seven priority areas – Euro 315 million earmarked for third country organizations; and
- human resources and mobility, including research training, for third-country researchers in Europe – Euro 110 million.

By way of example, the European and Developing Countries Clinical Trials Partnership Programme is dedicated to accelerating the development of new clinical interventions to fight HIV, malaria and tuberculosis. The European office is located in the Netherlands and an Africa office opened in Cape Town, South Africa, in 2004 under the auspices of the MRC. There has been a call for proposals to develop capacities in sub-Saharan Africa for the evaluation of candidate vaccines for HIV, malaria, tuberculosis, and of microbicides.

## WHO/Research Policy and Coordination (RPC)

The RPC budget increased from US$ 1,978,981 in the 2000-01 biennium to US$ 3,515,081 in the 2002-03 biennium. Donors for the two-year period 2000-01 were the governments of Norway, Sweden, Switzerland, and the United Kingdom. Other donors included the Global Forum for Health Research and the Rockefeller Foundation.

In 2000-01, 34 per cent of the RPC budget was spent on activities to provide an enabling environment for health researchers from developing countries. In 2002-03 this increased to 62 per cent of the RPC budget – primarily because of the Health Research Systems Initiative (HRSA) where RPC has funded a pilot project on in-depth country studies for the testing of data collection tools in 14 LMIC.

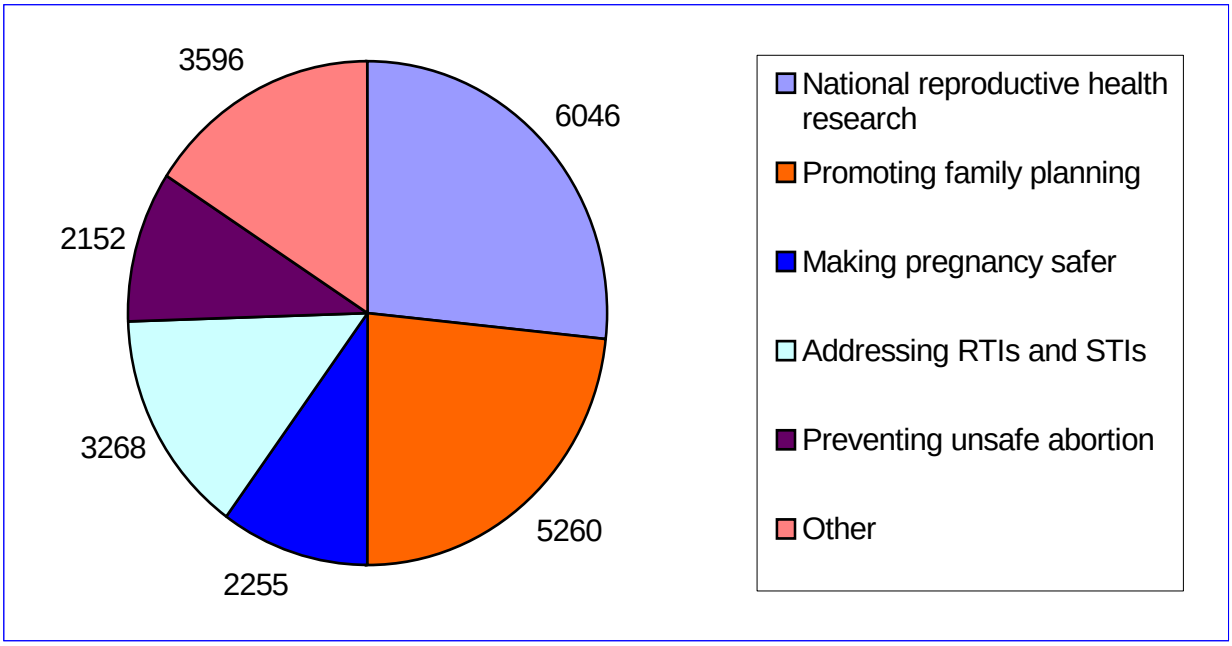
## UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction (HRP)

HRP is the main instrument in the UN system for research in human reproduction. The programme identifies and addresses priorities for research aimed at improving sexual and reproductive health. It reviews, develops and tests methodologies for the planning and implementation of reproductive health services and assists countries to do so. An estimated one third of its research budget is used to support national research capacity strengthening in reproductive health. Allocation of HRP funds for 2002-2003 is described in Figure 51.

HRP income has declined substantially from about US$ 46 million in the 1992-93 biennium to US$ 34 million in 1998-99 biennium and, finally, to US$ 27.2 million in 2002-03. Expenditures on research of global relevance, as well as national research and research capacity strengthening have also declined: US$ 25 million in 1992-93, US$ 20 million in 1998-99 and US$ 18.9 million in the 2002-03 (see Figure 52).

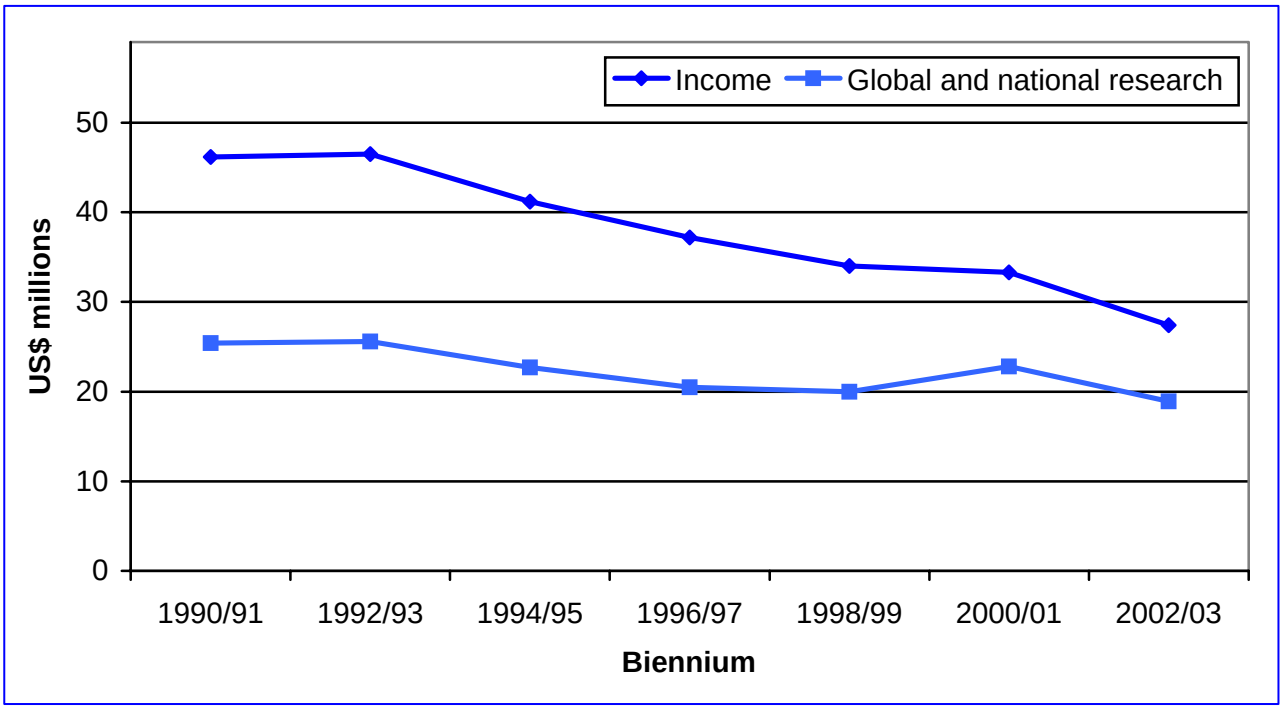
HRP co-sponsors – UNDP, UNFPA, WHO and World Bank – have contributed about one third of the total budget over the past 14 years but the absolute amount and the proportion of HRP budget they represent have declined over the past seven years – from US$ 8.3 million to US$ 4.3 million, and from 41 per cent to 28 per cent of the total budget. UNDP has not contributed since 1996. [HRP External Evaluation, 2003.]

**Figure 51**
**Allocation of funds, WHO Programme for Human Reproduction (HRP), 2002-03**
(US$ thousands)




Source: WHO Programme for Human Reproduction

**Figure 52**
**Trends in funding, Human Reproduction Programme (HRP), WHO, 1990-2003**




Sources: "RCS in Developing Countries is Cost Effective and Relevant to National Needs: the Experience of HRP", HRP financial reports and personal communication.

The relative share of contributions from Member States declined as a percentage of the total, while the share of contributions from foundations increased enormously – from 5 per cent to 22 per cent in the past 12 years [HRP External Evaluation, 2003].

### WHO – Department of Child and Adolescent Health and Development (CAH)

CAH is responsible for promoting health, growth and development outcomes for the age group from birth to 19 years. CAH work is guided by: development of strategies, tools and standards adapted to country needs; support for introduction in countries; and monitoring and evaluation of intervention impacts.

Newborn and child health are CAH sub-categories that address five of the Top 12 of global burden of diseases/conditions:

- respiratory infections;
- HIV/AIDS(paediatric);
- diarrhoeal disease;
- nutritional deficiencies; and
- perinatal/neonatal conditions.

Although there has been an overall decline in global child mortality over the last decade, there is growing evidence to suggest that child mortality rates are levelling out and in some countries rising [CAH Annual Report 2003]. Moreover, since most of the improvements in child mortality have benefited older children, newborn deaths (four million in 2001) comprise a greater share of total child mortality; consequently, CAH is devoting more research efforts in this area.

Both the CAH total budget and the budget for child and newborn research rose in the mid-1990s but fell in the period 1998-99 to levels of US$ 27.8 million for child health activities – US$ 6.7 million of which was for R&D (see Figure 53). During 2000-01, research for newborn and child health rose greatly to US$ 14.4 million and the total CAH budget increased to US$ 38 million. The increase was due, in large part, to the receipt of designated research funding from the UN Foundation (US$ 3.5 million over three years), USAID ($2 million), and the Gates Foundation ($10 million over five years). Funding levels continued to rise in 2002-03 but are anticipated to fall in 2004-05 as the large research grants come to an end.

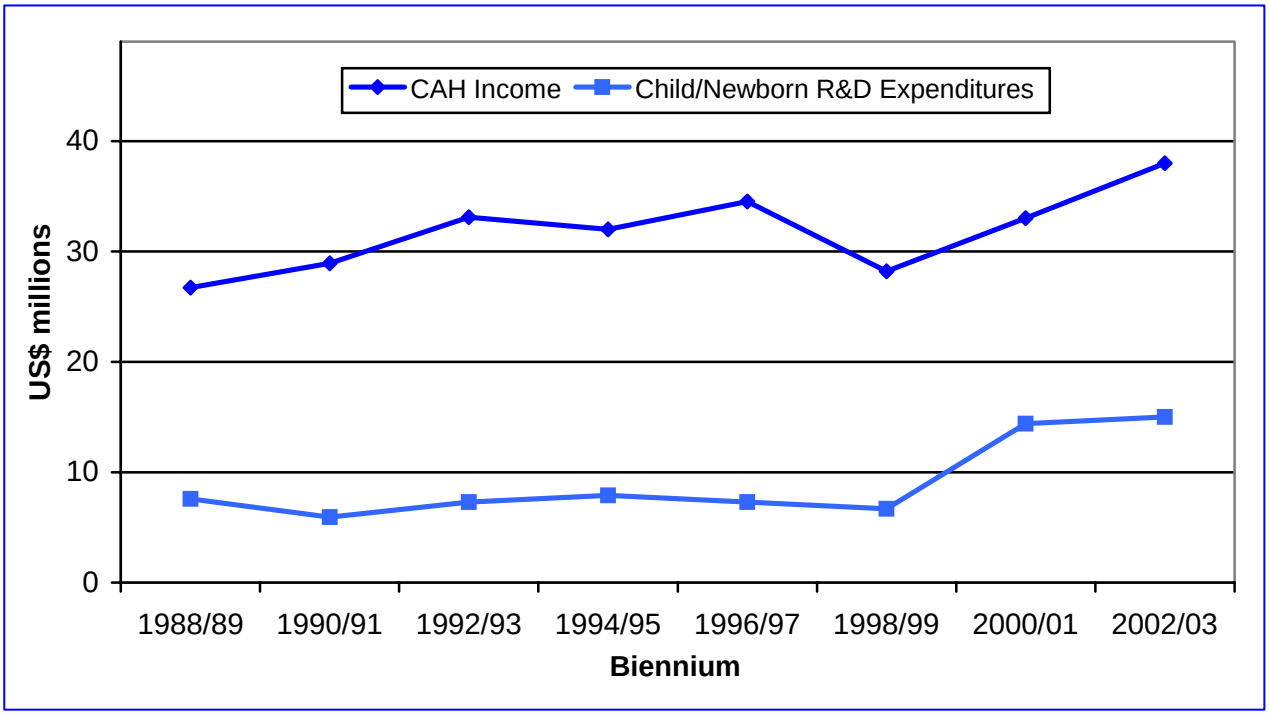
### World Bank Group

The World Bank provides funding for research through its support of global and regional programmes administered by the Development Grant Facility (DGF) and through its lending programmes (IBRD and IDA) implemented at the country level.

In 2001, the World Bank Group provided US$ 17.3 billion in loans to client countries, down from US$ 28.5 billion in 1998. The health-lending budget totalled US$ 1.2 billion in 2001, down from US$ 1.99 billion in 1998. DGF grants totalled US$ 25.4 million, up from US$ 20 million in 1998 [Monitoring Financial Flows for Health Research 2001, Global Forum for Health Research, for 1998 data; World Bank financial reports, personal communication for 2001 data]. Priorities followed the World Bank 1997 Population, Health and Nutrition (PHN) Sector Strategy – diseases of the poor (malaria and tuberculosis), family planning and reproductive health, HIV, malnutrition, health systems and policy research.

It is estimated that funds loaned for health research (mainly health policy studies) totalled US$ 50 million in 2001. About US$ 14 million could be wholly attributed to HIV/AIDS. An additional US$ 3 million is attributed to the HIV/AIDS, Malaria, STD, and Tuberculosis Project; US$ 2 million is attributed to the Integrated Early Childhood Project with the remainder attributed broadly to the health sector.

**Figure 53**
**Trends in funding, Child and Adolescent Health and Development WHO, 1988-2005**




Source: Department of CAH, WHO

Funding for global and regional programmes administered through DGF included at least an estimated US$ 8.3 million for health research in 2001. Programmes funded and their allocations are found in Table 24. It should be noted that about US$ 1 million was allocated to the Child Health and Nutrition Research Initiative and an equal amount for the Medicines for Malaria Venture (MMV) and Multilateral Initiative for Malaria (MIM) through the Global Forum for Health Research.

Thus, of total expenditures of US$ 17.3 billion for the World Bank in 2001, US$ 1.2 billion can be attributed to health, of which an estimated US$ 58.3 million was for health research compared to US$ 55.7 million in 1998.

## UNICEF/UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases (TDR)

The co-sponsored TDR programme focuses on the parasitic and communicable diseases found mainly in developing countries but increasingly worldwide as globalization expands. These diseases include malaria, leishmaniasis, filariasis, schistosomiasis, Chagas disease, trypanosomiasis and onchocerciasis; as well as, more recently, leprosy, tuberculosis and dengue fever.

The launch of the TDR strategy for 2000-2005 reversed a downward trend in income. In the 2002-03 biennium, total income was US$ 67 million up from US$ 52 million in the 1998-99 biennium-a 30% increase. However, the nature of TDR income changed – the new funding was designated for specific research projects. As a result, the undesignated income of US$ 44 million for the 1998-99 biennium fell to US$ 37 million in the 2002-03 biennium (see Figure 54). During the same biennia, operations in developing countries fell from US$ 24 million to US$ 18 million and total funds for research capability strengthening (RCS) fell from US$ 16 million to US$ 15.7 million. RCS is mainly funded from undesignated income and thus its levels have been affected by the decline in undesignated funding since the 1992-93 biennium. [TDR financial documents and personal communication].

**Table 24**
**Funding for global and regional programmes, World Bank Development Grant Facility (DGF), 2003** (US$ millions)

| Programmes | Funding |
|---|---|
| UNAIDS | 40 |
| Global Forum for Health Research* | 2.17 |
| Tropical Disease Research (TDR) | 2.50 |
| Human Reproduction Program (HRP) | 20 |
| Onchocerciasis Control Program (OCP) | 1.70 |
| African Program for Onchocerciasis Control (APOC) | 2.85 |
| Population and Reproductive Health Capacity Building | 20 |
| Roll Back Malaria | 1.50 |
| GAVI | 1.50 |
| Other** | 3.83 |

* Core and Initiatives
** Includes: Stop TB, Nutrition and Gender, MIM, MMV, IAVI, INDEPTH, European Observatory for Health Research
Source: World Bank financial records, personal communication

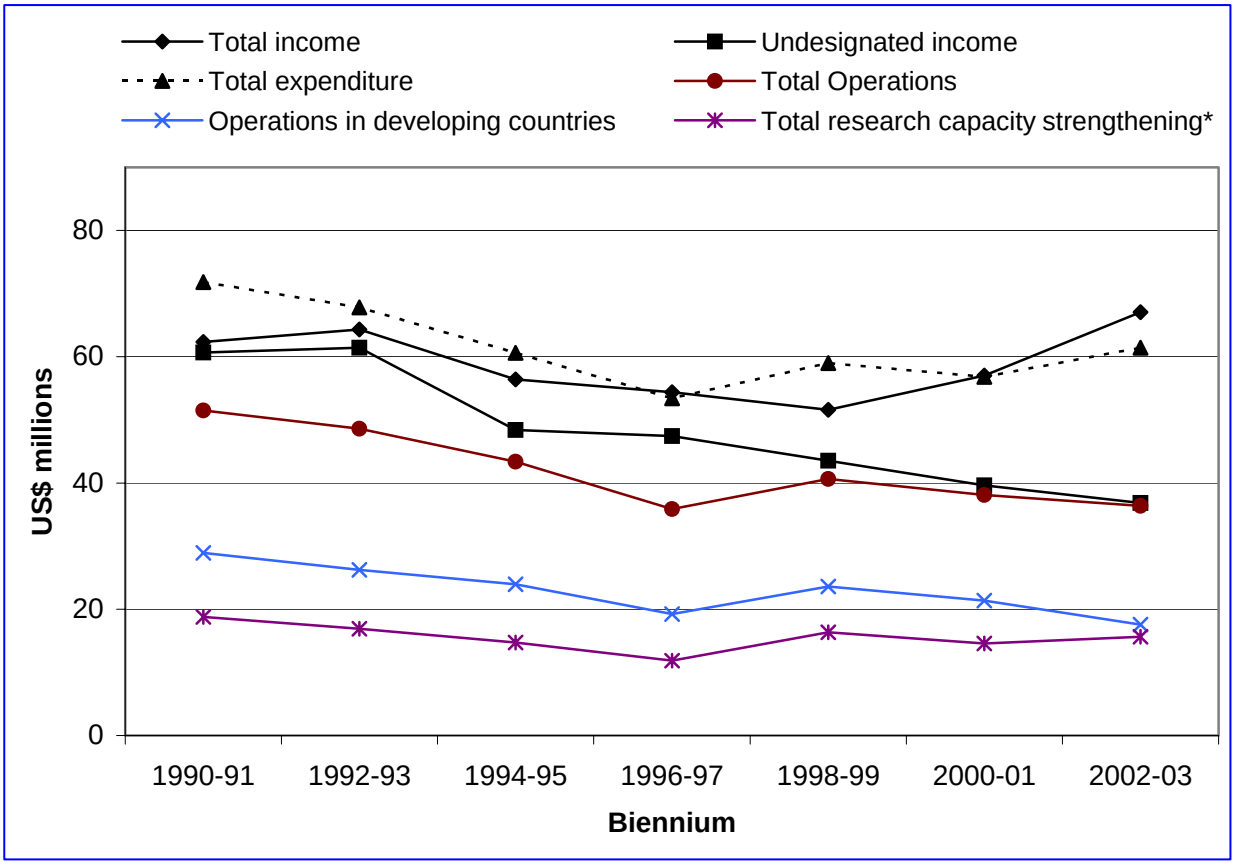
TDR operates through partnerships with public and private organizations. The programme is a meeting place for researchers from developing and developed countries. During the 2002-2003 biennium: 72 per cent of the 898 partners in the programme came from developing countries; of the 500 scientific articles published in international indexed journals as a result of TDR activities, 49 per cent had a scientist from a developing country as the first author; 59 students completed masters or doctoral programmes; and more than 650 researchers from developing countries participated in short training courses organized by TDR.

**UNICEF supports research in child and maternal health and nutrition but did not provide data for this report.**

## VII. Partnerships, initiatives and other NGOs investments in health research

In the past decade, a bounty of initiatives, partnerships and other NGO entities has emerged to contribute to the global international health research effort. In most cases, these efforts complement, enhance, and fill in the gaps of agendas being carried out by existing organizations. Some of these entities, such as IAVI and GAVI, have become large well-funded organizations. Others such as MMV have evolved as public-private partnerships and taken on the legal framework of a foundation. Still others have taken on roles as coordinating and advocacy organizations and venues for communicating research results rather than funding large research portfolios themselves; these include the Global Forum for Health Research and the Council on Health Research for Development (COHRED). Others serve as networks for organizing and coordinating research; in some cases, funds raised are used to carry out an agreed-upon research strategy, e.g., the Child Health and Nutrition Research Initiative (CHNRI)) and in others participating members are each responsible for supporting their agreed-upon component of a research strategy or project such as the International Network for the Rational Use of Drugs (INRUD).

**Figure 54**
**Trend in income and expenditures, Special Programme for Research and Training in Tropical Diseases (TDR), 1990-2003**




* Total research-capacity strengthening includes operations, personnel and operational support for dedicated capacity strengthening activities. In addition, there are other research-capacity strengthening activities which are financially recorded under individual R&D projects.
Source: TDR financial records, personal communication

Some of the partnerships, networks and initiatives that are active in health research for diseases and conditions that burden populations in LMIC are reviewed by the Global Forum for Health Research in their biannual 10/90 Report on Health Research. Some of these entities have been supported by the Global Forum, others not. They include NGOs that focus on diseases and conditions, risk factors, policies and cross-cutting issues:

- Road Traffic Injuries Research Network
- Global Alliance for TB Drug Development
- Initiative for Cardio-vascular Health Research in Developing Countries
- Multilateral Initiative on Malaria
- Child Health and Nutrition Research Initiative
- Sexual Violence Research Network
- Alliance for Health Policy and Systems Research
- Initiative on Public-Private Partnerships for Health
- International AIDS Vaccine Initiative

HIC investors play important roles in supporting these partnerships and initiatives and are likely to continue to support them as long as there are tangible results, programmes are found to be well managed, and activities are considered to be “value-added” and complementary to existing efforts.

While, in general, NGOs operate in a cost-effective manner and their impact undoubtedly is much greater than their small core budgets indicate, there has been some speculation that the dispersion of resources among an ever-increasing number of NGOs dedicated to health research, especially those funding health research project portfolios, is not cost-effective given the management and administrative costs involved to assure accountability in the use of investor funding.

Financial flow information was gathered from a spectrum of large and small partnerships/initiatives, and the findings are presented below.

## Global Alliance for Vaccines and Immunization (GAVI)

In 2001, GAVI total expenditures were US$ 28 million. In its early years, GAVI, with its financial arm the Vaccine Fund, did not support research. Currently, GAVI finances applied research and analytical studies. The GAVI Board has decided not to engage in research activities relating to malaria, tuberculosis and HIV/AIDS at this time, even though the diseases are included in the original GAVI objectives. The Board noted at its last meeting that upstream support for R&D on new vaccines does not meet agreed-upon principles and criteria and should not be funded under GAVI.

Immunization data quality audits (DQAs) were developed and launched in 2001. Beginning in 2002, US$ 0.5-US$ 0.8 million is being spent annually to conduct these audits.

An R&D task force laid the foundation for decisions on two Accelerated Development and Introduction Plans (ADIPs); one on pneumococcal vaccines and one on rotavirus vaccines. The ADIPs are concerned with downstream research and development studies (such as disease burden studies) focused on speeding up the introduction of new vaccines in developing countries. Each plan has a long-term budget of US$ 30 million with the first disbursements, made in 2003, of US$ 2.4 million and US$ 4 million.

In 2002, a major study on access to immunization was commissioned and in early 2004 a study on immunization services support was undertaken. Beginning in 2004, vaccine impact studies will be conducted relating to the new vaccine introductions financed by GAVI and the Vaccine Fund.

## Council on Health Research for Development (COHRED)

Over the past decade, COHRED has made a significant contribution to health and health research in LMIC by advocating the Essential National Health Research Strategy and by strengthening the capacity of countries to better prioritize and manage health research resources. In 2001, half the COHRED budget of US$ 1.4 million went to activities focused on strengthening capabilities for health research system development in LMIC. Specific activities included: defining health research agendas, strengthening capacities for health management, supporting studies to monitor resource flows, supporting networking and coalition-building at national and regional levels, and strengthening coordination of health research. Of the 27 countries in which priority-setting processes were supported, 22 were in low-income and five in lower middle-income countries.

## International Network for the Rational Use of Drugs (INRUD)

In 2001, the INRUD budget (core and leveraged funding) totalled US$ 617,388. Core funding was used for coordination, short-term training, maintenance of a drug-use research bibliography and INRUD news updates. USAID provided funding for the coordination budget through the Rational Pharmaceutical Management Plus Program. Leveraged funds were used for research capacity-building related to drug utilization for proposal development, data analysis, research support, and direct funding of research. Approximately 80 per cent of funds were spent on research and research capacity-building for developing-country researchers in their countries. The research all focused on improving the use of medicine. Phase 1 studies were interventions with providers;

Phase 2 studies were with the community; and Phase 3 studies investigated the effect of policy interventions.

### International Union against Tuberculosis and Lung Disease (IUATLD)

The annual budget of the IUATLD is approximately US$ 15 million. Budget funding is obtained from national association members representing more than 130 countries, individual members, grants and donations. Governments supporting IUATLD include Belgium, Canada, France, the Netherlands, Norway and the United States. Approximately 8 per cent of the annual budget can be attributed to research and research capacity strengthening. Priority research areas include tuberculosis, chronic obstructive pulmonary disease, acute respiratory infections and asthma.

### The Global Forum for Health Research

The central objective of the Global Forum for Health Research is to promote more health research to combat the neglected diseases and conditions that are major sources of ill-health in developing countries. The Global Forum supports commissioned research and in-house analytical research and convenes an annual meeting with core funding. It also channels investor funding to a variety of initiatives and networks. In 2001, expenditures for core activities were US$ 2,021,381 and expenditures for total activities including those earmarked for initiatives and networks but channelled through the Global Forum were US$ 4,910,550. An estimated US$ 1,146,077 can be attributed to health research for Global Forum core activities in 2001.

## VIII. Discussion

### Evolution and focus

This research paper aimed to expand and build upon HIC investor data for health research collected for the 2001 publication “Monitoring Financial Flows for Health Research” commissioned by the Global Forum for Health Research, taking into consideration lessons learned from contributing to that publication and from a review of HIC investor perspectives on the same publication. Special efforts were made to better understand three categories of HIC investors: ODA agencies, foundations/trusts and research institutions. Data and contextual information were obtained from 11 ODA agencies compared to three in 2001; 24 foundations/trusts compared to two in 2001; and six research institutions compared to one in 2001. Roughly the same number of multilaterals and non-governmental partnerships and initiatives were surveyed in 2001 (12) and 2004 (11). Primary HIC investor organizations in North America, Europe and Japan representing the largest investments in health research and active in international health research were targeted. Data collection from selected secondary HIC investors playing important roles in advocacy and coordination and supporting research in areas important to developing countries was a second priority. In the process of gathering this data, a better understanding of resource flows within the global research system was achieved and important reorganizations of research at the HIC-investor organization level were revealed.

### Health research and/or international health research financial data for international comparison year 2001

Data were obtained for seven ODA agencies, six foundations/trusts, six research institutions, six multilateral organizations, and five nongovernmental partnerships/initiatives. Financial resources of primary investors were particularly important to obtain as secondary investors and the performers of research rely on primary investors for the majority of their support. There are a limited number of primary investors providing the vast majority of funding for health research and health international research; their funding and research priorities play a critical role in driving the global research system. The leading HIC primary investors contributing data for 1998 are listed in Table 25 and

can be compared with the leading HIC primary investors providing data for this report (see Table 26). Those organizations that contributed 1998 health research data for the 2001 report were uniformly responsive to requests for 2001 data for the 2004 report. The collection of additional data, including disaggregated data, from a greater number of HIC organizations is feasible given adequate resources, including time.

## Underestimates and other discrepancies in data reported

HIC investors have diversified systems of tracking and reporting based on their mandates and the constituencies to whom they report. Complex resource flows compound the problems of identifying health research. Health research is especially difficult to identify in large multisectoral organizations where research is integrated into broad programmes. Research supported by HIC investors and conducted in developing countries is also difficult to identify because of decentralized tracking and reporting systems. Financial data are often provided by statisticians or budget staff who may not fully understand the health field or their organization's recipient organizations; as a result, only the most obvious research expenditures may be included in their reports to third parties.

**Table 25**
**Leading* HIC Primary Investors in Health Research in 1998**

| HIC Organization | Health Research (US$ millions) |
|---|---|
| NIH (USA) | 13,647 |
| Wellcome Trust (UK) | 650 |
| MRC (UK) | 529 |
| HHMI(USA) | 484 |
| CIHR (Canada) | 157 |
| Institut Pasteur (France) | 150 |
| USAID (USA) | 108 |
| World Bank** | 56 |
| ANRS (France) | 38 |
| DFID (UK) | 24 |
| EC/Research Directorate** | 18.6 |
| Gates Foundation (USA) | 17 |
| Rockefeller Foundation (USA)*** | 15 |
| SAREC (Sweden) | 14 |
| IRD (France) | 9 |
| IDRC (Canada) | 3 |

* Those HIC investors with large international research portfolios that provided data.
** EC and World Bank are technically secondary investors but for the most part they receive their funds directly from central governments.
*** Estimated based on RCS and global research.
Sources: Data reported in this paper and in Monitoring Financial Flows for Health Research, 2001

Health research estimates by third parties such as OECD or foundation centres are usually based on voluntary reporting from organizations resulting in underestimates. Although reporting to these entities may require standardized categories, these categories may not correspond to those used on a routine basis by the HIC investor. Data for surveys carried out by third parties may be based on keyword searches of projects but the keyword selected may not be included in the title of the

research project, leading to discrepancies between data obtained directly from organizations and those obtained by third parties.

**Table 26**
**Leading* HIC primary investors for health research and international health research, 2001**

| HIC Organization | Health research (US$ millions) | International health research (US$ millions) |
|---|---|---|
| NIH (USA) | 20,458 | 354 |
| MRC (UK) | 632 | NA |
| HHMI (USA) | 629 | 10 |
| Wellcome Trust (UK) | 582 | 73** |
| CIHR (Canada) | 330 | NA |
| Institut Pasteur (France) | 155 | NA |
| Gates Foundation (USA) | 131 | 102 |
| USAID (USA) | 96 | 96 |
| ZonMw (Netherlands) | 71 | NA |
| World Bank*** | 58 | 58 |
| ANRS (France) | 34 | 34 |
| EC/Research Directorate*** | 28 | 15 |
| DFID (UK) | 24 | 24 |
| IRD (France) | 19 | 19 |
| Rockefeller Foundation (USA) | 16 | 16 |
| SAREC (Sweden) | 14 | 14 |
| Ford Foundation (USA) | NA | 13 |
| Danida (Denmark) | 12 | 12 |
| IDRC (Canada) | 5 | 5 |
| Packard Foundation (USA) | 3 | 3 |
| NORAD (Norway) | 2 **** | 2**** |

NA = not available
* Those HIC investors with large international research portfolios that provide data.
** Only includes international programmes, not all research relevant to developing countries.
*** EC and World Bank are technically secondary investors but for the most part they receive their funds directly from central governments.
**** Only includes general medical research.
Sources: Institutional data reported in this paper and Ford Foundation data reported in Special Survey, Foundation Center, 2004

Health research data designated “international” were difficult to obtain from HIC-investor research institutions because their primary mandate (and thus the reporting systems that make international data identifiable) is health at the national level. All health research supported by ODA agencies and the World Bank was designated “international” but these research data were difficult to obtain for some because health and research related to health are becoming increasingly integrated into broad cross-sectoral programmes. Additionally, for some ODA agencies research carried out in developing countries is closely tied to programmes and not routinely reported to central offices as research.

Data on medical research are the easiest type of data to obtain within health research and health international research from all types of HIC investors. For some organizations, these data represented their total reported investment in health research, only because the data were tracked and reported. Operations research and social science research relevant to health are often not tracked and/or reported in international data sets or in sector surveys. All of the above reasons contribute to underestimates of health research by HIC organizations and mismatches in reported data.

## Long-term funding trends for health research and health international research

Long-term health research funding trends for 21 HIC investor organizations were collected. These data complement the “snapshot” provided for the base 2001 comparison year and provide insights for funding through 2004. Long-term funding trends are useful for documenting short-term variations; an example is the effect of financial markets on assets and grant expenditures of endowed foundations.

A number of HIC investors showed moderate increases in funding for health research through 2003 but because data were not adjusted for inflation or fluctuations in exchange rates, those moderate increases can be better described as ”slight increases” or “steady levels;” examples include SAREC, DFID, ANRS, MRC/UK, and Institut Pasteur.

Impressive increases in health research and/or health international research funding were shown by a number of major HIC organizations:

- Bill and Melinda Gates Foundation (and its predecessor the William H. Gates Foundation), USA: US$ 307,000,000 for health research in 2003 up from US$ 610,000 in 1996.
- CIHR (and its predecessor MRC, Canada): US$ 409 million in 2003-04, up from US$ 163 million 1997-98.
- IRD, France: 25 million for international health research in 2003, up from US$ 9 million in 2000
- NIH, USA:$ 28 billion appropriated for health research in 2004, up from US$ 12 billion in 1996; provisional US$ 589 million expended for international activities in 2003, up from US$ 198 million in 1998
- NORAD, Norway: US$ 3,375,982 for general international medical research in 2003, up from US$ 524,155 in 2000
- IDRC, Canada: US$ 6 million for international health research in 2003-04, up from US$ 2 million in 1999-00

Other HIC investor organizations showed decreases in funding for health research:

- USAID health research levels dropped from US$ 108 million in 1998 to US$ 96 million in 2001.
- HIC organizations with large endowments that were affected by the financial downturns in 2001 have seen decreases in grant expenditures for health research; examples include the Howard Hughes Medical Research Institute whose research expenditures fell from US$ 629 million in 2001 to US$ 539 million in 2004 and the Wellcome Trust whose research grant expenditures fell from US$ 769 million in 2000 to US$ 637 million in 2003.

- WHO/HRP funding for global and national research has fallen from US$ 25 million in 1990-91 to US$ 19 million in 2002-03.
- TDR program funding for operations in developing countries has decreased from US$ 29 million in 1990-91 to US$ 18 million in 2002-03 and research capacity strengthening activities have fallen from US$ 19 million in 1990-91 to US$ 16 million in 2002-03.

The decreasing trends noted above have implications for international health research as the organizations all support important international health research portfolios. Of some consolation is the fact that USAID levels have been rising since 1999; HHMI as well as Wellcome Trust and other organizations reliant on endowments have seen their asset bases and research expenditures start to recover from the downturns in the early part of the decade. The decreases in funding by TDR have been ascribed to a fall in the receipt of discretionary funding from donors.

Data from HIC investor organizations for both the international comparison year 2001 and long-term trends provided important input for the 2004 Global Forum for Health Research report on Monitoring Financial Flows for Health Research. The data served as a cross-check for aggregated data provided by international data bases (e.g., OECD), national surveys and other surveys carried out for example by foundation centres. The most detailed and accurate data came through personal contact with individuals at HIC organizations and/or through project-level analyses because much of the data sought were not in the public domain.

### Disease/condition-specific and other disaggregated data

HIC organizations were queried as to their funding levels for the top 12 diseases and conditions that affect populations worldwide. Most organizations do not collect data in these categories nor do they report expenditures using these classifications. The few organizations that used to collect these data (e.g., EC/Research and USAID) no longer do. Financial information for a few major diseases may be collected by some investors but there is a trend to collect data in much broader categories, reflecting programme interests. In some cases, where the investor makes available project-level data and time is allocated to analysing the data, it is possible to estimate expenditures by top disease and conditions. HIC investors unable to provide disease/condition data were asked to provide other disaggregated data available through their tracking systems. The data provided were useful as they reflected organizational priorities; they were also useful as input for estimating aggregate global funding for some diseases/conditions.

### Income data

Data on sources of funding for HIC organizations were very useful in furthering the understanding of the complexity of resource flows and addressing the issue of double counting. Previous work on resource flows for disease-specific topics or topics of other interest have mixed primary- and secondary-investor data and even performer data, resulting in double counting. In other cases, primary- and secondary-investor data have been added to arrive at national, regional and global aggregate numbers, again resulting in double counting. Although primary HIC investors may transfer funds between themselves, these transfers are usually small so that double counting is not often an issue. Examples include the transfer of funds from DFID to the MRC in the United Kingdom and transfers from NIH to USAID and vice versa in the USA. Occasionally, however, these transfers are large (e.g., the transfer of US$ 200 million from the Gates Foundation to FNIH in 2003) and can potentially distort funding analyses through double counting.

### Additional observations related to the work undertaken:

- A few large HIC investors did not make data available and special efforts should be made to obtain their data in future resource flows studies; these organizations include UNICEF, IAVI and the Ford Foundation.
- While health research data were made available from public sources for some large HIC-investor organizations, more detailed disaggregated data would be useful for future studies;

these include the UK MRC and DFID in the United Kingdom, ANRS, CIHR and Institut Pasteur.

- Health research resource flows for organizations in Germany and Japan proved difficult to obtain; new approaches need to be identified.
- Data provided in this paper can be used to identify the limitations of international, regional and sector data sets and, if feasible, ways to improve these data collection systems, especially those that are under development.
- Inflation-adjusted financial data and purchasing power parity data are not provided by HIC investors. Both of these factors have an impact on the "real" funds made available by these organizations for health research and should be taken into consideration for future analyses.
- International health research data collected from HIC investors in 2001 allowed the capture of more data relevant to the 10/90 gap compared to RCS data (defined as research funded in developing countries plus training of developing country researchers) collected in 1998.
- While international comparison years are an essential aspect of monitoring resource flows over the long term, due to the long delay in getting final numbers incorporated into international data sets the data are at least three years out of date by the time publication occurs. Collecting HIC investor information at the organization level provides more current data as well as provisional funding data for the future.
- Overestimates of global, national and regional totals for health research have already been discussed within the context of double counting; double counting may also inflate funding levels for disaggregated data such as disease-specific data.
- The impact of the numerous partnerships and initiatives addressing issues predominantly affecting LMIC on the distribution of primary HIC-investor funding could not be determined from this study.

## IX. Conclusion

Routine monitoring of health research funding at the global level provides a useful barometer for funding trends every two to five years. Identifying funding from primary HIC and LMIC investors before it is dispersed through a complex system to performers of research may be the most efficient approach to obtaining financial flows data. The quality and quantity of data collected could be improved by working with organizations that currently collect health research data, especially those organizations whose data collection systems are undergoing revision and/or are open to revision.

While trends in global funding for health research are of interest to the global health community, disaggregated data on specific topics of relevance to the most important international health issues are likely to be most useful to the global health community. Identification of and cooperation with the largest primary HIC investor organizations for health research and international health research are essential first steps in obtaining comprehensive disaggregated data on these issues. This disaggregated data can be a useful tool for HIC primary investors to establish priorities and guide their funding allocations. The data can also be useful for advocacy within the primary HIC organization and the broader health and development community. Furthermore, analyses based on primary-investor funding will reduce the problems of double counting and underestimation which arise as funds move through the system to the performers of research and will limit the number of organizations from which data are collected.

Country-level resource flows studies conducted in LMIC will be useful in corroborating and building upon data provided by HIC primary investors. Targeting LMIC primary investors with the largest research programmes for data collection and further analyses will be helpful for routine monitoring of resource flows as well as specific topical studies.