



(12) **United States Patent**  
**Garner et al.**

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(54) **DITHIOL COMPOUNDS, DERIVATIVES, AND TREATMENT OF PRESBYOPIA**

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(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 656 days.  
This patent is subject to a terminal disclaimer.

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**Related U.S. Application Data**

(63) Continuation-in-part of application No. 12/267,260, filed on Nov. 7, 2008, and a continuation-in-part of application No. 11/946,659, filed on Nov. 28, 2007, now Pat. No. 8,147,816, which is a continuation-in-part of application No. 11/135,271, filed on May 24, 2005, now Pat. No. 7,914,815, which is a continuation-in-part of application No. 10/050,879, filed on Jan. 18, 2002, now Pat. No. 6,923,955, said application No. 11/946,659 is a continuation-in-part of application No. 11/010,436, filed on Dec. 14, 2004, now Pat. No. 7,935,332, which is a continuation of application No. 10/050,879, said application No. 11/946,659 is a continuation-in-part of application No. 10/969,868, filed on Oct. 22, 2004, now abandoned, which is a continuation-in-part of application No. 10/050,879, which is a continuation-in-part of application No. 09/930,287, filed on Aug. 16, 2001, now abandoned.

(60) Provisional application No. 61/033,870, filed on Mar. 5, 2008, provisional application No. 61/060,487, filed

on Jun. 11, 2008, provisional application No. 61/077,186, filed on Jul. 1, 2008, provisional application No. 60/861,262, filed on Nov. 28, 2006, provisional application No. 60/907,734, filed on Apr. 16, 2007, provisional application No. 60/924,686, filed on May 29, 2007, provisional application No. 60/574,211, filed on May 26, 2004, provisional application No. 60/262,423, filed on Jan. 19, 2001, provisional application No. 60/225,659, filed on Aug. 16, 2000.

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(52) **U.S. Cl.**  
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(58) **Field of Classification Search**  
None  
See application file for complete search history.

(56) **References Cited**  
**U.S. PATENT DOCUMENTS**  
3,238,224 A 3/1966 Ohara et al.  
3,855,240 A 12/1974 Mueller  
(Continued)

**FOREIGN PATENT DOCUMENTS**  
EP 0 369 880 5/1990  
WO 93/25166 12/1993

(Continued)  
**OTHER PUBLICATIONS**  
U.S. Appl. No. 12/815,586, filed Jun. 15, 2010, Garner et al.  
(Continued)

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(57) **ABSTRACT**  
Dithiol compounds and derivatives thereof are disclosed. The agents are useful for treating ocular disease, especially presbyopia and cataract.

**8 Claims, 5 Drawing Sheets**

