ABSTRAK

Penelitian ini bertujuan untuk mengetahui efek pemberian gel lidah buaya (*Aloe Vera*) terhadap kadar *Alkaline Phosphatase* (ALP) cairan sulkus gingiva (CSG) pada tikus *Sprague Dawley* yang mengalami periodontitis. Sampel dari penelitian ini yaitu sebanyak 36 tikus *Sprague Dawley* yang dibagi menjadi 2 kelompok yaitu kelompok kontrol positif I, kelompok perlakuan II.

Tikus *Sprague Dawley* sebelum diinfiltrasi bakteri *Porphyromonas gingivalis* sebanyak 0,02 ml dilakukan *pre test* pengambilan dan pengukuran kadar *Alkaline Phosphatase* pada sampel cairan sulkus gingiva (CSG) kemudian didiamkan selama 7 hari. Setelah itu pada hari ke 8 sebelum diberi aplikasi gel pada kontrol positif dan kelompok kontrol, dilakukan *pre test* pengambilan dan pengukuran kadar *Alkaline Phosphatase* pada sampel cairan sulkus gingiva (CSG) kemudian diberikan aplikasi Ti-es *Metronidazole* gel plus 25% pada kontrol positif dan aplikasi gel *Aloe Vera* 99.03%. Pada hari 1, 2 dan 3 setelah aplikasi gel dilakukan *post test* pengambilan sampel cairan sulkus gingiva (CSG) menggunakan kertas saring kedalam sulkus gingiva kemudian dilakukan pengukuran cairan sulkus gingiva (CSG) menggunakan spektrofotometer UV/Vis 405nm. Hasil dari pengukuran kadar *Alkaline Phosphatase* dibandingkan dengan *pre test* dan *post test*.

Hasil penelitian menunjukkan bahwa terdapat efek yang signifikan dari pemberian gel *Aloe Vera* 99.03% terhadap penurunan kadar *Alkaline Phosphatase* pada tikus *Sprague Dawley* yang mengalami periodontitis, dan gel *Aloe Vera* 99.03% tidak memiliki perbedaan dengan Ti-es *Metronidazole* gel plus 25% dalam menurunkan kadar *Alkaline Phosphatase*.

Kata Kunci: *Periodontitis, Alkaline Phopshatase, Porphyromonas Gingivalis*, gel *Aloe Vera*

ABSTRACT

This study aims to determine the effect of giving *Aloe Vera* gel to levels of *Alkaline Phosphatase* (ALP) gingival sulcus (CSG) fluid in *Sprague Dawley* rats that have periodontitis. Samples from this study were 36 *Sprague Dawley* rats which were divided into 2 groups: positive control group I, treatment group II.

Sprague Dawley rats before infiltration of 0.02 ml *Porphyromonas gingivalis* bacteria were carried out pre-test taking and measuring ALP levels in CSG liquid samples and then allowed to stand for 7 days. After that, on the 8th day before being given a gel application in the positive control and control group, pre test taking and measurement of ALP levels in the CSG liquid sample was then given the application of Ti-es *Metronidazole* gel plus 25% in positive control and application *Aloe Vera* gel 99.03%. On days 1, 2 and 3 after the gel application was carried out post-test to take CSG sample using filter paper into the gingival sulcus and CSG was measured by using a 405nm UV / Vis *Spectrophotometer*. The results of the measurement of ALP levels were compared with *pre-test* and *post-test*.

The results showed that there was a significant effect of 99.03% *Aloe Vera* gel on reducing levels of ALP in *Sprague Dawley* rats with periodontitis, and *Aloe Vera* gel 99.03% had no difference with Ti-es *Metronidazole* gel plus 25% in reducing levels of ALP.

Keywords: Periodontitis, *Alkaline Phopshatase, Porphyromonas Gingivalis*, *Aloe Vera* gel