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Chaudhuri et al.

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(54) **SKIN-LIGHTENING**

6,362,167 B1 * 3/2002 Ghosal

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FOREIGN PATENT DOCUMENTS

FR 2730408 8/1996

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OTHER PUBLICATIONS

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

Budavari et al., *The Merck Index: An Encyclopedia of Chemicals, Drugs, and Biologicals*, 11th Edition, 1989, Merck & Co., Inc., Rahway, NJ.*

Halliwell, *Free Radical Research*, 25, 439-54 (1996).

Ghosal et al., *Indian Journal of Chemistry*, 35B, Sep. 1996, pp. 941-948.

(21) Appl. No.: **10/120,156**

Chemical Abstract 126:255293, "Maillard reaction inhibitors containing tannin (hydrozylates), and skin-lightening and antiaging cosmetics containing them" (1997).

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Chemical Abstract 73:42386, "Hydrolyzable tannins of Eucalyptus delegatensis wood" (1970).

(65) **Prior Publication Data**

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* cited by examiner

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(52) **U.S. Cl.** **424/62**; 424/769; 424/777

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(58) **Field of Search** 424/769, 777, 424/62; 435/810

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(56) **References Cited**

ABSTRACT

U.S. PATENT DOCUMENTS

5,073,545 A 12/1991 Arima et al.
5,078,989 A 1/1992 Ando et al.
5,145,781 A 9/1992 Suzuki et al.
5,609,875 A 3/1997 Hadas
5,824,327 A * 10/1998 Whittemore et al.
6,066,312 A 5/2000 Egawa et al.
6,124,268 A 9/2000 Ghosal
6,235,721 B1 * 5/2001 Ghosal

A light colored standardized extract of *Emblica officinalis* consisting essentially of over 40% by weight of Emblicanin A, Emblicanin B, Pedunculagin and Punigluconin, and not more than about 1% by weight of flavonoids, and methods of producing same. Also disclosed are cosmetic or pharmaceutical compositions comprising the standardized extract and methods of using same to lighten or whiten skin.

26 Claims, No Drawings