

INTISARI

Penyakit periodontal adalah penyakit rongga mulut yang paling banyak diderita oleh masyarakat di seluruh dunia. Salah satu bakteri yang menyebabkan terjadinya penyakit periodontal adalah *Fusobacterium nucleatum*. Daun kari (*Murraya koenigii*) adalah tanaman yang sering ditemukan di Indonesia. Beberapa kandungan antibakteri yang terdapat dalam daun kari antara lain flavonoid, tanin, alkaloid dan saponin. Penelitian ini bertujuan untuk mengetahui pengaruh berbagai ekstrak daun kari terhadap pertumbuhan *Fusobacterium nucleatum* secara *in vitro*.

Ekstrak daun kari dibuat pada konsentrasi 12,5%; 25%, dan 50%. Suspensi bakteri ditetapkan mengandung 1×10^8 CFU/ml bakteri dengan standar McFarland 0,5. Media MHA sebanyak 6 buah cawan petri diberi suspensi bakteri *Fusobacterium nucleatum* dan dibuat 4 sumuran dengan diameter 6 mm. Jumlah sampel dalam penelitian ini adalah 24 sampel. Masing-masing sumuran ditetesi dengan 50 μ l akuades steril dan ekstrak daun kari konsentrasi 12,5%, 25% dan 50%. Media MHA diinkubasi selama 24 jam pada suhu 37°C. Pengukuran dilakukan sebanyak 3 kali pada setiap sumuran. Data dianalisis menggunakan *One-way ANOVA* dengan taraf signifikansi 95%.

Hasil analisis *One-way ANOVA* menunjukkan bahwa ekstrak daun kari berpengaruh terhadap pertumbuhan bakteri *Fusobacterium nucleatum*. Hasil analisis *Post-hoc Scheffe* menunjukkan perbedaan yang bermakna pada pertumbuhan bakteri *Fusobacterium nucleatum* antara ketiga konsentrasi ekstrak daun kari. Kesimpulan penelitian ini menunjukkan ekstrak daun kari konsentrasi 12,5%, 25% dan 50% berpengaruh dalam menghambat pertumbuhan bakteri *Fusobacterium nucleatum* dan semakin tinggi konsentrasi ekstrak daun kari, semakin tinggi kadar hambat pertumbuhan bakteri.

Katakunci: Penyakit periodontal, ekstrakdaunkari, zonahambat, *Fusobacterium nucleatum*

ABSTRACT

Periodontal disease is the most common oral disease worldwide. *Fusobacterium nucleatum* is one of the numerous factors contributing in the development of this disease. Curry leaves (*Murraya koenigii*) is a plant commonly found in Indonesia containing flavonoids, tannine, alkaloid and saponin which has antibacterial properties. The aim of this study was to find out the effect of different concentration of curry leaves extract towards the growth of *Fusobacterium nucleatum* *in vitro*.

Curry leaves extract was made into three concentrations of 12,5%, 25% and 50%. Bacterial suspension was set containing 1×10^8 CFU/ml with a 0.5 McFarland standard. MHA media in six petri dishes were smeared with *Fusobacterium nucleatum* suspension and four 6 mm well were made in each petri dish. The total numbers of samples used were 24 samples. 50 μ l of curry leaves extract of each concentration and sterilized aqua dest were dripped into each well made. The petri dishes were incubated for 24 hours at 37°C. Sliding caliper with 0,02 mm accuracy was used to measure the diameter of the inhibition zone formed. The measurement was made three times at each well. One-way ANOVA statistic test with significance level of 95% was used to analyzed the data obtained.

The result of one-way ANOVA statistic test showed that curry leaves extract significantly influence the growth of *Fusobacterium nucleatum*. Post-hoc Scheffe test showed a significant difference between the growth of *Fusobacterium nucleatum* in each concentration of curry leaves extract. The conclusion of this study were that the curry leaves extract with concentration of 12,5%, 25% and 50% affect the growth of *Fusobacterium nucleatum* and the higher the concentration of curry leaves extract, the higher the rate of bacteria inhibition.

Keywords: periodontal disease, curry leaves extract, inhibition zone, *Fusobacterium nucleatum*