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(71) Applicant (for all designated States except US): **GEORGIA TECH RESEARCH CORPORATION** [US/US]; 505 Tenth Street, NW, Atlanta, GA 30332-0415 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MURTHY, Niren** [US/US]; 885 West Peachtree Street, Apt. 1628, Atlanta, GA 30308 (US). **HERMANN, Christopher** [US/US]; 1075 Peachtree Walk, Unit A319, Atlanta, GA 30309 (US). **WILSON, David Scott** [US/US]; 499 8th Street, NE, Apt. A3, Atlanta, GA 30308 (US). **NING, Xinghai** [CN/US]; 505 Tenth Street, NW, Atlanta, GA 30332-0415 (US). **BOYAN, Barbara D.** [US/US]; 898 Byrnwyck Road, NE, Atlanta, GA 30319 (US). **SCHWARTZ, Zvi** [IL/US]; 898 Byrnwyck Road, NE, Atlanta, GA 30319 (US). **GULDBERG, Robert** [US/US]; 1204 Promontory Path, Marietta, GA 30062 (US). **DIAB, Tamim** [SY/US]; 2216 Brookhaven View, NE, Atlanta, GA 30319 (US).

(74) Agents: **KLECKLEY, Troy S.** et al.; Troutman Sanders LLP, Bank of America Plaza, 600 Peachtree Street, NE, Suite 5200, Atlanta, GA 30308-2216 (US).

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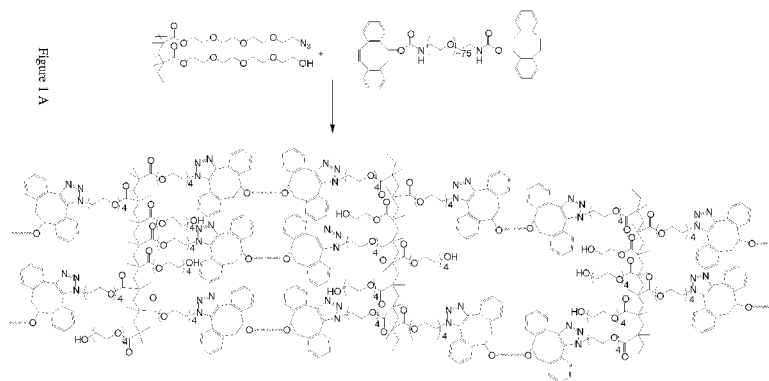
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(54) Title: POLYMER HYDROGELS FOR IN VIVO APPLICATIONS AND METHODS FOR USING AND PREPARING SAME



(57) Abstract: Compositions and methods are described for a polymer hydrogel created by a cycloaddition reaction between an azide and an alkyne that proceeds rapidly without catalyst to produce the polymer hydrogel in less than ninety seconds. The polymer hydrogel can be used in in vivo applications for the localized delivery of therapeutic agent in aqueous solutions. An example of therapeutic delivery of a protein in a mouse model is demonstrated.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - A61K 9/14 (2012.01) USPC - 424/487 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) USPC: 424/487 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Electronic Database Searched: PUBWEST (PGPB,USPT,USOC,EPAB,JPAB), Google. Search Terms Used polymer hydrogel composition, ariazole, bonded, polyacrylate backbone, hydrogel, glycol unit, crosslink\$, therapeutic, azide		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	Slaughter et al. "Hydrogels in Regenerative Medicine", Adv. Mater. 2009, 21, 3307-3329	1-42
Y	Charles et al., 'Charles et al. "Reduction of Non-Specific Protein Adsorption Using Poly(ethylene) Glycol (PEG) Modified Polyacrylate Hydrogels In Immunoassays for Staphylococcal Enterotoxin B Detection", Sensors 2009, 9, 645-655	1-42
A	Gibas et al. "REVIEW: SYNTHETIC POLYMER HYDROGELS FOR BIOMEDICAL APPLICATIONS", CHEMISTRY & CHEMICAL TECHNOLOGY, Vol. 4, No. 4, 2010 http://lp.edu.ua/fileadmin/ICCT/Journal/Vol.4/Num.4/07.pdf	1-42
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/>		
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Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201		Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774