

---

## Interview: Prof. G. Leigheb

---

# AIDS insect vector 'cannot be excluded'

*The following interview was given to EIR by Professor G. Leigheb, head of Dermatology Department of the Main Hospital (Ospedale Maggiore) of Novara, Region of Piedmont, Italy. Novara is a large city near the center of the rice-growing region, between the two largest industrial cities of northern Italy, Milan, and Turin. The interview was conducted by Marco Fanini and Stefania Sacchi; it has been translated from Italian and abridged.*

**EIR:** Professor Leigheb, you are the head of dermatology at the Ospedale Maggiore of Novara. When did you first hear of AIDS?

**Leigheb:** The problem has been talked about in the medical literature for several years, at first in a hazy way, and then more and more focused, also because the knowledge of the disease has become more and more refined. In practice, what counts most for a dermatologist (we are morphologists) is to directly see the sick person, and I have had the opportunity to see some AIDS cases, among the first ones confirmed in Europe as a matter of fact, at the clinic of Professor Orfanos in Germany, where there were cases of the disease confirmed among Americans stationed in Berlin.

. . . There are cases in Piedmont, as well as in other regions of Italy, of some minor conflicts among the various specialists in dealing with the disease. In fact, the disease is considered in some cases to be an infectious disease, in others immunological, in others dermatological, in others venereal, while others are interested in the disease principally from the social standpoint. . . . In regard specifically to Novara, the AIDS problem has been entrusted to the Division of Infectious Diseases, which is dealing with the issue by screening all the high-risk groups, drug users, and homosexuals. . . .

**EIR:** Do you know if the Piedmont region has launched any plans or put any initiatives on the drawing boards for prevention of AIDS?

**Leigheb:** I know that there have been meetings, to which I was not convoked, and where I do not know what was discussed. I can say that we received a circular from our

health administration which informed us about the ministry's circular concerning how health care workers should proceed regarding the AIDS infection.

**EIR:** Now we are coming to a point of extreme interest. Some American doctors, such as Dr. Whiteside, believe that it is possible that mosquitos may act as vectors for the transmission of the AIDS virus. What is your thinking about this and what do you think of this problem, in a region like yours which has particular characteristics, because of the kind of agriculture you have (ricefields, marshes) and the presence of these insects?

**Leigheb:** On mosquitos, and to be more precise in regard to transmission, on Diptera, which include both mosquitos and sandflies and *Aedes*, i.e., a group of insects among the major carriers of infection and infestation in the world, I can say that it cannot be excluded *a priori* that they may represent a possible vector of the virus. Suffice to say that the mosquito, and particularly the female (since only the female is a blood-eater and must necessarily feed on a blood meal, not just human but also of other animals, to be able to procreate and to be able to deposit its eggs), can engage in a zone like ours, where it is endemic, in repeated bites of the same person. A subject could be bitten in one evening by 10, 20, 50 mosquitos.

Therefore, the risk of acquiring the AIDS virus, as well as viral hepatitis, is not an eventuality to be excluded *a priori*. Therefore, it could be hypothesized in my opinion that in the Po Valley in Italy and in the zones where there are the greatest numbers of these insects, it would be a good idea to evaluate the problem in depth, to establish whether in fact: 1) the virus can be carried from an infected person to a healthy person by this mechanism, and 2) if the virus can, and for how long, survive in the gastric cavity of the insect, and hence, if one can define the mosquito or another dipteran as a passive carrier of the infection.

**EIR:** Are you an expert on insects?

**Leigheb:** I can specify to you that I have a certain experience with insects, as I am also an entomologist as a hobby, and statements I make regarding insects involve me as an entomologist; I published a monograph which was the subject some years ago of the National Congress of Hospital Dermatologists in Reggio Emilia, where I in fact treat all the skin diseases that can be transmitted via insects.

**EIR:** Beyond the AIDS problem, can insects transmit other diseases?

**Leigheb:** A topic which would require a more in-depth study is that related to arborviruses, i.e., the viruses transmitted by arthropods. Arthropods include insects and arachnids, which are invertebrates. Well, many of these invertebrates are capable of transmitting viral agents, above all certain ticks, but also some insects of the dipterous type. These are also ex-

tremely widespread in Europe, above all in the Russian Steppes, where the reservoirs of infection are represented by rodents, which are very abundant in those zones, but where the biological cycle of the virus and the transporting of it occur in fact via dipterans. We are speaking about infections which have not yet been pinned down and studied in a complete way, such as certain forms of encephalitis, certain forms of meningitis, serious and often mortal forms which are hence very important.

It is therefore not to be excluded that other viruses we do not know, may also use this type of transmission. We think that some viruses are spread to a notable degree by mosquitos, such as, for example, the myxomatosis virus, which kills millions of rabbits every year. . . .

Let me give some figures. Diptera [an order of insects—ed.] are represented by no fewer than 90,000 species, and 140 families. The *Culicidae*, the group to which the *Culex pipiens* belongs, i.e., the mosquito, is represented by 3,100 species. Among these *Culicidae*, the most important are the *Culex*, the *Anopheles*, and the *Aedes*. *Aedes aegypti* is widespread in the world, both in America and in Africa; it transmits yellow fever and dengue fever. The mosquito that bites us in cities arose by differentiation from the *Culex pipiens*, which generally lives in the country and is mainly a parasite on birds; it takes the name of *Culex pipiens autogenicus* or *molestus* and has adapted itself to feed on human blood: a kind of natural selection.

It is very important that always in the *Culicidae* and the *Diptera*, the *Phlebotomus* is very tiny, about 4 millimeters of wingspread, and it transmits the famous sandfly fever, or four-day fever. Many of the little fevers that last three-four days, are due to sandflies. Sandflies are capable of transmitting, above all in central-southern Italy, especially along the coast, cutaneous leishmaniasis (oriental button), whereas in the south, they can cause visceral leishmaniasis, a disease which can be deadly. Its natural reservoirs are wild dogs, and it seems that in the south they are affected by leishmaniasis. So it is a big problem, above all in Sicily and in southern Italy.

Then there are other types of dipterans. *Leptoconops irritans*, for example, with its painful bites causes enormous problems in the beach areas in Tuscany, with allergic phenomena and widespread edemas, so as to render life near the sea coast intolerable for particularly sensitive persons; they also transmit tularemia, a kind of pestilence that mainly strikes animals.

Other dipterans are the *Simuliidae*, which are very tiny gnats which in general live along running waterways which are very widespread in our country, especially in the Trentino region, and in zones of northeastern Europe where they can cause the death of entire herds of cattle or their dispersion, because of the painfulness of the bites or the poison from them. In our area, the mosquito, and I have encountered recently some cases even in the province of Novara, also

transmits worms, a filaria, which is 10, 12 centimeters long. The bite inoculates a worm which creates subcutaneous nodes which persist for months or years. In dogs, on the other hand, *Dinofilaria*, present in the Po Valley, causes cardiac *Dinofiliarasis* which can cause the death of the dog, because the heart of the dog is invaded by these worms.

The *Aedes aegypti* carries yellow fever, dengue, and other infections. *Anopheles* can transmit even malaria and many micetic forms and worms.

**EIR:** In Milan they are disinfecting manholes and water conduits. Do you think this is effective?

**Leigheb:** Yes, because mosquitos lay their eggs in stagnant water, or even in little puddles. It is difficult to succeed in eliminating the small sources of infection, marshes, rice-fields, small canals. Not least is the problem of ecological disequilibrium from disinfecting.

**EIR:** We were told in Rome, in parliamentary circles, that these disinfestation programs have been slowed down in recent years. As to AIDS in general, there is a good deal of discussion about what to do; in California, there is an organization called PANIC which collected 700,000 signatures to take the necessary measures against AIDS, applying those measures which are appropriate to every infectious disease. What do you think should be done on the general level to stem what seems to be a growing danger to everyone?

**Leigheb:** I am against alarmist news *per se*, but I believe that in the face of a problem of this magnitude, it is not alarmism if we defend certain ideas which support a prophylaxis, a study of the disease, and the precautionary norms in regard to hygiene, precisely to avoid, if we are still in time, the spread of that terrible disease. For this reason, broadly speaking, I would be favorable to embracing the perspectives of the PANIC initiative [California Ballot Initiative Proposition 64, on the November state electoral ballot—ed.]

as it seems logical to me that, as has been done for the prevention and safeguarding against diseases of an endemic and then pandemic nature, one intervenes with opportune legislation and with opportune research into people and the modes of transmission of the disease among people.

**EIR:** In case our government should decide on a serious effort at prevention, study, and research, that would have direct repercussions on the budget of the ministry and the regions. It means carrying out a greater effort, more funds would have to be allocated; simply the mass screening requires a lot of financing. Do you think it is possible to make government institutions take on these needs?

**Leigheb:** Undoubtedly yes. I think these would be well-spent funds and not wasted, because the problem is too important and it cannot be neglected, and one cannot be blind in the face of a problem of worldwide consequences such as this, which directly involves us.