

Candrani Khoirinaya (30622301)

Pertanyaan no. 1 :

1. Tuliskan topik penelitian Anda.
2. Tuliskan jurnal utama tempat artikel ilmiah Anda akan disubmit (cantumkan URL-nya).
3. Tuliskan kuartil jurnal utama tersebut (cantumkan URL halaman SJR-nya).
4. Buatlah mind map penelitian Anda yang akan disubmit ke jurnal tersebut.

Jawaban:

1. Bidang : Rekayasa Jaringan (Tissue Engineering) dan Stem Sel dengan topik yang dikaji, yaitu Pemanfaatan biomaterial yang memiliki struktur nano untuk mendiferensiasi sel punca mesenkimal menjadi sel rawan (kondrosit).
2. Jurnal yang akan dituju: Scientific Report (URL: <https://www.nature.com/srep/>)
3. Kuartil Jurnal Scientific Report: Q1 (URL: <https://www.scimagojr.com/journalsearch.php?q=21100200805&tip=sid&clean=0>)
4. Mind map dibuat dengan Software: Xmind

Judul: Spidroin-based Nanopatterns Directs Chondrogenesis in Human Wharton's Jelly-Derived Mesenchymal Stem Cells (hWJ-MSCs)

Struktur Artikel :

I. Introduction

- a. Why Chondrocyte and Chondrogenesis?
- b. What is Nanopattern?
- c. Role of nanopattern (nanotopography) surfaces in chondrogenesis
- d. Role of spidroin in chondrogenesis and why it is important
- e. Research Gap: Previous study, what makes the research important and the novelty of the research
- f. Aim of the paper

II. Material and Methods

- a. Fabrication of PDMS Nanogrooves surfaces
- b. Surface Characterization
- c. Cell Culture

- d. Cell Morphology, Attachment, Viability and Proliferation
- e. Glycosaminoglycan (GAG) Activity Assay
- f. Quantitative Polymerase Chain Reaction (qPCR)
- g. Cell Immunohistochemical Staining Analysis for Chondrogenesis Differentiation
- h. Statistical Analysis

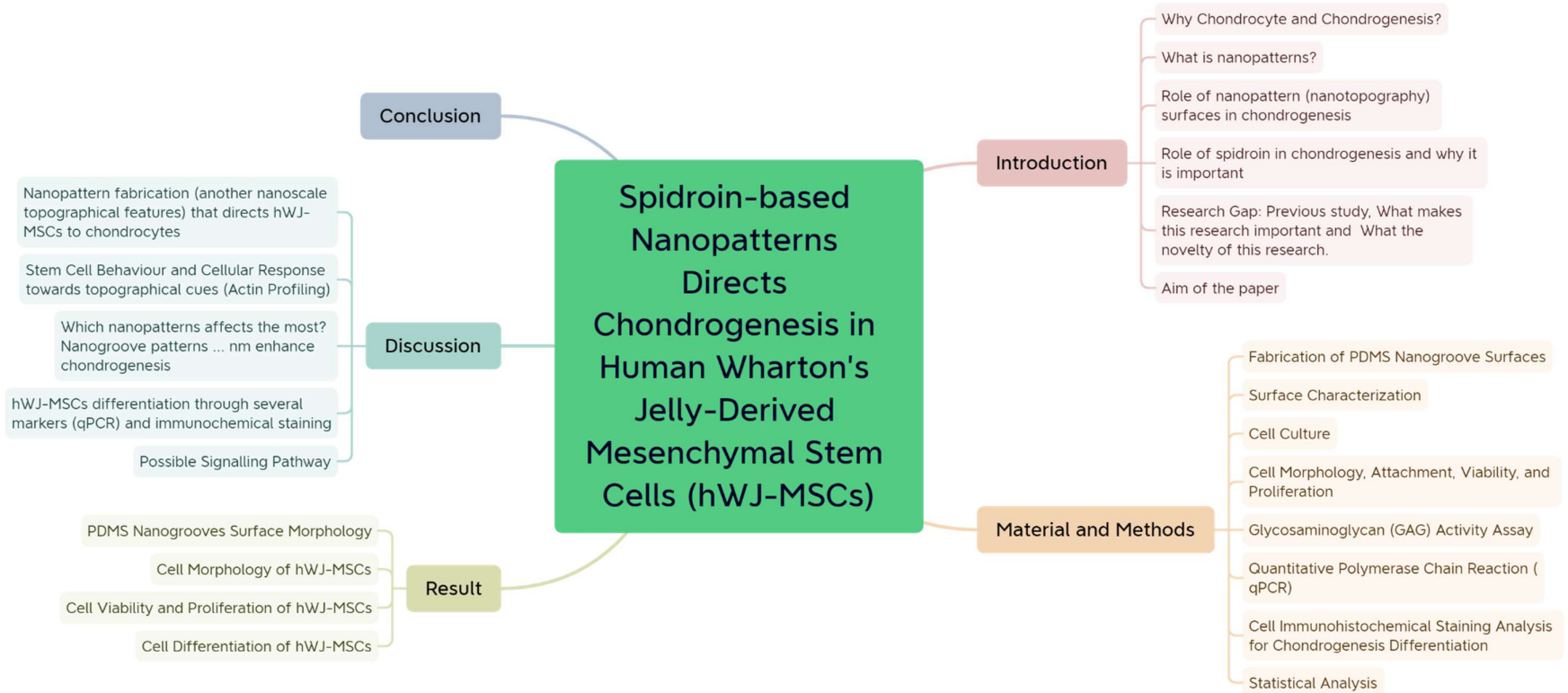
III. Result

- a. PDMS Nanogrooves Surface Morphology
- b. Cell Morphology of hWJ-MSCs
- c. Cell Viability and Proliferation of hWJ-MSCs
- d. Cell Differentiation of hWJ-MSCs

IV. Discussion

- a. Nanopattern fabrication (another nanoscale topographical features) that directs hWJ-MSCs to chondrocytes
- b. Stem Cell behaviour and cellular response towards topographical cues (actin profiling)
- c. Which nanopatterns affects the most? Nanogrooves patterns ... nm enhance chondrogenesis
- d. hWJ-MSC differentiation through several markers (qPCR and immunochemical staining)
- e. Possible Signalling Pathway

V. Conclusion



Presented with xmind

Gambar 1. Mind Map Draft Artikel.