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Prioritising neglected diseases related to poverty

Bernard Pécou, director of the Drugs for Neglected Diseases Initiative, tells Rhona MacDonald how his organisation is hoping to help millions of people living in poverty worldwide

When Bernard Pécou was working as a doctor in Africa and the Far East, he came face to face with the fact that he sometimes had to treat patients with toxic or ineffective medicines. "As a doctor you are trained to do no harm yet sometimes you have no choice," he says.

He realised that for many of the diseases in the developing world there were no cheap effective medicines that had few side effects. Pharmaceutical companies had had no incentive to fund research for drugs that were unlikely to give them a decent return on their investment.

This prompted Pécou, who had been working for the international agency Médecins Sans Frontières, to collaborate with six other organisations and set up the Drugs for Neglected Diseases Initiative in 2003. It aimed to find treatments for diseases that had previously been ignored.

"Our mission is to develop new, improved, and field-relevant drugs for neglected diseases, such as leishmaniasis, human African trypanosomiasis, and Chagas' disease," explains Pécou.

"The worst situation for a physician is to think that there is no hope [of an effective non-toxic medicine]... in the foreseeable future because there is no treatment in the pipeline," he says. "Everyone has a right to health and treatment. People should not be excluded just because they are too poor to pay or too few to make up a large market."

The facts speak for themselves, says Pécou, pointing out that every day more than 35 000 people die from infectious diseases. "Between 1986 and 2001, global funding for health research rose from \$30bn [£16bn; €25bn] to \$106bn, but progress towards new health tools for the poor remained insignificant," he says.

He thinks that the development of drugs for neglected diseases is more vulnerable to the

well rehearsed difficulties of producing new remedies than the development of drugs for diseases of affluent nations. It falls through three gaps in the research and development process, he says.

"Firstly, basic research into novel targets and compounds



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typically comes from public laboratories and is not translated into drug compounds. Secondly, successful compounds in the preclinical stage do not progress to clinical development. Thirdly, new drugs or new formulations get trapped in the web of complicated regulatory procedures and do not reach the patients," he says.

His organisation is building an alternative model, showing that new effective and affordable drugs for neglected diseases can be delivered. The initiative is currently involved in 18 short, medium, and long term projects after

considering 200 project proposals from around the world. Ten of these are in the discovery stage, three are in preclinical development, and five are in clinical development.

Two new antimalarial artesunate combinations, artesunate amodiaquine and artesunate mefloquine, are expected by 2006, making it possible to effectively treat millions of people with this fatal disease. "By 2007, physicians in Africa, Latin America, and Asia will be able to treat malaria more successfully," he contends.

In keeping with the initiative's remit, the artesunate amodiaquine combination will be easier to use. It requires just two tablets once a day for three days for

improve our network with partners from all over the world, so we spend quite a lot of time working with public and private research institutes to identify and develop the best projects," he explains. The centres the initiative is currently working with include Kitasato in Japan, Far Manghinos in Brazil, the Central Drug Research Institute in India, and the Kenya Medical Research Institute.

"Every player has a role to play, but none can substitute for the role of governments and public institutions, like the World Health Organization, in setting health priorities for people and in identifying gaps and the strategies to combat these gaps," he says.

This is why the initiative has recently launched a year long campaign, asking doctors, scientists, researchers, and the public to lend their support. The collaborators in the campaign come from a wide range of countries; their influence extends across the world. They include five public sector institutions—the Oswaldo Cruz Foundation from Brazil, the Indian Council for Medical Research, the Kenya Medical Research Institute, the Ministry of Health of Malaysia, and France's Pasteur Institute. Also involved are a humanitarian organisation, Médecins Sans Frontières, and an international research organisation, the Special Programme for Research and Training in Tropical Diseases, which comes under the auspices of the United Nations Development Programme, the World Bank, and WHO. The special programme also acts as a permanent observer to the initiative.

One of the challenges for the initiative is to show that the research is worth the investment. "Research is often seen as some remote activity that takes place in a laboratory with chemical formulas and years of work that is not always relevant. It also involves clinical trials with ups and downs and long periods of frustration before a breakthrough."

But there are also rewards, Pécou says, "There are so many innovative projects with scientists and researchers working in remote corners of the world, hooking up and coming up with new discoveries." □

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To find out more about the initiative, visit www.dndi.org, and sign the appeal at www.researchappeal.org.