Denial of science is the worst form of colonialism

Dr. Manuel Elkin Patarroyo, inventor of an anti-malaria vaccine in Colombia, granted the following interview to EIR *correspondent Javier Almario on Nov. 1. The interview took place at the Immunology Laboratory at the San Juan de Dios Hospital in Bogotá. The interview includes questions from a journalist from the Jorge Tadeo Lozano University, who is identified as "Q."*

EIR: Do you think that the malaria vaccine is ready for mass application?
Patarroyo: We believe that very little remains to be done. Possibly something is still lacking, although we haven't found anything yet. If something is, it is very little if you consider how massive a world vaccine is. As I've explained before, one must do this in stages. For example: How long have we known of the existence of a vaccine against hepatitis B? At least 10 or 12 years. That is, since the first tests on humans were made. We've only been testing for three years. And right now there are only 5 million people vaccinated against hepatitis B. No more!

Of course, one can understand the pressure worldwide for vaccinating against malaria. I would be delighted to do so, but I am also very cautious. Actually, though, I have moved very rapidly and some are complaining that I am going too fast. Others complain of the opposite. We are caught between two fires. All I can say is that we are making progress. We began with 5 people, then 13, then 63, then 1,000, then 1,500 of both sexes, then we went to 15,000 and we now have 27,000 vaccinated. Next year we will reach 200,000, moving by stages to make sure there are no problems, and that the vaccine is working as it should. But we now think that if anything remains to be done, it is very little.

EIR: Considering that your experiments suggest the vaccine is most effective in children, are you going to begin by vaccinating children?
Patarroyo: Of course. In Africa, we are going to begin by vaccinating only children. Why? Because once you've had the parasite [as a child] and survived, you have some immunity, you have defenses. So, the disease is no longer so fatal. This is when we say that the disease, at a given moment, is subclinical. That is, the disease doesn't reach its clinical characteristics of being severe. Thus, in Africa, all our work is going to be with the children, and we will see much greater benefit there.

EIR: What is the anti-malaria vaccine's effectiveness with children?
Patarroyo: In the studies we have begun in Tumaco, we have found a success rate of between 60% and 85% among children. The same with the elderly. Curiously, after the age of 15, the efficacy of the vaccine falls dramatically due to high rates of exposure, of contagion. Undoubtedly, the efficacy is much greater among those most susceptible, that is, children and the elderly.

EIR: Let's look at it in statistics. How many lives would be saved if this vaccine were universally applied?
Patarroyo: I don't like to speculate. I don't even like to present my hypotheses, although I have them. I like to show results. In the first test one can prove wrong, in the second test one can prove wrong, and in the third test one can prove wrong. But looking at the whole thing, I am not wrong. . . .

EIR: How many people die worldwide of this disease?
Patarroyo: According to the World Health Organization, there are between 300 and 350 million cases of malaria a year. Which means that there are nearly 1 million cases of malaria a day. These are brutal figures. In one week, the equivalent of the entire population of Bogotá becomes ill. The WHO estimates that there are 3.5 million deaths caused by malaria; that is, 10,000 deaths a day. These are brutal figures. I don't want to make any guesses, because there could be many variables. The only thing I can say is that if this vaccine were universally applied, it would be magnificent, sensational.

Q: And this is going to be done in Africa? The vaccine is going to be applied there?
Patarroyo: The vaccine is for the whole world. What is happening is that now I am going to Africa. And I have been in Africa observing things. Basically, what we are going to do is begin the vaccinations in one single place. Then we will see how well the others are organized, and we will

Patarroyo invented an anti-malaria vaccine

Colombia, Ibero-America, and the Third World have a right to science and technology, insists Dr. Manuel Elkin Patarroyo, inventor of an anti-malaria vaccine that will be given to 200,000 South Americans, Africans, and Asians in its first global application next year.

Dr. Patarroyo is director of the Immunology Institute of the San Juan de Dios Hospital, in Santa Fe de Bogotá, Colombia. His group, which began work in 1977, succeeded in 1987 in chemically fabricating the first synthetic vaccine against malaria, a disease which currently claims 62,000 Colombian lives, and 3.5 million lives worldwide, every year.

Applied in three separate doses, the efficiency rate of the vaccine has reached 80%, with the greatest success observed in children under 15 years of age. Already, 27,000 Colombians have received Patarroyo's vaccine.

The aggressive research of the institute is slowly managing to overturn the prejudices of the advanced sector, while resisting the pressures of the multinational pharmaceutical companies anxious to get control of the vaccine. Further, Patarroyo's research is advancing *despite* lack of support from Colombian Health Minister Camilo González Posso, a member of the narco-terrorist M-19, which was legalized in 1989 and was handed the Health Ministry portfolio as its "quota" of power.

"It is thought that the Colombian, the Latin American, is more brawn than brains," says Patarroyo. It's a lie. To make science, one needs "schools of research, where the most talented can go. It is presumed that this does not and cannot exist in Latin America. . . . That is why I systematically reclaim the right to advance science in our countries."

Patarroyo strongly denounced the concept of "technological apartheid," according to which the development of science and technology in the countries of the Third World must be prevented at all cost. "It is another form of colonialism. Those who hold power don't want to lose it."

The vaccine

The work of Patarroyo's research group began in 1977, the goal being to chemically produce vaccines, synthetically reproducing the components of targeted parasites, viruses, and bacteria.

Efforts to develop a vaccine against malaria, and specifically against the *Plasmodium falciparum*, which causes the most fatal form of the disease, began with a colony of Aotus monkeys in Amazonas department. These monkeys became infected with malaria the same way as humans, and therefore proved highly useful for the research. The molecules of the *Plasmodium falciparum* parasite were separated, yielding 22 different proteins, each of which was injected into a control group of Aotus monkeys. Later, they were inoculated with the *Plasmodium*. At first all became ill. But those inoculated with certain of the proteins showed delayed infection rates. None of the proteins individually proved to be the "magic bullet."

After the actual sequence of the amino acids of these molecules was discovered, and parts of them chemically reproduced, it was learned that a certain molecular mix gave the monkeys 80-90% protection.

The work to translate that success rate to humans was progressing, and human experimentation had actually begun, when Colombian President César Gaviria took power in August 1990. He gave the Health Ministry to the narco-terrorist M-19, whose "alternative medicine" advocacy (witch doctors and herbs) coheres nicely with the Gaviria government's embrace of the ecology lobby's "sustainable development" fraud. Financing for Patarroyo's project was stopped cold.

Fortunately, the governments of Venezuela, Ecuador, and Brazil had already begun experimenting with Patarroyo's work, guaranteeing its continuation.—*Javier Almario*

immediately begin, hopefully in the same week, to apply the rest.

EIR: And only children are going to be vaccinated?
Patarroyo: Only children from one to 15 years of age.

EIR: When you speak or write, it seems you always want to demonstrate that in Colombia, in Ibero-America, and in the Third World, science truly *can* be practiced.
Patarroyo: Of course! We as a people have always been taken as incompetents. Let me explain. At any given moment, it is thought that the Colombian, the Latin American, is very good for muscle-power, that we produce athletes, etc. You can imagine: Boxers . . . there you have Latin Americans. Great cyclists: Latin Americans. We are being relegated to the status of mere goods. Today, you are a great athlete . . . tomorrow, you no longer are a great athlete, and the day after tomorrow, even less so.

On the other hand, there are permanent values, of intelligence, of the heart, of goodness. They tell us that such and

such a Latin American writer is talented. But that is something he does, himself. Latin America has García Márquez, it has Gabriela Mistral, it has Asturias, it has its fantastic authors. But, at the same time, that is a question of the individual, who is not reproducible. Unlike science. Science has to be a continuum of effort, of work, of concentration, of thought. And for this you need schools. Schools of thought, of work, of action, where the most talented can go. And it is supposed that this doesn't or cannot exist in Latin America. We are always looked at as if we are incapable of doing this. Lies. The problem is not there. The problem is that, plain and simple, we have not had adequate leadership . . . so that these schools remain in place. And that is why I systematically reclaim the right to advance science in our countries.

EIR: In the political elites of the advanced sector, in England, the United States, France, there is discussion—especially since the war against Iraq—that it is dangerous to have science and technology in the Third World. They have even coined the term "technological apartheid," to which, they say, our countries should be subjected. . . . What do you think of this concept?

Patarroyo: It is another form of neo-colonialism. .Undoubtedly, those who have maintained or retained power obviously don't want to lose it. That is lawful. It is pure and simple another form of colonialism, the worst of all colonialisms: intellectual colonialism. It is the worst of all, the worst. I think that it is a total absurdity. They are using the Iraq deception. But by the same token one could say: What guarantees do we have that at any moment the prime minister of England might not go crazy and start shooting? I am convinced that it is but another form of colonialism.

Q: What other projects do you have in mind? What other vaccine would you like to develop?

Patarroyo: We are very actively working on the development of a vaccine against tuberculosis. We already have something under way. We are also working on a vaccine against hoof and mouth disease. We are working together with VECOL [state company manufacturing animal vaccines]. We are now working closely with them, after having smoothed off some rough edges, not only in the vaccine against hoof and mouth, but also in developing a method of diagnosing bovine tuberculosis, which is also a very big problem; it is a zoonosis, that is, not only cattle can be infected, but the same bovine tuberculosis bacillus can also attack humans. We are working on a method of rapid diagnosis, similar to the method used in human tuberculosis, to be able to detect the bovine tuberculosis bacillus in the milk. . . .

We also have a very good development, which is a new method of diagnosing leprosy. It detects leprosy very early on, not when the individual has leprosy, but when he is first infected and has no obvious symptoms. The drug is immediately administered, to be able to overcome his leprosy.

EIR: In the scientific publications of the advanced sector, there is skepticism regarding your work. Those who are not hostile toward you describe you as "the self-proclaimed inventor of the anti-malaria vaccine." The World Health Organization criticized the way in which experimentation with the vaccine was done on humans. The Centers for Disease Control (CDC) in Atlanta, Georgia in the United States claim that your vaccine has not generated a single antibody against malaria. How do you respond to these criticisms?

Patarroyo: This is nothing new to me. This naturally occurs in science. It is part of the human condition. But the most important thing is that no one expected a vaccine against malaria to emerge from a Third World nation. No one expected it or imagined it. Everyone expected the vaccine to emerge in the United States, England, France, Switzerland, or Sweden. But no one imagined that it could come from Latin America. Suddenly along comes someone who tells them: There is a vaccine. Meanwhile, the others continue with their own timing, at their own speed. This obviously generates all the reactions you can imagine, related to the attitude I described earlier: Science in Latin America? Forget it! It's impossible! And should someone suggest successful science in Latin America? Even less so!

What is going on is that all the work of the Immunology Institute is ignored. . . . This group is very competitive globally. I tell you that we could demolish any other group in the world. And this was never imagined in the developed countries. These criticisms are therefore normal, and don't bother me in the least. The same thing happened to my hero, Louis Pasteur. It was only acknowledged that Pasteur had developed the vaccines when he was about to die. I want to be a little luckier: that they recognize me next year. I want to move faster. But there is a stereotype. If someone in the United States discovers something, everyone here bows down and says, "Yes." But if someone from here discovers something, the whole world—here and there—says, "No!"

The criticisms of the World Health Organization, in truth, have an element of political manipulation. The WHO is financed by the pharmaceutical industry, which is also an institution that wants to control the vaccine, because there is money behind it. I have been refuting their criticisms one by one. . . .

The CDC was totally wrong. [This was] an absolute error. But they haven't had the courage to admit that they made a mistake. They have remained silent. They made a mistake, and they published it, and have not had the courage to retract it.

EIR: The error was in having vaccinated the monkeys with separate peptides, instead of vaccinating them with all the

peptides together, which is your vaccine?

Patarroyo: Yes, they separated, or detached, them. The truth is that other groups in the world are already reproducing what our group has done. Those groups which are finding these results are fighting with the CDC, because I am not going to pick a fight with the CDC. They ask me: "Why don't you repeat the experiment?" Well, I have already repeated it seven times, and I am not going to repeat it an eighth because of their mistake. Let them repeat it! They call this arrogance. But arrogance is different from dignity. I don't have to act submissively because those who say so are in the United States or in Europe.

EIR: You have received offers to sell your rights as author of the vaccine?

Patarroyo: Yes. Many proposals have come from the pharmaceutical companies. And it bothers them very much that my answer is that we are not going to sell the vaccine, that we are going to see how we can distribute it [directly] to the developing countries, so that they can eliminate the additional charges. The cost would multiply if the vaccine were sold to any company, and we don't want that. If I had already sold it, soon I would have become a [Jonas] Salk for the industry and for those who are now attacking me, but not for the people who need it, who are the blacks of Africa, the people of the Pacific Coast, the Thais, the Asians, etc. This is the crux of the matter.

Q: After you received proposals to go to Spain and head a laboratory over there, did the Colombian government give you help?

Patarroyo: The proposal from Spain was very good. The proposal came directly from the Spanish queen, directly from the crown, and from the government, from the higher council. I have an excellent relationship with [Colombian] President César Gaviria and his wife. The conflict I had was with the Health Ministry. I don't have a good relationship with the health minister [Camilo González Posso, a leader of the M-19—ed.]. That bad relationship contributed to the revival of old criticisms. The criticism of the World Health Organization is an old criticism. The CDC attacks . . . were made in early 1989, and they repeat them again systematically. In the United States and in Europe, no one pays attention to this any longer. They put together all those criticisms and issued a rehashed version sponsored by someone inside the Health Ministry. Well, what can you do? We couldn't finish our studies in Tumaco.

EIR: You got as far as the second vaccination dose. Was the third dose administered?

Patarroyo: The third dose was given but the followup couldn't be done. Yet, not to do this is playing with people's lives. For some in Tumaco, I am the wretch, although there are many who have understood, because people from the Malaria Eradication Service told the residents of Tumaco: "The fault is not Dr. Patarroyo's, but rather that they aren't paying us to do the followup, and we don't even have enough to live on."

I decided to return basically because of thousands of people who wrote letters asking me to. I received letters from peasants, from ministers, and from scientists across Latin America. I received calls from the health minister of Ecuador, and from the health minister of Venezuela, who said: "You got involved in this business of experimenting with the vaccine against malaria, and got us involved, and you can't leave us in the lurch."

Upon returning, we had lunch with President Gaviria, with the health minister, the agriculture minister, and we reached an agreement thanks to which we are working with VECOL. But with the health minister, there never really was an agreement, because he promised and promised and at the hour of truth, he didn't come through. The health minister did none of what he promised to the President, to the agriculture minister, and to me. To get into another fight with the minister made no sense. So I decided that things here in Tumaco were finished, and that we would proceed apace wtih the results of the vaccinations in Brazil, in Ecuador, Venezuela, etc.

EIR: How have you proceeded to get funds for scientific research in a country where the health budget is increasingly reduced as a result of the economic adjustments dictated by the International Monetary Fund, the World Bank, and the private banks that demand that the priority is debt repayment?

Patarroyo: When one is working seriously, and has serious products, like the anti-malaria vaccine, one can ask with authority. One goes and asks: "I have a course, I have an institution, I have the means, and besides, I have these products.". . . It is a matter of investing in what we have done. And the country has invested and continues to invest in this. We have achieved a method recognized throughout the world for the diagnosis of tuberculosis, an anti-malaria vaccine with efficacy rates of 40-80%, let's say 40% for the sake of discussion, or 50%. Does not the reduction of the mortality rate (from malaria) by 50% seem of enormous benefit, in lives, in both economic and social terms? So governments know how to invest.

EIR: What is molecule SPF66 which is now being applied as the anti-malaria vaccine?

Patarroyo: You mean Synthetic Plasmodium Falciparum, which was the 66th trial. Plain and simple, it is little pieces of the malaria parasite produced chemically, which have been glued together and polymerized. Since they are different pieces, they induce defenses against different molecules of the parasite, so that when the parasite invades the human organism, antibodies, or defenses, already exist to neutralize the action, and it does not cause infection. That is molecule SPF66. It is a very simple concept.