

INTISARI

Latar belakang:

Tagitinin C terbukti mampu menghambat timbunan kolagen fibroblas keloid secara *in vitro*. Mekanisme penghambatan timbunan kolagen terkait peran dari *Growth Factor* dan Sitokin belum banyak diketahui. Sehingga pengujian efek isolat Tagitinin C terhadap penghambatan VEGF yang termasuk *growth factor* dan TNF- α sebagai sitokin perlu dilakukan untuk mengetahui jalur penghambatan yang dapat dilakukan oleh Tagitinin C sebagai antifibrosis.

Tujuan:

Penelitian ini bertujuan untuk mengetahui efek pemberian isolat tagitinin C terhadap ekspresi VEGF dan TNF- α pada kultur fibroblas keloid.

Metode:

Penelitian *in vitro* terdiri atas kelompok kontrol dan kelompok perlakuan menggunakan sampel fibroblas keloid hasil kultur dari sampel kulit keloid pasien dan dibiakkan menggunakan teknik explant menggunakan sumuran (*wells plate*) sebagai media perlakuan sampel. Pemeriksaan ekspresi VEGF dan TNF- α mengacu terhadap protokol produsen kit pengukuran Human VEGF dan TNF- α Elisa kit.

Hasil:

Ekspresi VEGF pada kelompok isolat tagitinin C [*T. diversifolia*] lebih rendah jika dibandingkan dengan kelompok kontrol fibroblas keloid ($p < 0,05$) dan secara optimal pada konsentrasi 1 $\mu\text{g/ml}$. Ekspresi TNF- α pada kelompok isolat tagitinin C tidak berbeda bermakna jika dibandingkan kelompok kontrol fibroblas keloid ($p > 0,05$).

Kesimpulan:

Isolat Tagitinin C mampu menurunkan ekspresi VEGF pada kultur fibroblas keloid, dan hasil yang tidak berbeda bermakna ditunjukkan pada pengujian ekspresi TNF- α kultur fibroblas keloid.

Kata kunci:

Kultur fibroblas keloid, proliferasi sel, Tagitinin C, *Tithonia diversifolia* (Hemsley) A. Gray, VEGF, TNF- α .

ABSTRACT

Background:

Tagitinin C proved able to inhibit the collagen deposit of keloid fibroblasts in vitro. The mechanism of inhibition of collagen deposits associated with the role of Growth Factor and Cytokine is not widely known. Study of Tagitinin C isolate effect on VEGF inhibition which includes growth factor and TNF- α as cytokine is necessary to know the inhibitory pathway which can be done by Tagitinin C as antifibrosis.

Aim:

This study aims to determine the effect of Tagitinin C on VEGF and TNF- α expression in cultures of keloid fibroblasts.

Method:

In vitro research consisted of control group and treatment group using keloid fibroblast culture samples from cultured keloid samples of patients and cultured using explant technique with wells plate as sample treatment medium. VEGF and TNF- α expression tests refer to the manufacturer protocol kit Human VEGF and TNF- α Elisa kit measurements.

Results:

VEGF expression in isolate tagitinin C [*T. Diversifolia*] was lower when compared with the keloid fibroblast control group ($p < 0.05$) and optimally at 1 μg / ml concentration. TNF- α expression in isolate tagitinin C group did not differ significantly when compared with control group of keloid fibroblast ($p > 0,05$).

Conclusion:

Isolate Tagitinin C was able to decrease VEGF expression in cultures of keloid fibroblasts, and results not significantly different were shown in the expression test of TNF- α culture of keloid fibroblasts.

Keywords:

Keloid Fibroblast Culture, cell proliferation, Tagitinin C, *Tithonia diversifolia* (Hemsley) A. Gray, VEGF, TNF- α