US005286497A

United States Patent [19]

Hendrickson et al.

[11] Patent Number: 5,286,497

[45] Date of Patent: Feb. 15, 1994

[54] DILTIAZEM FORMULATION

[75] Inventors: **Dennis L. Hendrickson**, Overland Park, Kans.; **Dan C. Dimmitt**, Belton; **Mark S. Williams**, Kansas City, both of Mo.; **Paul F. Skultety**, Leawood, Kans.; **Michael J. Baltezor**, Lees Summit, Mo.

[73] Assignee: **Carderm Capital L.P.**, Thalwil, Switzerland

[21] Appl. No.: **58,534**

[22] Filed: **May 6, 1993**

Related U.S. Application Data

[63] Continuation of Ser. No. 872,572, Apr. 23, 1992, abandoned, which is a continuation-in-part of Ser. No. 702,567, May 20, 1991, abandoned.

[51] **Int. Cl.**[5] **A61K 9/16**

[52] **U.S. Cl.** **424/490**; 424/489; 424/497

[58] **Field of Search** 424/489, 490, 497

[56] **References Cited**

U.S. PATENT DOCUMENTS

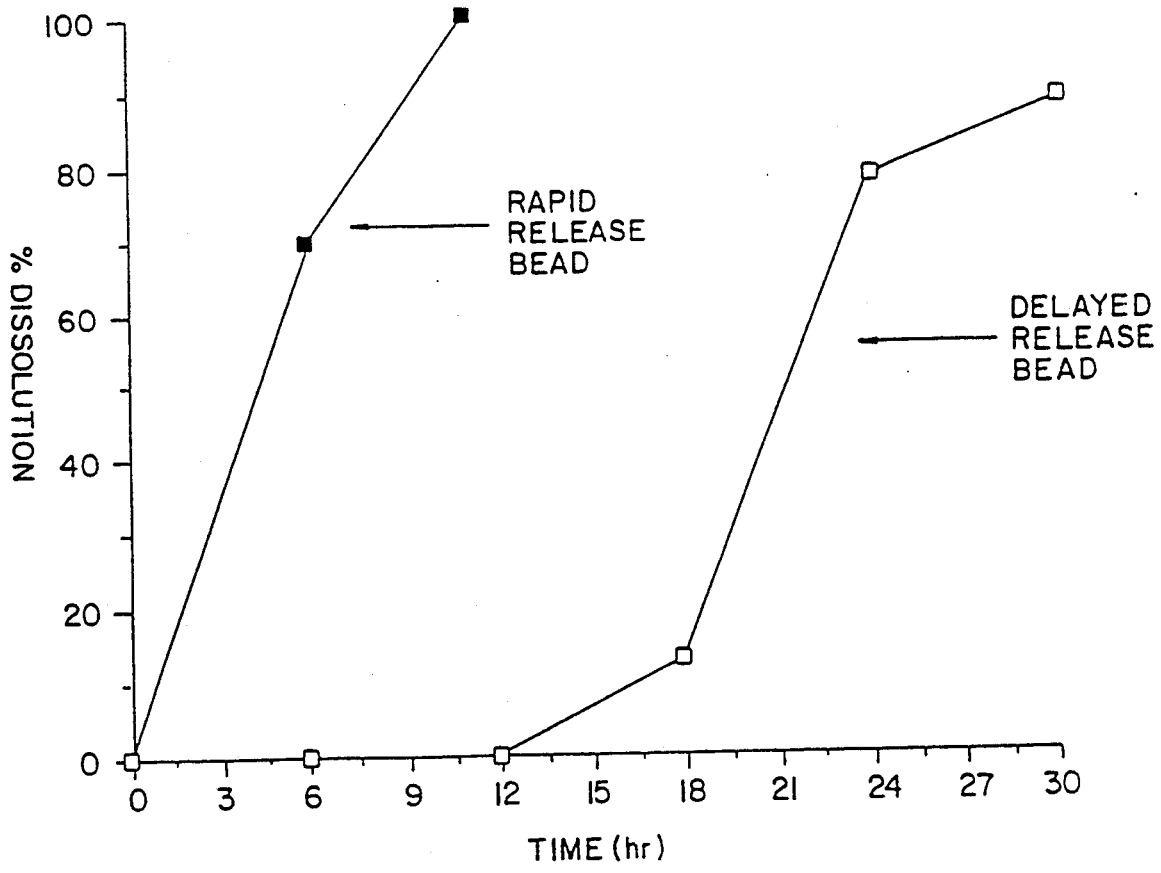
4,871,731	10/1989	Walker	514/211
4,891,230	1/1990	Geoghegan	424/497
4,894,240	1/1990	Geoghegan	424/497
4,917,899	4/1990	Geoghegan	424/497
5,002,776	3/1991	Geoghegan	424/497
5,112,621	5/1992	Stevens	424/497
5,229,135	7/1993	Philippon et al.	424/494

FOREIGN PATENT DOCUMENTS

193164	2/1986	European Pat. Off. .
225085	11/1986	European Pat. Off. .
282698	1/1988	European Pat. Off. .
320097	10/1988	European Pat. Off. .
315414	11/1988	European Pat. Off. .
8802253	9/1987	PCT Int'l Appl. .
9101722	7/1990	PCT Int'l Appl. .

Primary Examiner—Thurman K. Page
Assistant Examiner—William E. Benston, Jr.
Attorney, Agent, or Firm—Killworth, Gottman, Hagan & Schaeff

[57] **ABSTRACT**

The present invention is directed to a diltiazem formulation suitable for one a day administration. The formulation contains a blend of diltiazem beads having two differing dissolution profiles.

13 Claims, 3 Drawing Sheets