Form 5

Dissertation Evaluation Report

Report No.	Diploma Number: D-BIO 1194	Applicant's Name	Odsuren Sukhbaatar

Evaluators	Print name	Signature or Seal
Chief Evaluator:	Kenji Hirayama	/
Evaluator:	Hiroyuki Moriuchi	/
Evaluator:	Shinjiro Hamano	/

Evaluation Report of Dissertation

1 . Evaluation of the research purpose.

The thesis is designed to clarify the role of the IL-27 mediated immune regulation in the chronic malaria infection model using a mouse malaria pathogen, *Plasmodium chabaudi.* The purpose is clearly described and reasonable.

2 . Evaluation of the research methods.

To evaluate the effects of IL-27 produced during the infection, two different lines of gene knock-out mouse, IL-27ra$^{-/-}$ and IL27p28$^{-/-}$, were used for the analysis. The applicant also used a combination of two different *Plasmodium* species, *P. chabaudi* for priming, and *P. berghei* ANKA for secondary challenge infection, to elucidate the difference between the two phases. The research methods were appropriate, well-designed and soundly performed.

3 . Evaluation of the analysis, interpretation and discussion.

The applicant analyzed the data precisely and appropriately to show the effect of the genes knock-out. The conclusions were that 1) IL-27 directly controlled the primary production of antigen specific CD4^{+} T cells that could recall the immunity at the secondary infection and 2) The main regulatory cytokine IL-10 production by the CD4^{+} T cells at the secondary infection was also affected by the absence of IL-27 signaling. All the data analyses, interpretation and discussion were appropriate.

As stated above, the dissertation will greatly contribute to immunology, and the evaluators uniformly agree that the author should be awarded a Doctor of Philosophy in Medical Science.