



MatrixCell Bio

BIOWORK PEN

Biowork Pen is a wireless-controlled hand-held bioprinter with a simultaneous process of both biomixing and printing hydrogel with cells, drugs, & bioparticles.

Biowork Pen® is a trademark of MatrixCell Bio's bioprinting pen.



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🌐 www.matrixcellbio.com

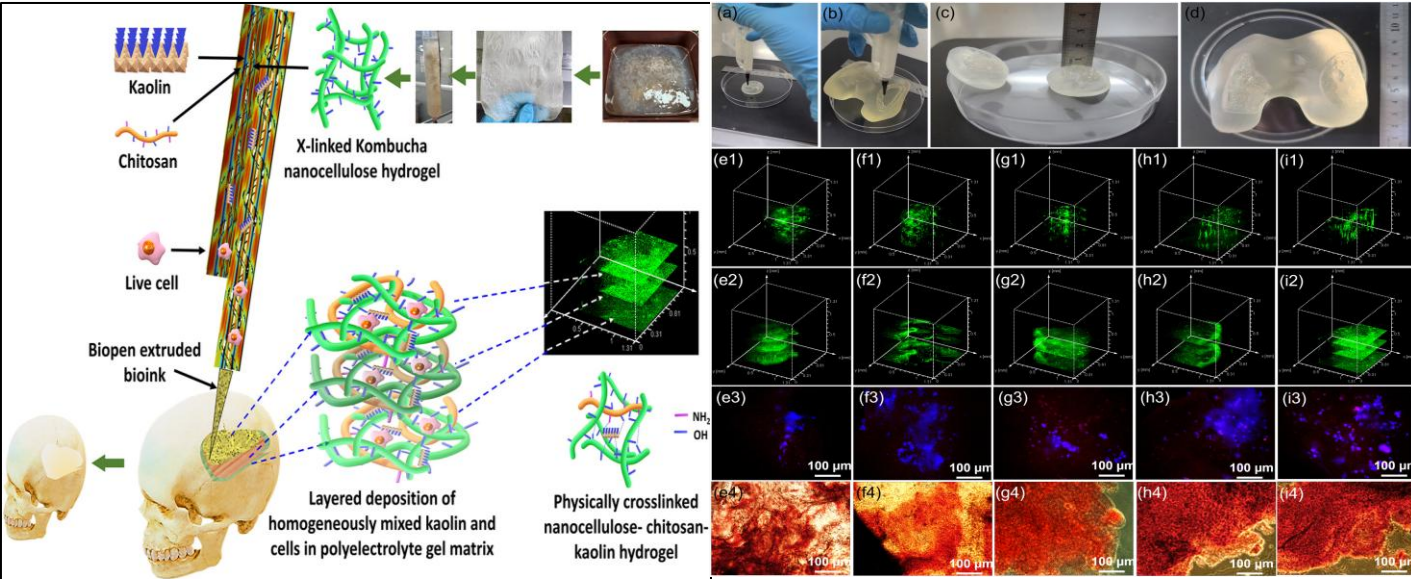
Seoul National Univ. of Sci. & Tech.,

📍 The 2nd startup incubation center 131, Gongneung-ro 232, Nowon-gu,
Seoul 01811, Republic of Korea.

「This product has successfully passed all KTR's electromechanical safety and electromagnetic compatibility tests, and its safety has been certified by an authorized institution. 」

EXPERIMENTAL RESULTS AND APPLICATION

Direct 3D bioprinting & *in vitro* tissue regeneration



- **Biomixing & 3D bioprinting:** Homogeneous biomixing & layer-by-layer printing of kaolin particles & live cells in cellulose-chitosan gel.
- **Cell culture of biopen printed gels:** Uniform *in vitro* growth & proliferation of cells in 3D bioprinted gel structure (7d).

Bio & biomedical Applications

- *In vivo* tissue engineering by direct bioprinting in defects.
 - Direct tissue engineering of complex defects (osteo-chondral, cartilage defects).
 - Bioprinting on large skin surface with a roller.
 - Cell/drug delivery.
 - Integration to traditional bioprinter.
 - Bio and biomedical research/industries.
- (homogeneous bioink mixing and printing)
- Can be used for veterinary care.



Total weight (g) without syringe	Height
109 g	157 mm