

# The Case of Ivermectin: Lessons and Implications for Improving Access to Care and Treatment in Developing Countries

**Jeffrey L Sturchio PhD**

*Executive Director, Public Affairs*

*Human Health — Europe, Middle East & Africa, Merck & Co., Inc*

*Box 100, Whitehouse Station*

*New Jersey 08889 – 0100, USA*

On October 21, 1987, Merck & Co., Inc., announced plans to donate Mectizan (ivermectin), a new medicine designed to combat onchocerciasis ('river blindness'), for as long as it might be needed. Merck took this action, working in collaboration with international experts in parasitology, the World Health Organization, and other agencies to reach those affected by the illness. This unusual decision came twelve years after the discovery of ivermectin by Merck scientists and nearly seven years after human clinical trials in Dakar, Senegal. Merck chairman, Raymond V Gilmartin, has sincerely affirmed the company's commitment to donate 'as much Mectizan as necessary, for as long as necessary, to treat river blindness and to help bring the disease under control as a public health problem'.

Through the continuing collaboration of an international, multi-sectoral coalition including the WHO, the World Bank, UNICEF, the Mectizan Expert Committee, dozens of Ministries of Health, the international donor community, more than thirty non-governmental development organizations, and local community health workers, there is hope that onchocerciasis can be eliminated as a major public health problem and socioeconomic development constraint within the next decade.

The Merck Mectizan Donation Program (MDP) is now the largest ongoing donation program of its kind. There are active treatment programs in 33 of 35 countries in sub-Saharan Africa, Latin America, and Yemen in the Middle East, where onchocerciasis is endemic. To date, more than half a billion Mectizan tablets have been donated and shipped since the inception of the Program. An estimated 25 million individuals are treated annually, with the 200 millionth treatment scheduled to take place this year.

## Challenges and Obstacles

At the start of the Mectizan experience, there were significant challenges to

expanding access to this safe and effective treatment for onchocerciasis. Although treatment requires only one annual dose, easily administered, governments were not convinced initially of the feasibility of providing treatment, due to the lack of resources needed to distribute the medicine to patients in need. There were competing health priorities and relatively poorly developed community health infrastructures in many of the countries hardest hit by onchocerciasis. Treatment programs faced both distribution and logistical challenges (including the technical issues of drug importation regulations and customs duties). Finally, since onchocerciasis strikes populations in remote areas in some of the poorest countries in the world, the political and civil unrest in some of these countries made it even more difficult to place free Mectizan in the hands of people infected with, or at risk of contracting, river blindness.

## Lessons Learned

What lessons have we learned from the Mectizan experience? What has it taught us about how to mobilize resources in successful public/private partnerships to address significant health problems – and to do so in a way that significantly reduces disease burden over the long term?

In one sense, Mectizan is unique — effective treatment requires only one annual dose, easily administered, with no major side effects. But it nonetheless provides an instructive case study in the interrelations of scientific and clinical research, corporate social responsibility, and the challenges of health and development. Some of the critical success factors from this experience include:

- the need to focus scientific and clinical research resources on feasible targets for clearly important health priorities
- the importance of partnerships among public and private sector organizations (including non-governmental development organizations) to control a dreadful disease, informed by the needs of the people whose lives are directly affected
- the essential role of distribution mechanisms and healthcare infrastructure in ensuring that medicines reach those who need them.

*This is a shortened version of a paper presented by Dr Jeffrey L Sturchio to a World Health Organization/World Trade Organization Workshop on Affordable Drugs (Høsbjør, Norway, April, 2001) The full text of the paper can be found on the workshop website:*

[http://www.wto.org/english/tratop\\_e/trips\\_e/tn\\_hosbjor\\_e.htm](http://www.wto.org/english/tratop_e/trips_e/tn_hosbjor_e.htm)

## Partnerships

The value of partnerships in advancing the cause of global health cannot be overstated. The complexity of the issues we face, the entrenched nature of the diseases we fight, and the fragility of the healthcare infrastructures we seek to build are all beyond the capability of any single organization or country alone. It is critical that the public and private sectors work together in a way that enables the people who are most directly affected to determine their own needs and priorities. Partnerships work best when based on clear objectives, trust, complementary expertise, and mutual benefits. And the continuing need for coordination, communication, and commitment from all involved in the process is crucial to success.

## Infrastructure

Merck's responsibility in meeting global health needs goes beyond discovering and developing a medicine like ivermectin, and beyond merely making charitable contributions. In over a decade of experience, we have learned that simply removing cost as a barrier (by providing medicine free of charge) is not enough in itself to ensure that the medicine gets to the people who need it most.

## Sustainability

Mectizan also shows that for a donation program to succeed in a significant way, commitments to ensure sustainability are as critical as promises to supply the product. The MDP is one example of how drug donation programs can be sustainable. Merck made a commitment to provide Mectizan for river blindness wherever necessary, for as long as necessary. For organizations that supply

Mectizan via community health programs, the Mectizan Expert Committee requires a minimum five-year commitment before agreeing to supply the medicine. The strategy of CDTI (community-directed treatment with ivermectin) has been employed to ensure sustainability by having Mectizan delivered to patients by village health workers as part of regular healthcare delivery – in fact, a remarkable 34,440 communities in affected regions are now planning and managing Mectizan distribution.

The MDP case also suggests that donation programs should, where possible, be integrated into a country's healthcare system. Onchocerciasis control efforts have been supported by local healthcare workers trained in the distribution, administration and monitoring of Mectizan treatment. These skills have enabled healthcare personnel to apply their knowledge to other initiatives that support a country's healthcare objectives. The involvement of the political and health structures of affected countries, together with the communities directly affected by the disease, have proven essential to routine distribution activities, long-term sustainability and overall success in diminishing the burden of disease.

## Health Impact, Capacity Building, and Implications for Future Access Programs

The case of Mectizan clearly demonstrates the power and possibilities in strong, transparent, and creative public/private partnerships to help address the enormous public health challenges facing developing countries today. Since the inception of the MDP, some 16 million children have been spared the risk of infection in 11 countries in West Africa due to a spraying program combined with Mectizan treatment. The World Bank reports that 25 million hectares of arable land have been recovered – enough to feed 17 million people. More than 600,000 cases of blindness have been prevented.

The cooperative nature of the program has helped to strengthen the primary healthcare system in many countries where Mectizan is delivered: the delivery infrastructure and treatment strategy have resulted in the delivery of other health services (e.g., vitamin A) and diagnoses of other conditions (e.g., cataracts). In effect, the initial decision to donate Mectizan served as a catalyst for a much broader — and effective — health intervention.



*There is real hope that this sad scene of a child leading a blind person will soon be a picture of the past*

*Photo: CBM International*

The Merck Mectizan Donation Program – which has helped millions of people in the developing world – is an instructive case, reminding us that even when medicines are free, questions of infrastructure, transparency, distribution, logistics, partnership, and sustainability structure the prospects for long-term health benefits. These lessons are significant in considering approaches to other medical conditions and programs of care and treatment in the developing world. While simple solutions won't work, the Mectizan case, by showing what can be achieved, is a cause for optimism.

## LEARNING RESOURCES ON ONCHOCERCIASIS

### • Onchocerciasis Teaching Slide Set

41-page handbook and 24 slides.

Price: £20 (£15 plus £5 p+p to developing countries by airmail)

### • Onchocerciasis and its Control

Report of a WHO Expert Committee on Onchocerciasis Control

Price: £11 (£11 + £5 p+p to developing countries by airmail).

Maximum of 3 copies per order

Available in English only

Cheque or banker's order drawn on UK£ or US\$ bank accounts payable to: UNIVERSITY COLLEGE LONDON

International Resource Centre, ICEH  
11–43 Bath Street, London EC1V 9EL, UK

Email: [everesource@ucl.ac.uk](mailto:everesource@ucl.ac.uk)

### • Onchocerciasis and Mectizan

56-page training manual comprising 10 activities which provide orientation to the knowledge, skills and attitude relevant to a community ivermectin distribution programme

Available in English and French

Please enquire about purchase price

Helen Keller Worldwide  
90 Washington Street  
New York, NY 10006, USA

Email: [mbernoit@hkworld.org](mailto:mbernoit@hkworld.org)

### • Onchocerciasis Flip Chart

Suitable for use in schools and community health education prior to conducting vision screening

Available in English only

Please enquire about purchase price

InFOCUS

327 Tealwood Drive  
Houston, Texas 77024, USA

Email: [radv@ibm.net](mailto:radv@ibm.net)

### • A Manual for Rapid Epidemiological Mapping of Onchocerciasis

34-page manual and 13-page supplement presenting a simple and inexpensive technique for identifying and mapping out communities at high risk of onchocerciasis.

Available in English only

Please enquire about purchase price

World Health Organization  
Marketing and Dissemination

Avenue Appia  
1211 Geneva 27

Switzerland

Email: [edgars@who.ch](mailto:edgars@who.ch)

☆ ☆ ☆