Dissertation Evaluation Report

Report No.	Diploma Number: D-BIO 1358	Applicant's Name	Awet Alem Teklemichael

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Evaluation Report of Dissertation

1 . Evaluation of the research purpose.
The purpose of this study was to evaluate and validate Kampo herbal medicine for the treatment of malaria, one of the three major infectious diseases in the world. The purpose is appropriate.

2 . Evaluation of the research methods.
Ninety-six compounds and 120 crude extracts were evaluated using malaria-infected erythrocytes. The concentration that inhibits 50% of the biological activity and the concentration that causes 50% cytotoxicity were determined and calculated selectively index (SI=CC50/IC50) as an indicator of safety. After being selected through the *in vitro* assay, positive extracts and compounds were then examined for in vivo antimalarial activity. These methods are appropriate.

3 . Evaluation of the analysis, interpretation and discussion.
Out of 120 Kampo herbal extracts, Coptis rhizome showed the highest antimalarial activity with a high selectivity index. Three major chlorinated compounds (coptisine, berberine, and palmatine) related to Coptis rhizome showed antimalarial activities. Among them, coptisine chloride exhibited the highest antimalarial activity. Finally, he found that the herbal extract of Coptis rhizome and its major active compound, coptisine chloride, exhibited significant antimalarial activity in malaria-infected mice consistently. The data analysis, interpretation, discussion are appropriate.

As stated above, the dissertation will significantly contribute to Malaria treatments, and the evaluators uniformly agree that the dissertation is worthy of being approved for a Doctor of Philosophy in Medical Science.