

PARTNERSHIPS

strength through unity

Public-private partnerships with governments and non-governmental organizations have helped GlaxoSmithKline find a more productive and financially viable way of developing and delivering medicines and vaccines to the developing world at a reduced price

Diseases that disproportionately affect developing countries – such as malaria and tuberculosis – place pharmaceutical companies in a dilemma. To do nothing is to leave millions of people to die or suffer each year when, in theory, the means may be out there to tackle the problem. Yet the harsh reality is that people in the affected countries can rarely afford to pay for drugs – and that even hugely profitable multinationals can't spend vast sums of money developing and distributing cures for little or no return.

That's why GlaxoSmithKline's work on developing vaccines and medicines through public-private partnerships looks so promising. Over the past ten years, in conjunction with governments, foundations and non-governmental organizations, GSK believes it has put together a working model that can overcome the market barriers and, in the words of Jon Pender, the company's director of government affairs, 'has transformed the pipeline of research and development projects for diseases of the developing world'.

GSK is not the only pharmaceutical company to have gone down this route, but believes that its extensive work on such partnerships means it is the only business in the world now researching new vaccines and treatments for HIV/Aids, tuberculosis and malaria – the priority diseases of the World Health Organization.

The path to partnerships began when GSK joined up some years ago with WHO, the UK government's Department for International Development, the University of Liverpool, and the London School of Hygiene and Tropical Medicine, to work on developing an anti-malarial drug therapy christened Lapdap. The work was successful: it produced a treatment that could help sufferers of a particular strain of malaria in sub-Saharan Africa. But it also established a way of working that could be carried over into other partnerships. Expenses for drug development were divided between GSK, WHO and DFID, each paying a third, while GSK agreed to sell Lapdap at a not-for-profit price to the public sector but could price it to make a profit when selling privately. GSK covered the manpower and infrastructure expenses, but the contributions of other partners meant that the company's investment in Lapdap was low enough to make the exercise financially viable.

contributions from partners mean that company investment can be financially viable

the company

GlaxoSmithKline is a £23 billion (\$11.5bn) turnover pharmaceutical company that employs around 100,000 people in more than 116 countries. Its core activity is developing and launching new medicines and vaccines, and it spends nearly £400,000 an hour on research to find new medicines. It:

- shipped 86 million preferentially-priced Combivir and Efavir tablets for the treatment of HIV/Aids to the developing world in 2006, with a further 120 million through its licensed generic manufacturers
- has granted eight voluntary licences for the manufacture and supply of generic versions of drugs for treating HIV/Aids in Africa
- donated \$1million (£500,000) to the South Asia Earthquake Relief Fund in 2006
- in 2006 made donations of medicines valued at

Enthused by the success of the partnership, GSK has built on that experience – most notably in the Medicines for Malaria Venture, which now manages 20 projects and is the largest portfolio of malaria drug research in history.

In this collaboration, as is often the case in its other partnerships, the company provides the research and development plus manufacturing and distribution expertise. Academic institutions assist with research, while public and voluntary sector partners such as the United States Agency for International Development and the Rockefeller Foundation help fund the development and delivery costs – and try to ensure that medicines get to the people who need them.

GSK has also created a specialist 'drug discovery centre' based in Tres Cantos in Spain, which works primarily on malaria and TB and prioritizes research projects according to their social and public health benefits rather than their commercial returns. It employs more than 100 scientists, half of whom are subsidized by the company's partners. Research is overseen by joint steering committees with representatives from GSK and its partners.

As medicines move into clinical development, partners contribute to the cost of running clinical trials and look at how to distribute the drugs. This reduces the cost of development for GSK and gets new products to patients faster. For instance, for one malaria product now in clinical trials, Dacart, GSK pays the internal costs of the clinical trials, such as providing the medicines for the trials and the staff to establish and oversee them, while others in the



■ promising progress on producing and testing a vaccine against malaria has been made by GSK through the Malaria Vaccine Initiative, under which the company matches funding from the Bill and Melinda Gates Foundation

partnership pay most of the external costs, such as payments to the physicians and hospitals conducting the research. These contributions make the project workable for GSK and will enable the company to provide Dacart at a not-for-profit price to public sector purchasers, initially in sub-Saharan Africa.

A similar research and development group exists within GSK's vaccines business, working on development of vaccines for diseases predominantly affecting the developing world. In partnership with the PATH Malaria Vaccine Initiative, GSK is making good progress on a potential malaria vaccine, with the hope that this will protect children living in sub-Saharan Africa. Thanks to \$21.4million support from the Bill & Melinda Gates Foundation, GSK will be able to carry out clinical trials in Africa – with the company more than matching the external contribution it receives to defray some of the clinical development costs.

And it's not just malaria that partnerships can tackle. GSK has also been involved in setting up the Global Alliance for TB Drug Development, another public-private partnership, which has created the first new advance in developing an anti-tuberculosis drug since the 1960s. A separate partnership between GSK and the specially formed Aeras Global TB Vaccine Foundation, in which the Dutch Ministry of Foreign Affairs and the Danish International Development Agency are involved, is also making progress on developing a TB vaccine that has shown promising results in early-stage clinical trials. And there is work being carried out on an HIV/Aids vaccine through a partnership called the International AIDS Vaccine Initiative, in which GSK works with the Uganda Virus Research Institute and the Indian Council of Medical Research, among others.

GSK's vice president of corporate responsibility, Julia King, believes the partnerships are a classic example of strength through unity. 'They require flexibility, transparency and trust, but they're a model that bring different skills and resources to a problem

and enable us all to do what we could not do alone,' she says.

Apart from the obvious plus points for the potential users of the drugs developed through these partnerships, GSK itself benefits. 'Companies that respond sensitively and with commitment by changing their business practices to address such challenges will be the leaders of the future,' argues Pender.

There are, inevitably, some concerns. There is heavy reliance on funding from private foundations, and GSK is urging developed-world governments to become more involved so that funding sources are more diverse and therefore more secure. Partnerships also need 'clear, shared objectives' so that everyone is singing from the same hymn sheet, and it takes time to build confidence between partners with different perspectives. But as King says, 'this approach can work where neither pure philanthropy nor pure commerce will work'. As a result, GSK expects to be

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Working in partnership with government and non-governmental organizations is becoming increasingly recognized as an effective way for business to meet social needs. GSK shows how going beyond 'business as usual' can lead to the provision of much-needed medicines and vaccines at affordable prices for developing countries, while maintaining the financial viability of the company. The public-private partnerships have enabled GSK to expand research efforts into new vaccines and treatments to assist the World Health Organization.

points of interest include:

- the way responsibilities are shared among the partners
- the potential long-term benefits for GSK
- recognition that trust is the basis of successful partnerships
- acknowledgement of the challenges facing some partnerships

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