



[54] **NITRIC OXIDE SYNTHESIS INHIBITORS FOR POTENTIATING THE ACTION OF PRESSOR AGENTS IN CERTAIN HYPOTENSIVE PATIENTS**

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[21] Appl. No.: 723,480

[22] Filed: Jul. 1, 1991

Related U.S. Application Data

[63] Continuation-in-part of PCT/US90/05199 filed Sep. 13, 1990, which is a continuation-in-part of Ser. No. 406,909, Sep. 13, 1989, Pat. No. 5,028,627.

[51] Int. Cl.⁵ A61K 31/195; A61K 37/00

[52] U.S. Cl. 514/565; 514/12; 514/930; 424/85.1; 424/85.2; 424/85.5

[58] Field of Search 514/565, 12, 930; 424/85.1, 85.2, 85.5

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[57] **ABSTRACT**

A method for treatment of an animal for systemic hypotension induced by internal nitric oxide production caused by endotoxin or cytokines. The method involves administering an α_1 adrenergic agonist and an amount of an inhibitor of nitric oxide formation from arginine to restore vascular contractile sensitivity to α_1 adrenergic agonists. A preferred inhibitor of nitric oxide formation is an N^G-substituted arginine having at least one hydrogen on a guanidino amino group replaced by another atomic or molecular species, including N^G-aminoarginine, N^G-nitroarginine, and N^G-alkylarginines such as N^G-methylarginine, N^G-ethylarginine, N^G-propylarginine and N^G-butylarginine. Arginine derivative inhibitors are preferably of the L configuration and include pharmaceutically acceptable addition salts. Treatment of systemic hypotension in a patient which has been induced by chemotherapy with biologic response modifiers such as tumor necrosis factor or interleukin-2 may be likewise accomplished. Treatment of an animal for systemic hypotension induced by endotoxin, or other bacterial toxins, e.g., septic shock, may also be accomplished by treatment with α_1 adrenergic agonists and an inhibitor such as an arginine derivative, restoring vascular contractile sensitivity to the α_1 adrenergic agonists.