2. Robles Disease (Onchocerciasis): Discovery and Dream of Dr. Figueroa

2) Dream of Dr. Horacio Figueroa

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On 10th of January 1970, I flew to Guatemala leaving New Orleans on board a TACA aircraft. This was my first trip to Guatemala C.A. expecting to visit Dr. Horacio Figueroa and endemic areas of onchocerciasis in there. During my stay in his house, he showed me a plantation called Panajabal located in the highland far from the capital, a paradise of onchocerciasis according to him, where almost all the villagers were infected. As is seen in the picture which I took at that time, a blind man was walking led by his grandson with a stick. This seen really blew me away! It was the first time that I saw the figure of “onchocerciasis or river blindness” as a parasitologist and determined the academic course of mine since that moment.

Dr. Figueroa was an emeritus professor of National San Carlos University of Guatemala and a passionate researcher of onchocerciasis admiring a historical Guatemalan physician, Dr. Rodolfo Robles, the discoverer of this disease. He had been eagerly looking for foreign scholars in order to study and control of onchocerciasis together for a long time. It was his dream to realize that with any investigators who would be interested. In 1967 he sent approximately 600 reprints of his monograph entitled “Guatemalan onchocerciasis” to parasitologists concerned mainly in filariasis world-wide. I received No. 540th reprint and so acknowledged for his kindness. Then we soon started mail communications on filariasis and onchocerciasis and eventually I sent him my Dirofilaria antigen which was purified originally for the diagnosis of lymphatic filariasis by skin test. He applied the skin test using this antigen on Guatemalans to see the reactivity in onchocerciasis. The result was published in Revista del Col. Med. Guatemala 20 (3) as our collaborative work in 1969. While I was in CDC, Atlanta, USA, Dr. Figueroa persuaded me to visit endemic area of onchocerciasis in Guatemala before I go back to Japan in Jan. 1970. Thus we met in Guatemala as mentioned above in the beginning and we agreed to start research for the control of onchocerciasis in there.

In order to experience more about onchocerciasis, I applied myself to OTCA, a former body of JICA as an ODA (Official Development Assistance) agency, as an expert to be dispatched to Ethiopia by joining in a bilateral international health project “Mid East and Africa Program” and the application was accepted. This program has been steered by Dr. T. Ishizaki and Dr. S. Asahina of the National Institute of Health, Japan. In Jan. 1970, together with two medical entomologists and one parasitologist, I started works at the Imperial Central Laboratory of Ethiopia, the former Pasteur Institute in Addis Ababa. Then the collaborative research started with our counterpart Dr. T. Wonde mainly in endemic areas of onchocerciasis near Sudan for one year.

In Aug. 1972, aiming at the research and control of onchocerciasis due to strong request of Dr. Figueroa, I consulted to Dr. D. Katamine, professor of Nagasaki University on this matter expecting to launch an aid project supported by OTCA. In Guatemala, Dr. Figueroa negotiated with Dr. Ucles, the Minister of Public Health, on the importance of introducing Japanese aid. According to Dr. Figueroa, Dr. Ucles was much pleased and they started consultation with the Embassy of Japan. In Japan, Dr. Katamine consulted with high-ranked officials of the Ministry of Foreign Affairs (MFA), Japan, on the possibility to support research for the control of onchocerciasis in Guatemala. The officials suggested us to make the Guatemalan government send an official proposal of aid.
project to the Embassy of Japan in Guatemala. Based on this suggestion, Dr. Figueroa proposed a plan of aid project prepared by us to the Japanese Embassy. Dr. Katamine chose members among scholars mainly in Kyushu area in order to send to the endemic foci.

In Feb. 1973, Dr. Katamine and I visited again the MFA and found the officials had already understood the request of Guatemalan side through the Japanese Embassy and told us the possibility to send some experts to Guatemala. For several months we continued to negotiate with the MFA and OTCA on the project plan. Finally Dr. Goto, the director of Medical Division, OTCA, showed us a plan to dispatch only me to Guatemala in the late Nov. 1973 as a short-term expert for preliminary investigation. Apart from this issue, the Embassy of Japan in Guatemala offered in July to Guatemalan government a scholarship of a man to learn medical entomology in Japan. Then we consulted and decided to accept Mr. Onofre Ochoa in the laboratory of Dr. H. Takaoka in Kagoshima University. Later Mr. Ochoa acted as the main counterpart and friend for all the Japanese experts.

In the late Nov. 1974, I arrived at Guatemala and soon started epidemiological study together with Dr. Figueroa in five endemic plantations including Panajabal located in the endemic highland during two months. We found that the skin snip method showed far higher positivity in comparison with the traditional nodule detection method. Further, we clarified the time frequency of vector blackfly bites in those areas and skin density of microfilaria of *Onchocerca volvulus* by time. The report which summarized the results of studies emphasizing the urgent necessity of research for the control of onchocerciasis was handed to the Ministry of Public Health of Guatemala and to the Ambassador of Japan, Mr. J. Mori. Our ambassador was delighted with this suggestion, Dr. Figueroa proposed a plan of aid project prepared by us to the Japanese Embassy. Dr. Katamine chose members among scholars mainly in Kyushu area in order to send to the endemic foci.

Due to the above conclusion, in 1975 three Japanese missions were dispatched to Guatemala in order to investigate possibility of launching a project and finally to exchange record of discussion with the Min. Public Health. The first mission in Mar. was headed by Dr. A. Nakajima, an ophthalmologist, and the others which exchanged the record of discussion (R/D) with the Guatemalan government in June and Sept. by Dr. S. Hayashi, parasitologist and the director of National Institute of Health, Japan. The project started within the fiscal year 1975. It was really the dream and intention of Dr. Figueroa to study and control of the disease inviting foreign collaborators in Guatemala. He liked to say many times “Querer es poder” in Spanish. It means that, if there is a will, there is a way. The dream became a reality. After a big earthquake in Feb. 4, 1976, the first Japanese expert team could arrive late at May 1976 to begin the project headed by Dr. H. Takahashi, an entomologist. Before this, I myself arrived on 19 Apr. at the capital city in order to arrange various matters like laboratory and housing arrangement, buying vehicle and etc. for the coming of the first expert team. Eventually this project continued for 8 years in total and produced many important findings in research and vector control of onchocerciasis. As the mode of disease transmission in Central America was quite different from that of Africa in OCP (Onchocerciasis Control Program) area, the methodology established in this project in Guatemala was highly precious. The achievements were recorded in several review articles cited in this monograph.

Thus the dream of Dr. Figueroa, who deceased lamentably by stroke in 1991 at the age of 91, was realized by the ODA cooperation by Japan. The produced academic and technical assets were inherited to OEPA (Onchocerciasis Eradication Program of America) successfully. Even though the global control strategy against onchocerciasis changed from vector control to MDA (Mass Drug Administration) of Ivermectin (an antiparasitic agent curiously discovered by a Japanese scientist, Dr. S. Omura), the collaboration between Guatemala and Japan will remain in the history. Looking back many things occurred in this project, my reminiscence always converges with the picture shown in the top page with impressive smile of Dr. Figueroa. And I recall the persistent academic footsteps recorded during the past 100 years after the great discovery of a Guatemalan physician, Dr. Rodolfo Robles.