Interview with…

Professor Jeannine Tagliante-Saracino, a member of the Project Advisory Group (PAG)

Doctor Tagliante-Saracino is full professor of public health at the University of Abidjan in Côte d'Ivoire.

This interview took place on February 2, 2007, in Ouagadougou, Burkina Faso

All the interviews on this subject are available at the following address: http://www.meningvax.org/press-reports.htm

Professor Tagliante-Saracino, if you had to introduce yourself in a few words, what would you say?
I am an infectiologist and full professor of public health at the University of Abidjan. I studied medicine at Salpêtrière in Paris and, during this period, became aware of the importance of infectious diseases in African health issues. I did my training at Abidjan, where I worked in the field of infectious diseases for about ten years. These diseases represent 60 percent of our pathologies, including AIDS. This shows how significant they are in Africa, and this led me progressively toward public health, where I specialized in the fight against disease.

Why did you choose medicine?
I was interested in many things, but I think that if we look into the psychology of it, I spent a lot of time with sick people during my childhood and I wanted to do something useful for Africa.

Why did you turn toward teaching?
After studying in Paris, I wanted to return to work in Côte d'Ivoire where I'm from. It was important to return to Africa, due to the under-resourcing of medical care and the demand for health workers. I realized that the teaching profession is essential for capacity building.

How did you come to join the PAG (Project Advisory Group)?
There's a story to tell about that. During my career in Côte d'Ivoire, I was appointed director of the National Institute of Public Hygiene. This institute goes back a long way—during the colonial period it was part of the mobile hygiene service, whose mission was immunization, the prevention of and fight against epidemics, etc. These services led the fight against smallpox. When I was given the chance to work at the Ministry of Health I chose this department because it seemed logical—I had studied infectious diseases, I had taken the public health examination, and it made sense to me to join the MoH department that fights against infectious disease. I suggested this department be transformed into a national public organization—the National Institute of Public Hygiene. The Institute started offering immunization programs outside the realm of the Expanded Programme on Immunization in 1992 because we thought it was important to offer vaccinations to the entire population, according to need. For example, we offered the tetanus vaccine to everyone, for a fee, and we also developed specific immunization programs for companies, communities, schools, and rural areas.

During the meningitis epidemic in 1994, 1995, and 1996, we introduced preventive vaccination campaigns, for a fee, in the north of Côte d'Ivoire on the border with Burkina, which at the time was subjected to epidemics. We talked to colleagues in the field, Agence pour la Médecine Préventive (AMP), and PATH to say that even if the polysaccharide vaccine was not effective, seeing how considerable the epidemics were, the vaccine should still be offered to inhabitants during the preepidemic season, in order to avoid disastrous situations. This resulted in fee-paying vaccination campaigns during which we distributed over five million doses of vaccine in five years. AMP carried out research to determine the cost of some of the campaigns and presented the results at a World Health Organization meeting at UNICEF headquarters in New York, a meeting attended by Dr. Marc LaForce and a representative of the Bill & Melinda Gates Foundation. At the time, the GAVI program was in preparation. I think that when the MVP project was created, the group present in New York remembered the experience we had had in Côte d'Ivoire of preventive mass vaccination campaigns against meningitis, and that is how I came to be asked to join the Project Advisory Group. I was very pleased to join the group and to advocate for the MVP because I am convinced that it is through this project that we will eliminate group A meningococcal meningitis. I think Marc LaForce was one of the people who persuaded Bill Gates' advisors that if they were going to set up a foundation, it was very important to back immunization. Accepting the invitation to serve as a member of the PAG fitted my conception of life since I am interested in everything connected with the fight against communicable and infectious disease.

It's a duty…
It's also a pleasure because these are challenges which really require thought, organization, and advocacy work.

Meningococcal polysaccharide vaccines are usually used in response to epidemics. What made you decide to use them as a preventive, fee-paying measure?
It was a test. We implemented a strategy of contacting the local population, we told them about the disease and invited them to come and be vaccinated. During these campaigns, we offered vaccines against yellow fever and meningitis because these two diseases were a risk in the region, and we provided the two vaccines for 500 CFA francs—less than a euro. Being a national public institute with the obligation of revenue, we tried to work out as accurately as possible how cheaply we could do it so as to make it as accessible as possible to the local people. We didn't cover the whole population, of course, but we did reach a coverage rate of 50 percent to 65 percent, depending on the region. This coverage rate enabled the most affected regions to be protected when the very large epidemics broke out, like in Burkina Faso. It is important to realize that when an epidemic breaks out, it is very difficult to organize reactive campaigns because, even if epidemiological surveillance is in place, there are delays in the transmission of information in rural areas. And if vaccines are not available the situation rapidly becomes critical. One thing that led me to organize these preventive campaigns in the face of the threat of meningitis epidemics was that the Institute ordered stocks of vaccines which were prepositioned in the north of the country, but once the epidemic season was over, we were left with stocks of unused vaccines which were likely to become outdated. So, to ensure the stock was renewed, we vaccinated preventively and ordered new vaccines.

What do you think you will contribute to the project and to the PAG?
One of the first things I will bring into the project is my conviction. Meningitis has an impact on the health and social life of Africans and on the African economy. It is up to us to analyze all this, to become good advocates, to convince our politicians and all affected economic players of the disastrous impact of the disease. We need domestic mobilization in Africa and it is we, Africans, who must encourage partners to help us and to make meningitis a priority.

I'll put myself in the position of a political or economic decision maker—Why should meningitis be a priority when there are other diseases, infectious or not infectious, that have many more victims in Africa—AIDS, malaria, or malnutrition, to name but a few…
I think that if we look at the natural history of infectious diseases in Africa, we will see that these diseases are strongly linked to underdevelopment. Let's take onchocerciasis. It is a disease that caused extreme blindness, along with the desertion of fertile valleys. There's a lot that has been written about it. But onchocerciasis did not appear in the 1970s! It has been in Africa for hundreds of years, so you can imagine the number of people mutilated and handicapped by this disease and forced to leave high-risk areas. Initially, the fight against onchocerciasis made it possible to reduce morbidity, but later on it also resulted in fertile valleys being given back to the people. If you take the case of Côte d'Ivoire or Burkina, all the large sugar plantations at Ferkésedougou, Borotou, and Bobo Dioulasso are former onchocerciasis areas that had been deserted for years. We can see that if we count up over the years, infectious disease has probably been the most powerful enemy of African development.

Another example: Côte d'Ivoire became known in the time of Louis XIV, but colonial history has it that for many years there were only trading posts where exchange took place, and that these trading posts could only be transformed into shops and business centers after the arrival of quinine. Until there was quinine, malaria made it impossible for foreigners to settle, because those who arrived often died three months later from pernicious malaria. That is what history tells us about settlers. But we have never measured the effect of this disease on the people who lived there, particularly children, who have a high mortality or morbidity due to malaria. We can only imagine how important morbidity was at a time when there was only traditional medicine, or no medicine at all. The influence of each of these diseases is terrifying. So when someone says, "Why meningitis?", we should reply that each time a disease is vulnerable, that's to say we have an effective method of fighting it, we must tackle it forcefully. In the case of meningitis, the reservoir is solely human. If we can cut off the chain of transmission, if we can sufficiently protect the receptive subject, elimination or even eradication of the disease might be possible. As far as group A meningococcal meningitis is concerned, there is a real possibility that in the not-too-distant future we will see the disease eliminated from the morbidity registers. So it's worthwhile. It is not a choice between one disease or another, it depends on the vulnerability of the problem.

There were other clinical studies with meningococcal conjugate vaccines in the 1990s that were never completed. What makes you believe that MVP will complete the clinical trials, produce a vaccine, and introduce it through large-scale vaccination campaigns in Africa?
I think that this group, led by professor Kader Kondé and doctor Marc LaForce, wants to succeed. Much research could be done to develop vaccines against other diseases, but then the question of market analysis comes up. Is it possible for a vaccine manufacturer to make

a return on investment for products developed for African countries? People hesitate to produce vaccines that are only useful in African or underdeveloped countries. I think that's why this project should be welcomed, because it makes headway by tackling the three key problems—producing an effective vaccine, looking into the conditions for its introduction, and looking for funding—to solve the problem. Usually we look for a vaccine (this was the case for the hepatitis B vaccine), but once the hepatitis vaccine was produced, it was difficult to introduce it because the other issues hadn't been discussed and the people concerned couldn't afford to buy the vaccine. This project is interesting because the three points are dealt with at the same time—supplying a vaccine that works well, thinking about the way it should be introduced and the problem's vulnerability, and finding funding from countries and partners so that, once everything is sorted, we *really* will solve the problem.

Do you think there are other diseases for which the MVP model could be useful?
Let's look at the example of yellow fever, for which there is an excellent vaccine. It is a disease with a vector so we talk about controlling the disease rather than eliminating it. French control strategies using mass vaccination campaigns were effective until 1962, but after 1962 there wasn't a strategic follow-up plan for control—how to mobilize funding, how to protect the people etc.—and unfortunately we are now seeing yellow fever epidemics reemerge in force. So we must urgently address the problem of yellow fever which, when it rears its head, is, like meningitis, extremely disruptive and destructive and paralyzes the region because, once the epidemic has broken out, you can do nothing but fight it.

Isn't there a risk that we'll find ourselves in the same position with meningitis?
Of all meningococci, serogroup A is the most dangerous. If immunization strategies are followed effectively, I think that in ten years' time, we will have to have to rethink what immunization strategy needs to be maintained so that this disease, which will have all but disappeared, doesn't come back. However we will have to continue surveillance of the other serogroups to see if and how they evolve. But this cannot be answered right now.

Suppose you were director of MVP, what would you do after MVP?
You've caught me unawares. I haven't thought about that, but I think it's a project that, as it is seen through, will provide other opportunities. For a start, this project will show how to run a vaccination program, a fight against disease. The work is carried out in three stages concurrently: firstly, the production of an effective vaccine or control measure, then the introduction strategy—what age to vaccinate and the actual feasibility (the possibility for health systems to adopt the project and not fall apart due to poor efficiency)—and finally sustainable funding and sustainability of the project's goal. This project will teach all that and will serve as a model for other serious diseases, because there are signs of other forthcoming serious diseases. These are viral diseases, particularly arbovirus, Rift Valley fever and chikungunya. Will these diseases remain in their current state or will they become more and more common due to climate change? I think that as the project advances, it will open up new prospects.

What should MVP be paying particular attention to now that the project is in the clinical trial phase in Africa?
I think we need to pay attention to the quality of the clinical trials in Africa. It would be useful if a pool of knowledge was created because we can't ignore the fact that it is in our countries that infectious disease is rife. We have an environment that enables us to carry out

any clinical trial for any infectious disease. What we really have to get down to, us African teachers as well as the groups that come and help us carry out these clinical trials, is to reach a high level of competence so that the quality of the clinical trials meets all criteria, whether it be scientific, ethical, etc., and cannot be criticized. Training for clinical trials is a real specialty. There isn't much opportunity for training in Africa and yet, due to the persistence of infectious disease here, clinical trials are going to take place in Africa. African universities and research institutes must become aware of this. At the moment we are just passive actors—a clinical trial is organized and we take part in it. But our skills must go beyond that so that, when a clinical trial is put forward, the African group leading the clinical trial must be sufficiently well recognized for its international qualifications for the trial to be entrusted to them without a second thought. We must get people to take an interest in clinical trials, to train and make this field their specialty, to exercise an irreproachable level of quality and precision.

Reinforcing skills is obviously very important to you—you turned toward teaching because you thought it was important to build up African skills in the medical and health sector, and you think that clinical research should be developed in Africa. What role do you think MVP should have or could have in reinforcing skills?
MVP should build capacity in the African groups with which it is working. I don't know if the project is able to, but even just trips to places in Europe or America where clinical trials are carried out, participation in training courses or internships would develop capabilities. But there is another area in which MVP could also intervene and that's in introducing the new vaccine preventively through mass vaccination campaigns.

You come from Côte d'Ivoire. Have you experienced many meningitis epidemics?
Epidemics break out in the north of Côte d'Ivoire, often at the same time as epidemics in Burkina. Records show that there are maybe 400–500 cases, but they are not exhaustive

Are there beliefs about meningitis like there are in Burkina Faso?
What I noticed when I was working as an intern in Abidjan, and which I found remarkable, is the capacity of the local people from the north or from Burkina Faso to recognize the symptoms of meningitis. The family of the patient would say, on entering the emergency room, that the person had meningitis. People could recognize the disease by certain signs, headache, neck stiffness, etc. In the south of Côte d'Ivoire, diagnosis takes longer. So there is knowledge of the disease in hyperendemic areas and that has helped us a lot in our preventive campaigns, even when it was for a fee, because when you say to people, "We've got a vaccine, we're going to vaccinate you against meningitis", they respond to the call straightaway, even in a region where liquid assets (money) are rare. I will always remember—the first days of immunization were in the Lobi region, in the northern part of Côte d'Ivoire which borders Burkina. Parents gave their children chickens instead of money as payment. They didn't have any money but they realized it was important to be vaccinated. There was a willingness to pay. What I regret is that we didn't take any pictures. We could have shown how committed people were to the vaccination campaign. The local populations are not passive, they are concerned about their health. It is up to us to explain that there is a solution and that we are working on it to make it as accessible to them as possible.

So there aren't problems with people who have particular beliefs, who are against vaccination?

No. There are some ethnic groups in Africa who don't want iron to penetrate the skin so vaccination with a needle can bother them. Otherwise I think everyone, at least in the case of Côte d'Ivoire, is open to vaccination. At one point there was a phenomenon in the west of Côte d'Ivoire which was almost identical to the one in Nigeria, whereby programs to vaccinate mothers were associated with programs to encourage spacing out births. People merged the two, and because they were against spacing out births, they also rejected vaccination. So we must be very, very careful when joint programs are run because in some regions vaccination may be rejected but not for the reasons we think. The vaccine against meningitis is a very, very great mobilizer. I even had problems because television and radio talked a lot about the epidemics in 1996 and the whole of Côte d'Ivoire knew about them, people knew we were vaccinating in the north of the country, and it was a problem because in Abidjan, everyone wanted to be vaccinated, everyone reacted fast and we risked running out of the vaccine.

The Project Advisory Group meeting ended this morning with a list of new recommendations from PAG members. Can you understand that we may sometimes be a little discouraged by these recommendations?
You mustn't take it like that. You mustn't forget that we are all in the same boat. It is a very good project and we are trying to make it even better. Having said that, the title of the project "Eliminating epidemics" sounds like a slogan and is very attractive for the general population, but it makes no sense in public health, especially as the general goal of the project, as it is written, is the elimination of group A meningococcal meningitis. We must specify that the end objective is to eliminate endemic *and* epidemic group A meningococcal meningitis.

Is there anything else that you'd like to add?
I think this is a project of the future, which should be carried through to a successful and celebrated conclusion. It is a project for the future in an Africa beset by enormous health, social, and economical problems, aggravated by numerous political conflicts.

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