Louis-Pierre Delpy: A French Scholar and Former Director of the Razi Institute of Iran (1931-1951)

Asadollah Hosseini Chegeni, PhD; Ehsan Mostafavi, DVM, PhD

1Department of Plant Protection, Faculty of Agriculture, Lorestan University, Khorramabad, Iran
2Department of Epidemiology and Biostatistics, Research Centre for Emerging and Reemerging Infectious Diseases, Pasteur Institute of Iran, Tehran, Iran

Abstract

Delpy came to Iran as the third director of the Hesarak Vaccine and Serum Institute (Razi) in 1931 and revolutionized the institute by performing diagnostic and vaccine-producing techniques for 20 years. Dr. Delpy, as a veterinary microbiologist, was employed partly to control the outbreaks of rinderpest, but he did more important and lasting work in controlling other infectious and parasitic diseases, production of serums and vaccines, and developing tick taxonomy in Iran. Delpy was a very modest scientist who died in 1974 in France.

Keywords: Iran, History of medicine, Vaccines


Introduction

Dr. Louis-Pierre Delpy was born on July 26, 1899 in Limoux (Aude), Languedoc province, Southern France. He completed his studies in veterinary medicine at the Toulouse Veterinary Faculty in 1922. After two years of internship and research at the Parasitological Research Laboratory under the supervision of Émile Brumpt in Paris, and at the Institute Pathologie Exotique Vétérinaires in National Veterinary laboratory of France under the training of Dr. H. Vallée, he was recruited by the Ministry of Overseas and was dispatched to French West Africa as a veterinarian researcher. He collaborated with Georges Curasson on rinderpest in Bamako (capital of Mali). During his valuable services in French West Africa, he studied the common diseases of that region such as anthrax, trypanosomiasis, and rinderpest, and invented a vaccine, known as the Curasson-Delpy vaccine. In 1930, Dr. Delpy returned to Paris to defend his doctoral dissertation (Figure 1) entitled “Contribution to the study of rinderpest and animal trypanosomiasis in French West Africa”. At this time, he was informed that a veterinary microbiologist was being recruited to develop the veterinary vaccine and serum institute of Iran.

The foundation of an animal disease control and vaccine and serum institute was approved by the Iranian Parliament on January 6, 1925. A few months after the establishment of the Institute, due to lack of a suitable place for holding large animals in the Pasteur Institute of Iran in Tehran, part of Kamalabad lands near the village of Hesarak (Karaj), was provided for this institute to serve as a place of work and residence of staff and to build animal stables required for serum production. Consequently, in April 1924, the institute was transferred to Karaj. The responsibility of this institute with 22 personnel was given to Dr. Abdullah Hamedi and then to Dr. Morteza Kaveh. Due to exposure to grasshoppers in agricultural fields and the decline of rinderpest, the institute focused on the production of anti-locust poisons from 1928 to 1931; however, in the spring of 1924, rinderpest outbreaks re-emerged in some central regions of Iran.

In September 1930, Mahmoud Fateh, the director of the Faculty of Agriculture in Iran, was sent to France to employ four French specialists in order to improve the production of biological products in this institute. Dr. Delpy arrived in Iran in March 1931. The Minister of Agriculture, Mostafa Gholi Bayat, was interested in agricultural reforms and warmly welcomed Dr. Delpy and appointed him as the director of the Iranian Vaccine and Serum Institute. In order to finalize the location of the institute, the land of the Karaj Agricultural College and the lands of the Hesarak village, which were available to the Ministry of Agriculture, were recommended to Dr. Delpy.

Delpy in Iran: Beginnings

Dr. Delpy immediately prepared the plan of a microbiological laboratory, a vaccine preparation unit, and portions for diagnosis and study of animal infectious
diseases around Hesarak (Figure 2). The construction of the planned laboratories lasted one year. After equipping the first laboratory, other laboratories were built in the years to come, when needed.

Research and Development in Razi

Razi Institute was being developed every year. Delpy conducted microbiology and vaccine preparation units with the help of Dr. Hossein Mirshamsi. For instance, in 1941, an outbreak of diphtheria in Iran caused severe mortality. At that time, as Iran imported the diphtheria serum from Germany and due to this country’s involvement in World War II, Iran encountered a severe lack of anti-diphtheria serum. Following this crisis, in November 1941, Dr. Manouchehr Eghbal, Professor Yahya Adl (father of surgery in Iran), and Dr. Mohammad Gharib (a pioneer of pediatrics in Iran) advised Dr. Delpy to solve the problem. He delegated responsibility for producing the vaccine to Dr. Mirshamsi, and the first anti-diphtheria serum was successfully developed in early May 1942 by his efforts. Later, considering the importance of parasitic and infectious animal diseases in Iran, Dr. Delpy conducted numerous studies on these diseases and their diagnosis. Valuable studies were conducted on brucellosis by Dr. Delpy and Dr. Morteza Kaveh; they were able to isolate Brucella abortus from an aborted calf using the cultivation method for the first time in Iran. Then, researchers of the Razi Institute produced a vaccine against animal brucellosis in 1963.

Around 1946, Dr. Marcel Baltazard spent 6-month at Razi Institute under Dr. Delpy’s supervision. Baltazard was later selected as the fourth French President of the Pasteur Institute of Iran, and remained in this position for 13 years.

Delpy’s services lasted for nearly 20 years at the Razi Institute, and during his last 15 years, Dr. Aziz Rafyi was an active colleague of Delpy (Figures 3 and 4).

Delpy and Rafyi performed several studies on anti-rabies immunizations, transmission of Spirochaetae by ticks, sheep pox virus, trypanosomiasis, Eperythrozoon wenyoni, and tick-borne relapsing fever. Dr. Rafyi (Figure 3) worked in the Razi Institute as the head of the laboratory, the head of the department, and as a deputy director for a long time, finally serving as the head of the institute for almost 16 years after Dr. Delpy. Due to Delpy’s valuable activities in Iran, his presence as the director of the institute was extended several times until 1950 by the National Consultative Assembly of Iran.

At the same time, Dr. Delpy taught at the schools of medicine, veterinary medicine, and agriculture. The
Laboratory of Parasitology at the Faculty of Medicine (Tehran) was established under the supervision of Dr. Asadollah Sheibani in 1938. Dr. Delpy, while serving as the head of Razi Institute, became the director of this laboratory for six months, followed by Dr. Nasser Ansari (Figure 4).

Despite the problems existing in Iran during World War II from 1940 to 1945, Dr. Delpy continued to publish the Archives de l’Institut d’Hessarek, and encouraged colleagues to write their own scientific research and publish it in European journals. Ten volumes of this scientific journal were released at the time of Delpy’s residence in Iran. Although many articles published in these volumes were written by him, he did not hesitate to add the name of his collaborators as co-authors of these papers, even occasionally, with much courtesy, he put the name of some of them as the first authors. A significant number of Delpy’s papers were published in international journals as well as in the Archives de l’Institut d’Hessarek which is a relic of the fruitful days of his scientific activity. In 2015, on the occasion of the 90th anniversary of the Hesarak (Razi) institute and to appreciate the great people who provided invaluable services to this institution, a head bust of Dr. Delpy, along with those of Dr. Morteza Kaveh, Dr. Aziz Rafyi, and Dr. Seyed Hossein Mirshamsi, was installed at the entrance to this Institute.

In this section, Delpy’s scientific activities are briefly reviewed.

Rinderpest
One of the reasons motivating the employment of Dr. Delpy was the control of the first huge outbreak of rinderpest in Iran which started around 1924. As Delpy had extensive experience with rinderpest, he conducted important studies on this disease to determine different aspects of rinderpest in different regions of the country.5,8

Ticks
When Delpy was in Iran, tick-borne diseases were prevalent among the livestock. Although Delpy was primarily a microbiologist, in practice, he became an expert tick taxonomist. His made major contributions to the taxonomy of the Hyalomma,3-18 Haemaphysalis,19 Ornithodoros and Argas.20,21

Protozoan and Bacterial Infections
Delpy studied heartwater (caused by Ehrlichia ruminantium) in Sudan22 and Trypanosoma sudanense in Sub-Saharan Africa.23 He also studied trypanosomiasis French West Africa.2,24 Considering the abundance of protozoan infections in Iran, Delpy studied various protozoan and bacterial diseases and pathogens25-28 such as bovine theileriosis,29-33 Salmonella pullorum and Salmonella gallinarum,34 tick-borne relapsing fever,35-38 Eperythrozoon wenyoni,39 diphtheria,40 brucellosis,41-43 camel trypanosomiasis,44 and staphylococcal antitoxins.45

Vaccine Production
Delpy and his colleagues produced a set of rinderpest vaccines to control the disease in cattle.46-48 He also performed immunization studies to prepare various vaccines against bovine hemorrhagic septicemia, pasteurellosis, sheep pox, anthrax, foot and mouth disease, cholera, and aphtha.49,65

Other Activities
Delpy studied dog rabies66 and transboundary animal diseases in West Africa,67 pneumoenteritis of sheep,68 and inflammatory neuropathy of goats,69 and also worked on the treatment of horse strangles,70 a method to count living bacteria,71 and diffusion of virus cleavage.72 Delpy published a book in Persian entitled “A survey on infectious diseases of livestock in Iran”.73

Delpy’s Characteristics
Although Dr. Delpy had extensive and profound knowledge of scientific work, he was very modest. He was never ostentatious and admired valuable people. Delpy taught scientific methods in biology to Iranians, both university students and colleagues at the Razi Institute. He always reminded his students and colleagues to open their eyes and observe the reality at hand, not what should happen later. He consistently said that life is short and the works that people need to do are countless. He was not convinced by the results of one or two studies; to have a convincing and tangible result; tests were repeated at least five times in different conditions to yield the same results.

Retirement and Death
After serving twenty years in Iran as the director of Hesarak Institute, Dr. Delpy was retired and returned to France in March 1951. He began working as a scientific and technical director at the Institute of Mérieux for several years. Then, he left the institute in 1955 to lead a peaceful life in his villa in the city of Cannes, Southern France. Meanwhile, he occasionally went on missions as an expert and advisor for the World Health Organization (WHO) and the Food and Agriculture Organization of the United Nations (FAO).

In 1958, upon the decision of cabinet ministers, Hesarak Veterinary Institute was renamed to Razi Institute after Muhammad ibn Zakariya al-Razi, a well-known Iranian scientist. During retirement, Delpy came back to Iran four times upon the official invitation of the Ministry of Agriculture and Razi Institute (Figure 5).

During these visits, Dr. Delpy talked with friends and colleagues about the progress of new researches at the institute. His last trip to Iran was in October 1973. Six months after his return to France, he died at his home in Cannes, in May 1974 at the age of 75. Delpy’s wife was
of Polish descent, and she and Delpy had two children, Jacques and Claudie.

Authors' Contribution
AHC and EM carried out the design of the study, AHC participated in gathering the data, and prepared the manuscript. EM critically reviewed the manuscript, applied comments and finalized the manuscript. All authors have read and approved the content of the manuscript.

Conflict of Interest Disclosures
The authors declare that they have no conflict of interest.

Ethical Statement
Not applicable.

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