

Viral Epidemiological Research in Africa

● **Lecturer: Prof. Hirofumi Sawa**

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● **Date: May 10 (WED) from 5:30 p.m.**

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● **Place: Lecture room 2, Medical Education & Library Building 3F**

医学教育図書棟 3 階 第 2 講義室



ABSTRACT

Recently, emerging and re-emerging infectious diseases - such as, influenza, Ebola hemorrhagic fever, Zika virus disease, African trypanosomiasis, tuberculosis and anthrax - are continuously appearing worldwide and have become a major concern to public health. In fact, these diseases are examples of zoonoses whose causative agents can infect both humans and animals. The agents are typically asymptomatic in their natural wild host animals and occasionally transmit to other animal species, including livestock and poultry, and also to humans, causing serious infectious diseases. To implement preemptive measures in an evidence-based manner, so as to better predict the emergence of zoonosis outbreaks and the prevention of epidemics and pandemics, it is imperative to identify natural host animals carrying potential pathogens and to elucidate the routes of transmission. Based on these findings, diagnostic, preventive and therapeutic measures are developed. We are combating zoonoses through the following studies: "Identification of natural hosts and the elucidation of transmission routes", "Clarification of the molecular basis of pathogenesis" and by "Development of measures for diagnosis and prevention".

Hokkaido University has actively worked with the University of Zambia (UNZA) for more than 30 years, indeed since the School of Veterinary Medicine was established in 1985 by the Technical Cooperation Program implemented by the Japan International Cooperation Agency (JICA). The Research Center for Zoonosis Control, Hokkaido University has thus been focusing on the development and strengthening of activities for the control of zoonoses. In 2008, the Research Center for Zoonosis Control established the Hokudai Center for Zoonosis Control in Zambia (HUCZCZ) at the School of Veterinary Medicine, UNZA, to contribute to the control of zoonoses in African countries. The School of Veterinary Medicine, UNZA and the Research Center for Zoonosis Control have collaborated intensively to promote epidemiological and basic research studies of infectious diseases caused by viruses, protozoa and bacteria by utilizing the biosafety level-3 (BSL-3) facility established in the HUCZCZ. Our objective is to control zoonotic diseases by conducting research and educational infrastructures. These activities will create a new research environment, promoting leading research projects for the better understanding of infectious diseases, the establishment of novel protocols to predict outbreaks of zoonoses and the formulation of preemptive measures.

We have performed intensive epidemiological studies employing the BSL-3 facility and, as a result, we have identified many novel viruses from Zambian wildlife. In this presentation, the diverse DNA and RNA viral families (Parvoviridae, Circoviridae, Polyomaviridae and Flaviviridae) from different animal hosts discovered in Zambia will be presented.

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● Inviter: Prof. Hiroyuki OSHIUMI (Department of Immunology) / 押海 裕之 教授 (免疫学)

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