THESIS

DETECTION OF AVIAN INFLUENZA ANTIBODY (SUBTYPE H5N1) USING HI TEST IN EURASIAN TREE SPARROW (*Passer montanus*) IN PONGGOK SUB-DISTRICT, BLITAR

BY:

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ENDORSEMENT FORM

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Thesis

Submitted in partial fulfillment of the requirement for degree of
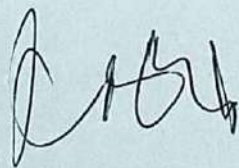
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at

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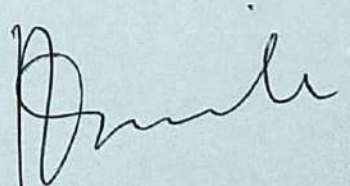
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Approval of

Supervisor Committee,

(Dr. Kusnoto, M,Si., drh)   (Prof. Dr. Rahaju Ernawati, M.Sc., drh)

Co-Supervisor   Supervisor

DECLARATION

Hereby, I declare that in this thesis entitled :

DETECTION OF AVIAN INFLUENZA ANTIBODY (SUBTYPE H5N1) USING HI TEST IN EURASIAN TREE SPARROW (*Passer montanus*) IN PONGGOK SUB-DISTRICT, BLITAR

There is no other work ever published to obtain a college degree in a certain college and according to my knowledge there is also no work or opinion ever written or published by others, except those in writing referred to this paper and mentioned in the reference.

Surabaya, 6 December 2019

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Date : 6 November 2019

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SUMMARY

AMALIA DINAR KURNIASARI. Research entitled "Detection of Avian Influenza Antibody (Subtype H5N1) Using HI Test in Eurasian Tree Sparrow (*Passer montanus*) in Ponggok Sub-District, Blitar" under the guidance of Prof. Dr. Rahaju Ernawati, drh., M.Sc as Supervisor and Dr. Kusnoto, drh., M.Si as Co-Supervisor.

This study aims to detect Avian Influenza (Subtype H5N1) antibodies using the Hemagglutination Inhibition Test on sparrows taken in Ponggok Sub-district, Blitar and to find out whether sparrows in the region have been exposed to the Avian Influenza virus. The study was conducted at the Virology and Immunology Laboratory of the Department of Veterinary Microbiology, Faculty of Veterinary Medicine, Universitas Airlangga.

The sample used was sparrow serum with a total of 30 samples. Serum from non-chicken species such as sparrows contain non-specific hemagglutinin that can affect the interpretation of HI tests. Therefore to eliminate this non-specific agglutinin, a special treatment is carried out using chicken erythrocytes (100%). Treatment is done by mixing chicken erythrocytes (100%) and serum samples in a ratio of 1:20. 2.5 μL of chicken erythrocytes for 50 μL serum were mixed and then incubated at room temperature for 30 minutes, then centrifuged at 3000 rpm for 10 minutes (OIE, 2012).

AI antigens used in this study were obtained from PUSVETMA. Sample testing is done using the HI test, the test results are positive if it shows a titer $> 2^4$. Based on the results of research conducted, from 30 serum sparrow samples

there were no positive results. The absence of AI antibodies in serum sparrow indicates that sparrow is not exposed to the AI subtype H5N1 virus. The absence of antibodies in the sample can also be caused by antibody titers due to previous transmission which has decreased until the antibody titer cannot be detected. It could also because antibodies have not yet formed, high temperatures also cause transmission of AI virus subtype H5N1 through the air is have a small possibility. Then it is necessary to examine and detect antibodies in other birds (chickens, ducks) in the area.

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I would like say thank you to:

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The author realizes there are still many shortcomings and errors so that suggestions and criticism are needed to prepare the further research papers.

Surabaya, 6 December 2019