United States Patent [19]

Bentz et al.

[11] **Patent Number: 5,008,240**

[45] **Date of Patent: * Apr. 16, 1991**

[54] **METHOD OF TREATING INFLAMMATION**

[75] Inventors: **Hanne Bentz**, Palo Alto; **Larry Ellingsworth**, San Jose; **Rosa Armstrong**, Palo Alto, all of Calif.

[73] Assignee: **Collagen Corporation**, Palo Alto, Calif.

[*] Notice: The portion of the term of this patent subsequent to Feb. 21, 2006 has been disclaimed.

[21] Appl. No.: **230,330**

[22] Filed: **Aug. 9, 1988**

Related U.S. Application Data

[63] Continuation of Ser. No. 836,672, Mar. 6, 1986, Pat. No. 4,806,523, which is a continuation-in-part of Ser. No. 763,337, Aug. 6, 1985, abandoned.

[51] **Int. Cl.**[5] **A61K 37/02**

[52] **U.S. Cl.** **514/2**; 514/21; 514/801; 514/825; 514/886; 514/887; 530/356; 530/840

[58] **Field of Search** 424/95; 514/2, 21, 801, 514/886, 887, 825; 530/356, 840

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,400,199	9/1968	Balassa	424/95
4,394,370	7/1983	Jefferies	424/95
4,434,094	2/1984	Seyedin et al.	424/95
4,473,551	9/1984	Schinitsky	424/95

FOREIGN PATENT DOCUMENTS

0128849	12/1984	European Pat. Off. .
0169016	1/1986	European Pat. Off. .
169016	1/1986	European Pat. Off. .
269408	6/1988	European Pat. Off. .

OTHER PUBLICATIONS

Shipley et al., (1985), Proc. Natl. Acad. Sci., U.S.A., 82:4147–4151.

Moses, (1985), Fed. Proc. 44(3), VIII, abstract.

Kehrl et al., (1985), Clinical Research 33(2):610A.

Brinckerhoff, (1983), Arthritis and Rheumatism 26(11):1370–1379.

Tashjian et al., (1985), Proc. Natl. Acad. Sci., U.S.A., 82:4545–4538.

Roberts et al., (1985), Proc. Natl. Acad. Sci., U.S.A., 82:119–123.

Baserga, (1981), Handbook of Experimental Pharmacology 57:385–404.

A. B. Roberts et al., *Proc. Nat. Acad. Sci., U.S.A.*, (Jun. 1986) 83:4167–71.

D. A. Lawrence, *Biol. Cell* (1985), 53:93–98.

M. B. Sporn et al., *Science* (1983), 219:1329–31 (Sporn II).

J. M. Davidson et al., *J Cell Biol* (Apr. 1985), 100:1219–27.

Primary Examiner—Jacqueline Stone

Attorney, Agent, or Firm—Irell & Manella

[57] **ABSTRACT**

Inflammation, acute and/or chronic, is treated with a CIF (TGF-β). The CIF may be administered locally or systemically, depending upon the indication, and does not require coadministration or activator or cofactor for efficacy.

21 Claims, 4 Drawing Sheets