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(54) Title: VITAMIN FUNCTIONALIZED GEL-FORMING BLOCK COPOLYMERS FOR BIOMEDICAL APPLICATIONS

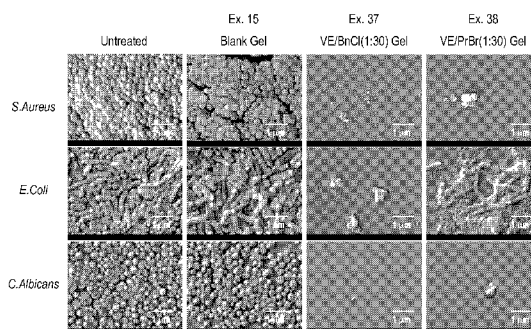


FIG. 30

(57) Abstract: Gel-forming block copolymers were prepared comprising i) a central hydrophilic block consisting essentially of a divalent poly(ethylene oxide) chain and ii) two peripheral monocarbonate or polycarbonate hydrophobic blocks. The hydrophobic blocks comprise one or more vitamin-bearing subunits. The vitamin-bearing subunits comprise a carbonate backbone portion and a side chain comprising a covalently bound form of a vitamin. The gel-forming block copolymers can be used to prepare various bio-degradable and/or biocompatible hydrogel and organogel drug compositions, in particular antimicrobial and/or anti-tumor drug compositions. The hydrogel compositions can be suitable for depot injections. Synergistic enhancement of toxicity to microbes was observed with compositions comprising an antimicrobial cationic polymer and an antimicrobial compound.



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