令和 7 年度　第 14 回　大学院セミナー

令和 7 年　5　月 22　日

分　野　名 Area of Research (責任者名)(内線)	病原原虫学分野 Dept of Medical Protozoology 責任者名(KANEKO Osamu) 内線(7838)
演　　題 Title	**1. Mpox: Lessons learned and new paradigm** **2. Human African trypanosomiasis or sleeping sickness: A deadly disease in the heart of Africa in the process of elimination**
講　師　等 Presenter	**1. Professor Placide Mbala [1),2)]** **2. Professor D. Ngoyi Mumba [1),2)]** 1) Institut National de Recherche Biomedicale (INRB), Democratic Republic of the Congo (DRC) 2) University of Kinshasa, Democratic Republic of the Congo (DRC)
概要 Abstract	別紙参照 Please see attached abstracts
開 催 日 時 Date and Time	令和 7 年 6 月 2 日（月）June/2/2025 16:10-17:40
開 催 方 法 Online/Face to face	グローバルヘルス総合研究棟 1F　大セミナー室(103) Global Health Building 1F Seminar Room L (103)
備　　考 Notes	

☐先端医療科学特論（基礎編）　☐先端医療科学特論（臨床編）
☑先端新興感染症病態制御学特論　☐先端放射線医療科学特論
☐日本語（Japanese）　☑英語（English）
☑対面（Face to face）　☐オンライン(Online)

1. Mpox: Lessons learned and new paradigm

Professor Placide Mbala [1),2)]

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Mpox is a viral zoonotic disease caused by an orthopoxvirus with clinical manifestations similar to smallpox. The first human case was identified in 1970 in the Democratic Republic of Congo (DRC). Could mpox virus emerge from its natural reservoir to become a pathogen fully adapted to humans, filling the ecological niche left vacant by the eradication of smallpox? WHO active surveillance conducted in 1981-1986 concluded that mpox was not an important public health issue as most cases were zoonotic over 70% with less than 30% of secondary transmission, with more children affected (>70%). Mpox maintained the same pattern with sporadic outbreaks until 2022 when it was declared as a PHEIC leading to the global outbreak affecting more than 100,000 people in more than 100 non-endemic countries, with sustained human-to-human transmission, mostly through sexual networks. Mpox remains the only disease declared as a PHEIC twice by WHO in 2022 and 2024, due to drastic increase of cases in several countries with new variants more transmissible and adapted to human transmission, leading to a new epidemiological feature of mpox.

2. Human African trypanosomiasis or sleeping sickness: A deadly disease in the heart of Africa in the process of elimination

Professor D. Ngoyi Mumba [1), 2)]

1) Institut National de Recherche Biomedicale (INRB), Democratic Republic of the Congo (DRC)
2) University of Kinshasa, Democratic Republic of the Congo (DRC)

Human African trypanosomiasis (HAT) is a parasitic disease transmitted to humans by the bite of the tsetse fly. It is found only in Africa, as the vector is limited to that continent. It is caused by a flagellate parasite of the genus *Trypanosoma*. Two species are pathogenic to humans: *Trypanosoma brucei gambiense*, found in West and Central Africa, and *Trypanosoma brucei rhodesiense*, found in East Africa.

In the late 1980s, there were more than 30,000 new cases of HAT per year. The efforts of World Health Organization (WHO) , national control programmes, bilateral cooperation and non governmental organizations during the 1990s and early 2000s reversed the curve. After continued control efforts, HAT occurrence reached a historic low under 2000 cases in 2017 and under 1000 cases in 2018, and the WHO Neglected Tropical Diseases Roadmap targeted for 2020 its elimination as a public health problem, and for 2030 the interruption of transmission (zero case).

Several challenges must be overcome to achieve this goal, including improving diagnostic tools, discovering low-toxicity drugs that are relatively easy to administer, and caring for individuals who are seropositive, i.e. patients who test positive for the disease but in whom the trypanosome cannot be isolated, since these individuals can act as a reservoir for the parasites, perpetuating the cycle of transmission.