

附件一、技術推廣表



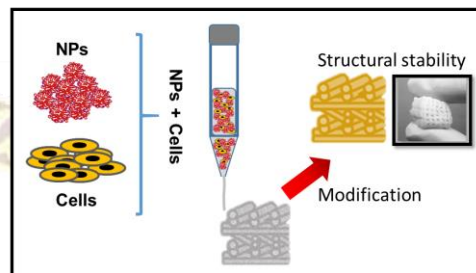
用於細胞三維列印之生物墨水組及其應用

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單位：國立臺灣大學 高分子 學系/研究所

簡歷：<http://www.pse.ntu.edu.tw/members/bio.php?PID=8>

市場及需求：醫療器材、組織工程



技術摘要：

本發明係關於一種三維生物列印的墨水材料及方法，特別係關於一種生物墨水組、一種利用該生物墨水組進行三維列印以製備可承載細胞之建構物的方法、及一種墨水組成物用於細胞三維列印之用途。

優勢：

- (1) 具有高生物相容性及特定流變性質，適合用於進行高解析度、高圖樣擬真度、及長時間的三維生物列印。
- (2) 具有高分子與離子間的交互作用的方式有效增強列印成品的機械性質與結構穩定性。

競爭產品：CELLINK®

專利簡述：

- (1) 本技術已有相關專利（中華民國專利申請號：TW 107102761；美國專利申請號：US 16/055,676）。

聯絡方式：臺大產學合作總中心

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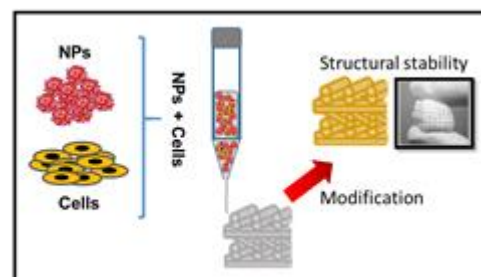
Bioink set and applications thereof for three-dimensional printing of cells

PI : Prof. Shan-hui Hsu

Institute of Polymer Science and Engineering,
National Taiwan University.

Experience:

<http://www.pse.ntu.edu.tw/members/bio.php?PID=8>



Market Needs: Medical device/ Tissue engineering

Our Technology: Provided is a bioink set for printing cell-loadable constructs, including a bioink which contains biodegradable polyurethane and biological macromolecules, and a solution of divalent metal ions. Also provided are methods of preparing a cell-loadable construct by three-dimensional printing with the bioink set, and use of an ink composition for three-dimensional printing of cells.

Strength:

- (1) High biocompatibility and specific rheological properties and thus is suitable for high-resolution, high-fidelity, and long-term 3D bioprinting.
- (2) The printing method of the present invention effectively enhances the mechanical properties and structural stability of printed products and ions without impairing cell viability.

Competing Products: CELLINK®

Intellectual Properties:

- (1) R.O.C. Patent Application No: TW 107102761; U.S. Patent Application No.: US 16/055,676.

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