

# United States Patent [19]

Golub et al.

[11] Patent Number: **4,666,897**

[45] Date of Patent: **May 19, 1987**

- [54] **INHIBITION OF MAMMALIAN COLLAGENOLYTIC ENZYMES BY TETRACYCLINES**
- [75] Inventors: **Lorne M. Golub, Smithtown; Thomas F. McNamara, Port Jefferson; N. S. Ramamurthy, Smithtown, all of N.Y.**
- [73] Assignee: **Research Foundation of State University, Albany, N.Y.**
- [21] Appl. No.: **566,517**
- [22] Filed: **Dec. 29, 1983**
- [51] Int. Cl.<sup>4</sup> ..... **A61K 31/65**
- [52] U.S. Cl. .... **514/152**
- [58] Field of Search ..... **424/227; 514/152**

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[57] **ABSTRACT**

A method of reducing pathologically excessive levels of activity of collagenolytic enzymes in mammals to substantially normal levels by administering 10-100% of the normal antibiotic therapeutic dose of a tetracycline is disclosed.

**10 Claims, 8 Drawing Figures**

Dr. Reddy's Laboratories, Ltd., et al.  
v.  
Galderma Laboratories, Inc.  
IPR2015-

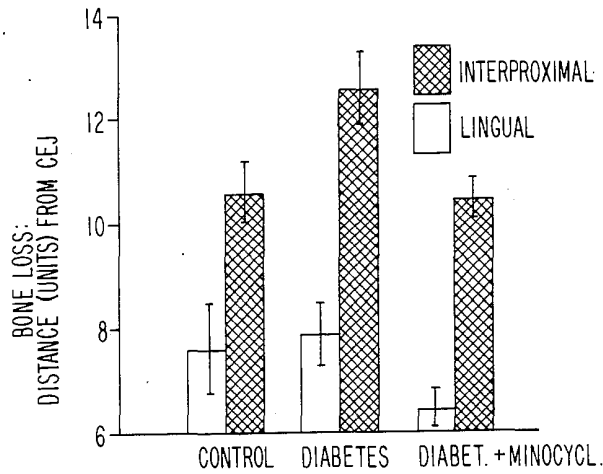


FIG. 1b

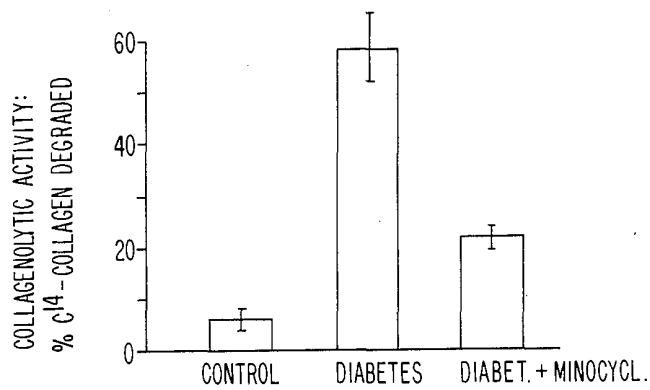


FIG. 1a

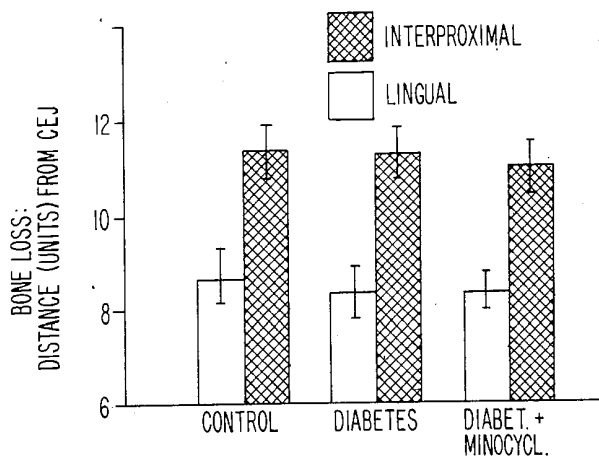


FIG. 2b

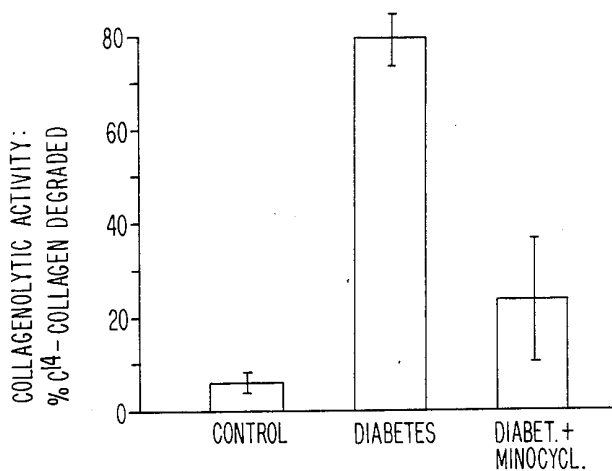


FIG. 2a

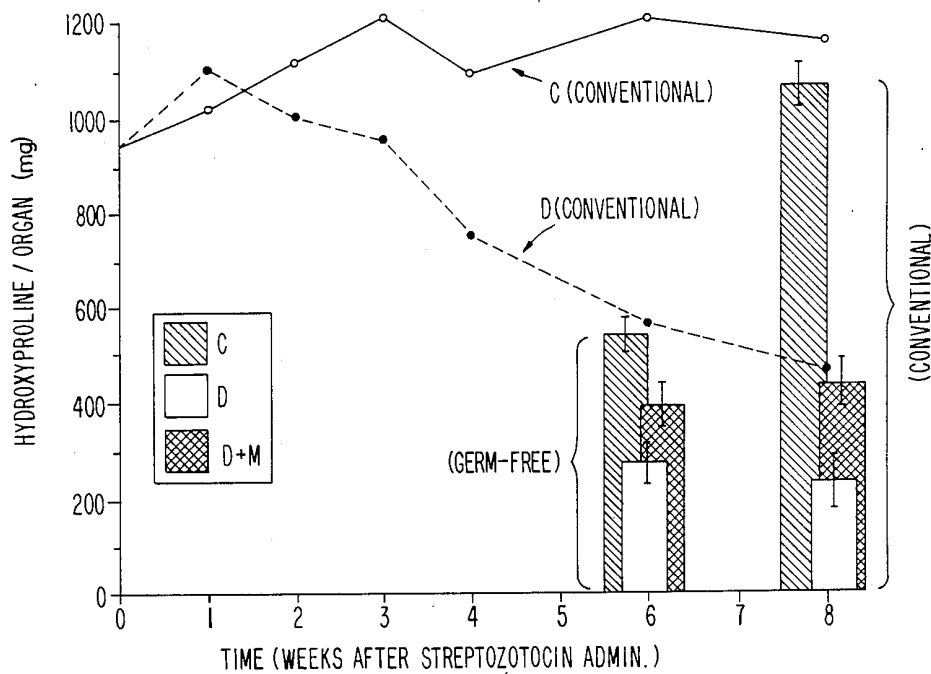


FIG. 3

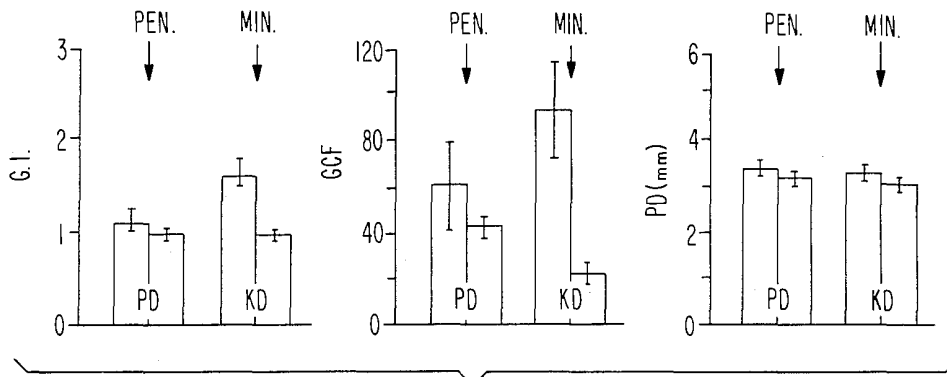


FIG. 4

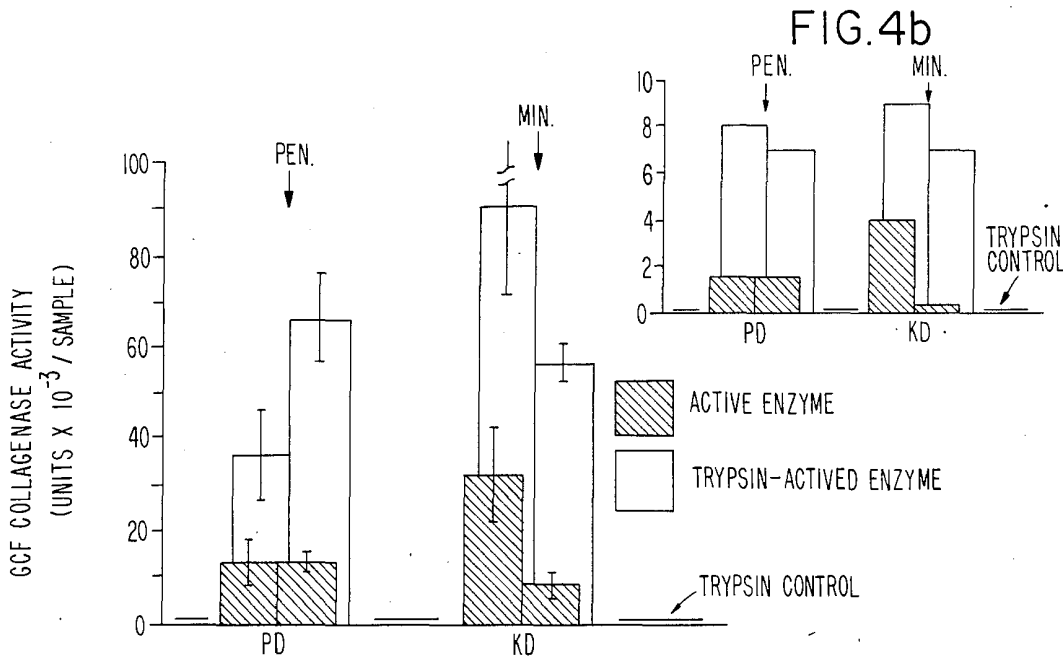


FIG. 4a

FIG. 4b

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