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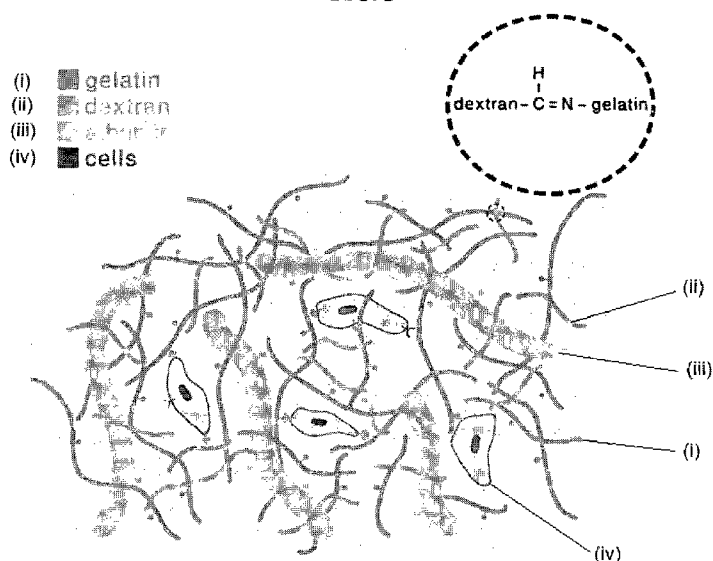
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(54) Title: FIBER-REINFORCED HYDROGEL COMPOSITES AND METHODS OF FORMING FIBER-REINFORCED HYDROGEL COMPOSITES

FIG. 1

(57) Abstract: A fiber-reinforced hydrogel composite is provided. The composite includes a hydrogel and a fibrous component containing a plurality of fibers. Length of each of the plurality of fibers is less than about 1,000 μm . A method of preparing a fiber-reinforced hydrogel composite is also provided. The method includes coating a hydrogel precursor solution on a substrate to form a hydrogel precursor film, depositing the plurality of fibers onto the hydrogel precursor film, and allowing the hydrogel precursor film to form a hydrogel film, thereby forming the fiber-reinforced hydrogel composite. A scaffold containing the fiber-reinforced composite, and a tissue repair method using the fiber-reinforced composite are also provided.



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