

## Perbandingan berbagai konsentrasi media kultur Lysate-PRF terhadap ekspresi TGF $\beta$ 1 pada proses diferensiasi hDPSCs. = Comparison of various Lysate-PRF culture concentration on TGF $\beta$ 1 expression in the differentiation process of hDPSCs.

Muhammad Zaal Haq, author

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### Abstrak

#### <b>ABSTRAK</b><br>

Latar Belakang: Transforming growth factor-1 (TGF-1) adalah sitokin multifungsi yang mempunyai peran penting dalam menginisiasi diferensiasi hDPSCs menjadi sel seperti odontoblas. Proses tersebut memerlukan media kultur seperti Lysate-PRF untuk meningkatkan jumlah growth factor yang diperlukan agar proses diferensiasi tersebut bisa terjadi.

Tujuan: Membandingkan berbagai konsentrasi media kultur lysate PRF terhadap ekspresi TGF 1 pada proses diferensiasi hDPSCs.

Metode: Evaluasi ekspresi TGF 1 lysate PRF 1%, 5%, 10%, dan 25% serta FBS 10% (kontrol) pada diferensiasi hDPSCs menggunakan ELISA pada hari ke-7.

Hasil: Terdapat perbedaan bermakna antar kelompok uji yaitu lysate PRF 1%, 5%, 10%, 25% dan kelompok kontrol (FBS 10%).

Kesimpulan: Lysate PRF konsentrasi 25% memiliki ekspresi TGF 1 yang lebih tinggi dibandingkan dengan kelompok konsentrasi lainnya maupun kelompok kontrol FBS 10% pada proses diferensiasi hDPSCs hari ke-7.

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#### <b>ABSTRACT</b><br>

Background: Transforming growth factor-1 (TGF-1) is a multifunctional cytokine that has an important role in initiating differentiation of hDPSCs into cells such as the odontoblasts. The process requires culture media such as Lysate-PRF to increase the number of growth factors needed so that the differentiation process can occur.

Purpose: Comparing the various concentrations of PRF lysate culture media to TGF 1 expression in the differentiation process of hDPSCs. Methods: Evaluation of TGF 1 lysate PRF expression 1%, 5%, 10%, 25% and FBS 10% (control) on differentiation of hDPSCs using ELISA on day 7.

Result: There were significant differences between PRF lysate 1%, 5%, 10% and 25% and the control group (FBS 10%).

Conclusion: 25% PRF lysate has the highest TGF 1 expression compared to other concentration groups and 10% FBS control group in 7th day hDPSCs differentiation.