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(54) Title: A NEW SUPRAMOLECULAR HYDROGEL BASED ON PHOTOPOLYMER AND PEPTIDE AMPHIPHILE

(57) Abstract: In this invention, biomaterial having hydrogel structure obtained by the supramolecular (electrostatic) interaction of gelatin methacrylate (GelMA), which is an (-) electrically charged and photo-sensitive (UV-sensitive) photo-(bio)polymer obtained by the methacrylic acid (MA) modification of gelatin biopolymer, which is a biodegradable and low-cost polymer; and bio- active (containing the relevant amino acid sequence -YIGSR- for the differentiation of stem cells into neural cells), peptide amphiphile (PA) molecules having nano-fibrillary structure, containing an (+) electrically charged hydrophobic tail (palmitic acid) obtained by solid phase peptide synthesis method, is described.



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