US005591613A

United States Patent [19]

Makryaleas et al.

[11] **Patent Number: 5,591,613**

[45] **Date of Patent: *Jan. 7, 1997**

[54] **METHOD FOR THE PREPARATION OF D-ARGININE AND L-ORNITHINE**

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[*] Notice: The term of this patent shall not extend beyond the expiration date of Pat. No. 5,405,761.

[21] Appl. No.: **366,544**

[22] Filed: **Dec. 29, 1994**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 715,963, Jun. 17, 1991, Pat. No. 5,405,761.

[30] **Foreign Application Priority Data**

Jul. 2, 1990 [DE] Germany 40 20 980.6

[51] **Int. Cl.**[6] **C12P 13/10**

[52] **U.S. Cl.** **435/114**; 435/227

[58] **Field of Search** 435/114, 227; 562/554, 560

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,222,258	12/1965	Iizuka	435/114
3,668,072	6/1972	Ando	435/114
4,248,677	2/1981	Kato	562/560
4,346,169	8/1982	Akashi	435/114
4,420,432	12/1983	Chibata	260/501.11
4,698,442	10/1987	Nestor	562/560
5,059,712	10/1991	Griffith	562/560
5,405,761	4/1995	Makryaleas	435/114

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[57] **ABSTRACT**

D-arginine and L-ornithine are prepared by means of the enzymatic conversion of DL-arginine in the presence of an L-arginase which selectively converts L-arginase to L-ornithine, permitting recovery of both D-arginine and L-ornithine.

5 Claims, 6 Drawing Sheets