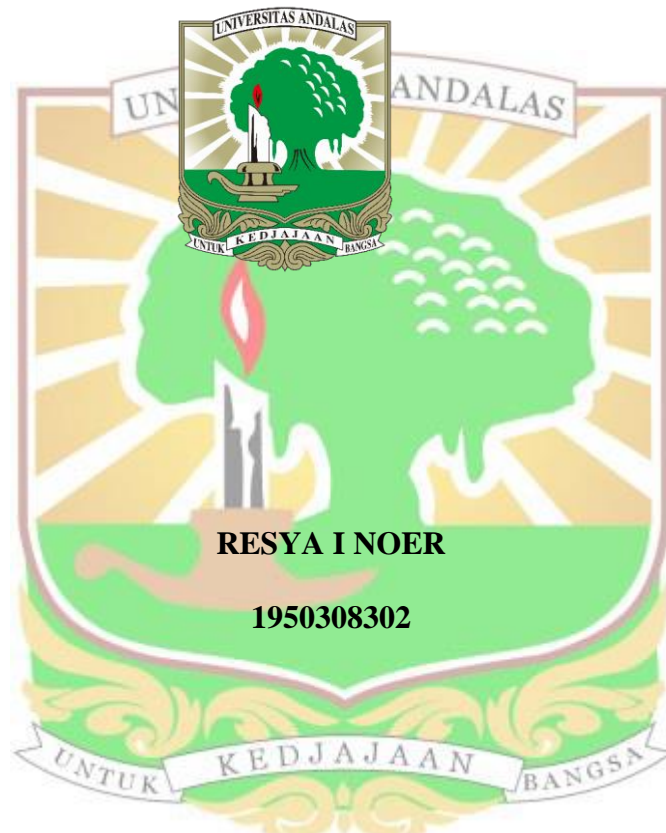


**PENGARUH ALFA MANGOSTIN TERHADAP EKSPRESI
TRANSFORMING GROWTH FACTOR BETA-1
SEL FIBROBLAS KELOID**

TESIS



PEMBIMBING I : Dr. dr. Qaira Anum, SpKK(K), FINS DV, FAADV
PEMBIMBING II : dr. Ennesta Asri, SpKK(K), FINS DV

**PROGRAM PENDIDIKAN DOKTER SPESIALIS
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**PENGARUH ALFA MANGOSTIN TERHADAP EKSPRESI
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SEL FIBROBLAS KELOID**

Resya I Noer
Program Studi Dermatologi dan Venereologi
Fakultas Kedokteran Universitas Andalas/RSUP Dr. M. Djamil Padang
Email : resyainoer@gmail.com

Abstrak

Latar belakang

Keloid merupakan pertumbuhan jaringan fibrosaproliferatif yang disebabkan oleh adanya respon abnormal dari proses penyembuhan luka. Alfa mangostin diketahui memiliki sifat anti fibrotik dan anti proliferasi sehingga dapat dipertimbangkan menjadi salah satu penggunaan bahan alam pada penatalaksanaan keloid.

Tujuan

Penelitian ini bertujuan untuk mengetahui pengaruh alfa mangostin terhadap ekspresi *transforming growth factor beta-1* (TGF- β 1) sel fibroblas keloid.

Subjek dan metode

Penelitian ini merupakan penelitian eksperimental dengan dengan pendekatan *post test only control group design*. Penelitian ini menggunakan sampel berupa kultur sel fibroblas keloid yang dibagi menjadi lima kelompok dan masing-masing diberi alfa mangostin dengan konsentrasi berbeda yaitu konsentrasi 0 μ M (kontrol), 5 μ M, 10 μ M, 20 μ M, 40 μ M dan 80 μ M. Inkubasi dilakukan selama 24 jam, kemudian ekspresi TGF- β 1 akan dinilai menggunakan *qPCR machine*. Analisis statistik dilakukan dengan uji ANOVA. hasil analisis dianggap bermakna jika $p < 0,05$

Hasil

Rerata ekspresi TGF- β 1 sel fibroblas keloid pada kelompok perlakuan 5 μ M, 10 μ M, 20 μ M, 40 μ M dan 80 μ M. Peningkatan konsentrasi alfa mangostin cenderung menghasilkan kecenderungan peningkatan ekspresi TGF- β 1 sel fibroblas keloid. Berdasarkan uji ANOVA, tidak ditemukan pengaruh alfa mangostin terhadap ekspresi TGF- β 1 sel fibroblas keloid ($p=1,000$)

Kesimpulan

Terjadi peningkatan ekspresi TGF- β 1 setelah pemberian alfa mangostin. Penelitian lebih lanjut masih dibutuhkan untuk meneliti pengaruh alfa mangostin pada patogenesis keloid.

Kata kunci: alfa mangostin, ekspresi, keloid, TGF- β 1

EFFECT OF ALPHA MANGOSTIN ON THE EXPRESSION OF TRANSFORMING GROWTH FACTOR BETA-1 OF KELOID FIBROBLAST CELL

Resya I Noer
Dermatology and Venereology Department
Medical Faculty of Andalas University/ Dr. M. Djamil Hospital
Padang Email: resyainoer@gmail.com

Abstract

Background

Keloids are a fibroproliferative lesion due to the result of aberrant wound healing process. Alpha mangostin has been known due to its anti-fibrotic and anti-proliferative properties so that it can be considered as one of the therapeutic application of natural ingredients in the management of keloids.

Aim

This study aims to determine the effect of alpha mangostin on the expression of *transforming growth factor beta-1* (TGF- β 1) of keloid fibroblast cell

Subjects and methods. This study is an experimental study with a post test only control group design. Sample used in this study is keloid fibroblast cell culture divided into five groups and each was given alpha mangostin with different concentrations, which were concentrations of 0 μ M (control), 5 μ M, 10 μ M, 20 μ M, 40 μ M dan 80 μ M. Incubation was carried out for 24 hours, then the expression of TGF- β 1 were assessed by qPCR machine. Statistical analysis was done with ANOVA test. Statistically significant difference was set at $P < 0.05$.

Result

The mean of the expression of TGF- β 1 of in various concentration of alpha mangostin 5 μ M, 10 μ M, 20 μ M, 40 μ M dan 80 μ M were higher than the control group. Increasing the dose of alpha mangostin resulted in a tendency to increase of the expression of TGF- β . Based on ANOVA test, there was no statistically significant effect of alpha mangostin on the expression of TGF- β 1 ($p=1,000$).

Conclusion

There was an increase of expression of TGF- β 1 of keloid fibroblast cell after treated with alpha mangostin. Further studies are still needed to know the effect of alpha mangostin on pathogenesis of keloid.

Key words: *alpha mangostin, expression, keloid, TGF- β 1*