

Dissertation Evaluation Report

Report No.	Diploma Number: D-BIO 1445	Applicant's Name	MOE MOE HAN
Evaluators	Print name		
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<p>Evaluation Report of Dissertation</p> <p>1. Evaluation of the research purpose.</p> <p>The purpose of the present study, that is, to elucidate the mechanisms for the involvement of SUMOylation, especially SUMO-related enzymes such as protein inhibitors of activated STAT1 and 4 (PIAS1 and 4) and RING finger protein 4 (RNF4), in homologous recombination following radiation-induced DNA double-strand breaks (DSBs), is reasonable.</p> <p>2. Evaluation of the research methods.</p> <p>The research methods used to accomplish the above purpose include knockdown (KD) of gene expression by siRNA, and quantification of foci formed by the molecules that normally accumulate to the radiation-induced DSB sites with immunostaining in <i>in vitro</i> cell culture system. Thus, these methods are also reasonable.</p> <p>3. Evaluation of the analysis, interpretation and discussion.</p> <p>Using the above-mentioned methods, it was found that focus formation by replication protein A (RPA), RAD51 recombinase (RAD51) and breast cancer susceptibility gene 1 (BRCA1) were all inhibited by the KD of PIAS1/4 or RNF4, which were rescued by the KD of p53-binding protein 1 (53BP1), indicating the counteraction of PIAS1/4 and RNF4 on 53BP1-mediated HR blockade</p> <p>As stated above, the dissertation will greatly contribute to research on DNA damage response, and the evaluators uniformly agree that the dissertation is worthy of being approved for a Doctor of Philosophy in Medical Science.</p>			