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# United States Patent [19]

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Viegas et al.

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[54] **MEDICAL USES OF IN SITU FORMED GELS**

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[\*] Notice: **The portion of the term of this patent subsequent to Dec. 10, 2008 has been disclaimed.**

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[58] Field of Search ..... **424/78, 427, 430, 436, 424/486, 488, 497, 78.02, 78.17, 78.18, 78.26, 78.27, 78.37, 1.1; 514/772.7, 779, 944, 966, 967, 912, 913, 914; 523/122**

[56] **References Cited**

**U.S. PATENT DOCUMENTS**

4,188,373 2/1980 **Kreznoski** ..... 424/78  
4,570,626 2/1986 **Norris et al.** ..... 128/132 R

4,856,513 8/1989 **Muller** ..... 128/303.1  
4,861,760 8/1989 **Mazuel et al.** ..... 514/54  
4,911,926 3/1990 **Henry et al.** ..... 424/426  
4,948,575 8/1990 **Cole et al.** ..... 424/44  
5,071,644 12/1991 **Viegas et al.** ..... 514/772.7

**FOREIGN PATENT DOCUMENTS**

0386960 2/1990 **European Pat. Off.** ..... A61K 47/34

**OTHER PUBLICATIONS**

**Cornea, In press, 1989, Reidy et al.**

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[57] **ABSTRACT**

Balanced pH, hyperosmotic, hypoosmotic, or isoosmotic gels are ideal vehicles for drug delivery. They are especially suited for topical body cavity or injection application of drugs or diagnostic agents; for drug or diagnostic agent delivery to the eye of a mammal; as protective corneal shields; or as ablatable corneal masks useful in laser reprofiling of the cornea. The compositions without the addition of a drug or diagnostic agent are useful as medical devices, for instance, in separating surgically or otherwise injured tissue as a means of preventing adhesions.

**9 Claims, No Drawings**