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[54] **HEME BINDING COMPOUNDS AND USE THEREOF**

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Related U.S. Application Data

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[52] **U.S. Cl.** **514/399**; 514/427; 514/565; 514/632; 548/336.1; 548/335.5; 548/339.1; 548/560; 548/561; 548/562; 548/557; 562/560; 562/556; 564/227

[58] **Field of Search** 514/399, 427, 514/565, 632; 548/335.5, 336.1, 339.1, 560, 561, 562; 562/556, 560; 564/227

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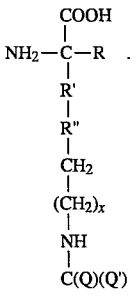
[57] **ABSTRACT**

Inhibitors of nitric oxide formation from arginine useful for treating hypotension, inflammation, stroke and to restore vascular contractile sensitivity to the effects of α_1 adrenergic agonists are physiologically active compounds including N^{δ}-substituted ornithine or N^{ϵ}-substituted lysine moieties or monoalkyl carbon-substituted N^{δ}-substituted ornithine or N^{ϵ}-substituted lysine moieties, having the formula



wherein R is $(CH_2)_yCH_3$ or H, R' is CH_2 or $C(H)(CH_2)_yCH_3$, and R" is CH_2 or $C(H)(CH_2)_yCH_3$, with y ranging from 0 to 5, and x is 0 or 1 and wherein none or only one of R, R' and R" provides an alkyl substituent on ornithine or lysine moiety, and wherein Q is a heme binding moiety and/or a sulfur-containing binding moiety and Q' is —NH_2 when there is a double bond between the omega carbon and Q and Q' is =NH when there is a single bond between the omega carbon and Q, and physiologically acceptable acid addition salts thereof.

7 Claims, 5 Drawing Sheets