

**PRODUCTION OF POLYCLONAL ANTIBODY
AGAINST INDONESIA CHIKUNGUNYA VIRUS ISOLATE
FOR DIAGNOSTICS DEVELOPMENT**

By

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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ABSTRACT

PRODUCTION OF POLYCLONAL ANTIBODY AGAINST INDONESIA CHIKUNGUNYA VIRUS ISOLATE FOR DIAGNOSTICS DEVELOPMENT

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Chikungunya (CHIK) is a viral disease caused by CHIK virus (CHIKV), a member of the genus *Alphavirus* and family *Togaviridae*. The virus is transmitted to humans by *Aedes* species of mosquitos. The disease can cause acute fever, conjunctivitis, arthritis, and arthralgia affecting multiple joints. The current recommended treatments are only by using analgesics, antipyretics, and Nonsteroidal anti-inflammatory drugs (NSAIDs) to relieve symptoms. In addition, the clinical findings of the disease show that CHIKV infection has several resemblances with dengue virus (DENV) infection causing dengue disease. The development of sensitive and specific diagnosis for CHIK is critical in order to distinguish it from other viral diseases that have similar clinical manifestations. The production of polyclonal antibodies (PABs) to CHIKV may offer starting material for new diagnostic kits development. Furthermore, the fabrication of hybridomas and the resulting Monoclonal antibodies (MAbs) offers more specificity, although can consume longer time and more expensive development. This thesis is aimed to produce polyclonal antibodies to Indonesia isolate of CHIKV for the development of new diagnostic kits.

Keywords: Chikungunya virus, polyclonal antibody, diagnostic



DEDICATION

I dedicate this work for the future of science and humanity.

This thesis is also dedicated to my beloved parents
who have been a great source of inspiration and support.



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In the name of **Allah** who is the most magnificent and the merciful, he is the one who is very sensitive about each and every activity of all his men and without whose help, I am unable to accomplish any objective in my life.

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