**Commentary on Samuel Broder's, Stephen Hoffman's and Peter Hotez's article in
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Broder *et al.* recently published an article in *EMBO reports* about new cures for the health problems of the Third World. The subtitle was even more informative: the application of genomics to the diseases plaguing the developing world may have huge medical and economic benefits for those countries and might even prevent armed conflict.

This is how we scientists are: candid! In summary, the authors of the above-mentioned article predict that genomics will finally solve some of the major problems afflicting the so-called 'Third World countries'—from infectious diseases to social unrest—and put their economies on the right track. . . to what? Among the diseases listed as examples are many so-called 'tropical diseases', as well as HIV/AIDS. The authors correctly point out that research on tropical parasites, such as hookworm, has so far been for the benefit of patients of the developed world, to control specific diseases of these countries such as stroke. This is a very pertinent demonstration of the new trends in the geopolitics of disease research.

As one reads the article, one cannot help but reflect on several statements that depict the mentality of us, scientists of western culture and capitalism: the posi-

tivistic view of science, the messianic attitude of the developed world and the pressure of capital gains to keep tightening the rope around the neck of those countries we want to save. We, supposedly 'neutral' scientists, are here to help the dream come true.

Genomics is new, yes, but what is not new is the discourse. The same statements have been made before with other scientific breakthroughs, such as penicillin, monoclonal antibodies, synthetic peptides and genetic engineering. Yes, we have the blueprints of several important organisms, but they are still in a coded form. It is therefore necessary to wait for the arrival of proteomics—and so the dream of new cures must be postponed for another 10 or more years. In the meantime, another highly important player in solving our problems, 'Education for All', as was discussed at the United Nations Conferences in Jomtien, Thailand, and again in Dakar, Senegal, is also being postponed for 15 more years.

But let us be positive and assume that the solution to malaria and leishmaniasis will be with us here in Colombia in the next year. One can wonder who will be vaccinated first: those working in the coffee-growing farms, or the guerillas and

paramilitaries? Since this is a matter of market forces, and since heroin and cocaine sell better than coffee and bananas, amapola and coca dealers will eventually be healthier than coffee and banana growers—which they already are.

And what about the health of people in the developed countries, whose major problems seem to be stroke, obesity, erectile dysfunction, etc.? Their economic health allows for a diet rich in fat and proteins from animals fed on plenty of cereals—eight pounds of quality cereal are needed to produce one pound of meat. Meanwhile, in other parts of the world, children die of hunger and disease with no cereals to eat. Still, the authors of the article are there to remind us of the report of General Slim, that without malaria it would be far easier to perform military actions in the south.

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There are two possible strategies for eradicating diseases of poverty: either develop treatments and specific preventive measures, or abolish poverty. History has taught us that the former rarely works in the absence of progress with the latter. Undertaking science and technology in the developing world provides the only route to achieving both aims simultaneously. It is in this respect that the article by Broder, Hoffman and Hotez most dramatically misses the point of the opportunity offered by genomics to alleviate suffering in impoverished societies.

The authors are quite right to suggest that genomic science will have the greatest impact in developing countries, especially in relation to tropical diseases. But they are quite wrong to suggest that this technology can only be transferred downwards from well-meaning laboratories in the developed world. Advanced societies are not the sole preserve of scientific talent, and the greatest obstacle to cutting-edge research in developing countries is certainly not the geographical distribution of human intelligence. Nor is it necessarily the lack of investment. Rather, the

problems are the availability of reagents and equipment, the time needed to obtain these necessary items and the complexity of local importation barriers and controls. Thus, efforts by developing countries to compete in hypothesis-based research are almost always doomed to failure. It is very hard to have an idea that has not occurred to someone else: if two scientists—one in New York and one in Papua New Guinea—simultaneously have the same insight, the American will almost always be the first to patent and publish the results due to logistical advantages.