

Dissertation Evaluation Report

Report No.	Diploma Number: D-BIO1527	Applicant's Name	Mhd Yousuf Yassouf
Evaluators	Print name		Signature or Seal
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<p>Evaluation Report of Dissertation</p> <p>1 . Evaluation of the research purpose.</p> <p>This research aimed to explore the underlying mechanisms by which elevated pathological levels of hydrostatic pressure (HP) modulates lymphocytes (Ly) activation. This research purpose is worth enough pursuing.</p> <p>2 . Evaluation of the research methods.</p> <p>Ly collected from the mouse spleen were cultured with or without stimulation by lipopolysaccharide or phorbol 12-myristate 13-acetate/ionomycin. Culture under HP (50 mmHg) for 3 hours or atmospheric pressure (control) was performed for these cells. Activation of Ly was evaluated using CD69 expression, and the levels of various interleukins and cytokines were tested using ELISA and RT-qPCR. The localization of NFAT and HIF-1α was detected using fluorescent antibodies and ImageJ software. Expression data of COVID-19 patients were obtained from GEO database, and used for further expression analyses. These methods were properly chosen for the purpose, and performed well.</p> <p>3 . Evaluation of the analysis, interpretation and discussion.</p> <p>This study demonstrated that a biphasic effect of HP on Ly activation; minor activation of resting Ly, and suppression of activated Ly. These effects were transmitted not through Piezo1, but the balance of Nfat and Jun. Expression data among COVID-19 patients supported their findings.</p> <p>As stated above, the dissertation will greatly contribute to the field of immunology, and the evaluators uniformly agree that the dissertation is worthy of being approved for a Doctor of Philosophy in Medical Science.</p>			