

**IgY DALAM SERUM UNTUK MENGHAMBAT PERTUMBUHAN
BAKTERI *Aggregatibacter actinomycetemcomitans* DAN *Porphyromonas
gingivalis***

**IgY in Serum to Inhibit the Growth of *Aggregatibacter
actinomycetemcomitans* and *Porphyromonas gingivalis***

ABSTRACT

Background. *Porphyromonas gingivalis* is the main cause of chronic periodontitis. Besides *Porphyromonas gingivalis*, there is also *Aggregatibacter actinomycetemcomitans* as the cause of aggressive periodontitis. IgY is a type of immunoglobulin which is the main antibody of poultries, including: chicken, bird, reptile and lungfish. High concentration of IgY is found in chicken egg yolk. IgY can also be found in chicken blood that has already been given antigen. IgY inserted orally has specific target and is dependent on antigen-antibody interaction to foreign objects. IgY can be used as an alternative prevention the plaque accumulation which can cause periodontitis. IgY can also be used in various fields of medicine such as xenotransplantation, diagnosis and alternative antibiotics in therapy. **Purpose.** To prove IgY potential in serum to inhibit the growth of *Porphyromonas gingivalis* and *Aggregatibacter actinomycetemcomitans*. **Methods.** Samples were divided into 3 groups, each group consists of 7 chickens. Control group was injected with 1 ml PBS, second group was injected with 1 ml *Porphyromonas gingivalis* bacteria and third group was injected with 1 ml *Aggregatibacter actinomycetemcomitans* bacteria. The diameter of zone of inhibition formed around paper disc was calculated with calipers. **Results.** The study results showed that IgY in serum could inhibit the growth of *Porphyromonas gingivalis* and *Aggregatibacter actinomycetemcomitans* significantly. **Conclusion.** IgY in serum can inhibit the growth of *Porphyromonas gingivalis* and *Aggregatibacter actinomycetemcomitans* bacteria.

Keywords: IgY, Serum, *Porphyromonas gingivalis*, *Aggregatibacter actinomycetemcomitans*
