People @ Virology

Biography of Professor Chiao-Ju Wu
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Dr. Chiao-Ju Wu was born in Fuzhou, Fujian province of China in September 9, 1909. In 1930, he graduated from Nan-yang medical college in Shanghai, majoring in internal medicine. In 1936, he was offered a group leader position at provincial Institute of Public Health, which was the earliest institute for microbiology research in Fujian province. In 1948, after working in this institute for 12 years, he was awarded a visiting scholarship from world health organization (WHO) to study virology and bacteriology in both Michigan state department of Health and New York state department of Health in U.S. At the end of 1949, he returned back to his previous institute and was appointed as a group leader in the department of bacteriology and later was promoted as director in institute for infectious diseases prevention and treatment.

Dr. Wu is recognized as one of the most famous virologists in China and had been involved in many viruses researches such as encephalitis type B virus, Enterovirus, and hepatitis B virus. One of these outstanding works is about encephalitis type B virus. When he returned from the U.S, he established a laboratory to study virology. Around the middle century of 20th, the encephalitis type B virus epidemic was swept in Fujian province with high mortality and mobility. Dr. Wu led a group to first conduct a series of experiment to isolate virus, identify the host and transmission media as well as perform epidemiology studies. His group first identified that the pigs were the main natural hosts for encephalitis type B virus and to further investigate the virus transmission media, they screened many species of mosquitoes and found that region-specific species of mosquitoes served as virus transmission media such as Aedes albopictus in south part of Fujian. During the monitoring of the epidemic of

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encephalitis type B virus, to their surprise, the encephalitis B infected patients cases were still reported in regions with lower density of mosquitoes. Dr. Wu and his group members raised a hypothesis that other transmission media must be existed except the certain species of mosquitoes. With great efforts, they first successfully isolated the encephalitis type B virus from *Lasiohelea taiwana* and reported that the encephalitis type B virus can be transmitted not only by both mosquitoes and also by *Lasiohelea taiwana*. This breakthrough work was published in *Acta Microbiologica Sinica*, and was quickly confirmed by many other groups. As a medical doctor, Dr. Wu also led his group to successfully establish disease diagnostic methods using sucrose/acetone extracted antigen and several ways for prevention of encephalitis type B virus infection.

In addition, Dr. Wu also led his group to investigate the Enterovirus, especially for coxsackievirus. His group successfully investigated the distribution, clinical symptom, transmission route and pathogenesis of coxsackievirus. By serological, pathological approaches, they found enterovirus infections was associated with myocarditis, a disease marked by inflammation and damage of the heart muscle.

Dr. Wu spent most of his life on virology study and played important roles in public health and disease prevention in not only Fujian province but also applied their studies to other
parts of China. His academic achievements included 27 publications about encephalitis B, 18 publications about Enterovirus and publications about other viruses, also he was elected to the Fujian provincial society for microbiology, and the Fujian provincial society for parasitology.

Figure 2: Dr. Chiao-Ju Wu (sitting in the middle) were discussing with his colleagues