No.	K24-3123	
研究課題名	Immunopathology of, and Response to, Protozoan Parasites	
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(Form 2)

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IMSUT International Joint Usage/Research Center Project <International>

Joint Research Report (Annual/Project Completion)

Annual Report

Report (April 1st, 2024 - March 31st, 2025)

Project title: K24-3123-Immunopathology of, and Response to, Protozoan Parasites

Leishmaniasis, a vector-borne disease caused by Leishmania parasites, is undergoing significant epidemiological shifts due to factors like climate change, urbanization, and forced migration, enabling its resurgence in non-endemic regions such as Europe. Widespread resistance to antimony-based treatments emphasizes the urgent need for a better understanding of the mechanisms underlying both pathology and drug resistance. In collaboration with Prof. Coban and Prof. Sanjoba, we contributed to the diagnostic challenges that could be experienced in re-emergence zones such as Turkiye (Turkey) that cutaneous leishmaniasis have changed its clinical features and causative agent (*Ekemen et al., Frontiers in Medicine, 2024).* In this fiscal year, mice experiments are successfully moving forward, and we hope to obtain more results in near future.

Publication(s):

1. *Ekemen S, Nalcaci M, Toz S, Sanjoba C, Demirkesen C, Cetin ED, Tecimer T, Yildiz P, Gursel M, Ince U, Ozbel Y and Coban C.* Diagnostic challenges in cutaneous leishmaniasis due to atypical *Leishmania infantum*: pathologists' insights from re-emergence zones. **Frontiers in Medicine, 2024,** 11:1453211. doi: 10.3389/fmed.2024.1453211

2. Temizoz B, Shibahara T, Hioki K, Hayashi T, Kobiyama K, Lee MSJ, Surucu N, Sag E, Kumanogoh A, Yamamoto M, Gursel M, Ozen S, Kuroda E, Coban C, Ishii KJ. 5,6-dimethylxanthenone-4-acetic acid (DMXAA), a partial STING agonist, competes for human STING activation. ***Front Immunol. 2024*** *Mar 12;15:1353336.doi:10.3389/fimmu.2024.1353336.*