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SUMMARY

STEFANI ARIESA WARA HAPSARI. Leukocyte Differential Count in Long Tailed Monkey (*Macaca fascicularis*) Experimentally Infected with Poliovirus. This research conducted under the supervision of Prof. C. A. Nidom, drh., MS. as the first supervisor as well as the research project leader and Prof. Dr. Setiawan Koesdarto, drh., M.Sc., as the co-supervisor.

This research intended to know the effect of injected poliovirus against long-tailed monkeys' leukocyte differential count and whether there is any significant difference in the impact between OPV2 vaccine and WHO Reference poliovirus.

This research was conducted at the Biosafety Level 3 (BSL 3) and Biosafety Level 2 (BSL 2) Laboratories of Avian Influenza Research Center (AIRC) as well as in Phatology Clinic Laboratory at Universitas Airlangga.

The materials utilized as a part of this research are particular pathogenic free (SPF) male or female long-tailed monkeys (*Macaca fascicularis*) with age around 2-3 years, Oral Poliovirus Vaccine 2 (OPV 2), WHO Reference poliovirus, ketamine and xylazine for anesthesia. The 28 unisex monkeys will be adjusted for 4 to 5 days in BSL 3 research center before the treatment. They were haphazardly divided into two sorts of treatment, OPV2 vaccine and WHO poliovirus, with 14 replications each. The monkeys will be injected with (OPV2 vaccine and WHO Reference poliovirus) and observed for 21 days. The macaques recieved 0.1 ml of

poliovirus formulation. Their blood was gathered for pre-treatment and post-treatment hematologic information by means of femoral vein.

The data obtained in this research were analyzed by General Linear Model; Repeated Measure method. The software used for data analysis was the Statistical Product and Services Solution 23 (SPSS 23).

Both treatment brought in increasing of leukocyte, lymphocyte but not significantly difference ($p > 0.005$) whereas monocyte and granulocyte count change significantly difference ($p < 0,005$) between pre-treatment and post-treatment datas, but no significant difference revealed between the overall of OPV2 and WHO Reference attenuated poliovirus. The increase of leukocyte differential count is still in normal range.