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# United States Patent [19]

Stamler et al.

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[54] **CONTROLLING NITROGEN OXIDE CONCENTRATIONS TO MODULATE SKELETAL MUSCLE CONTRACTION**

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**Related U.S. Application Data**

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[52] **U.S. Cl.** ..... **514/6**; 514/185; 514/224.8; 514/249; 514/255; 514/551; 514/564

[58] **Field of Search** ..... 435/190, 191; 514/6, 185, 551, 564, 576, 224.8, 255, 249

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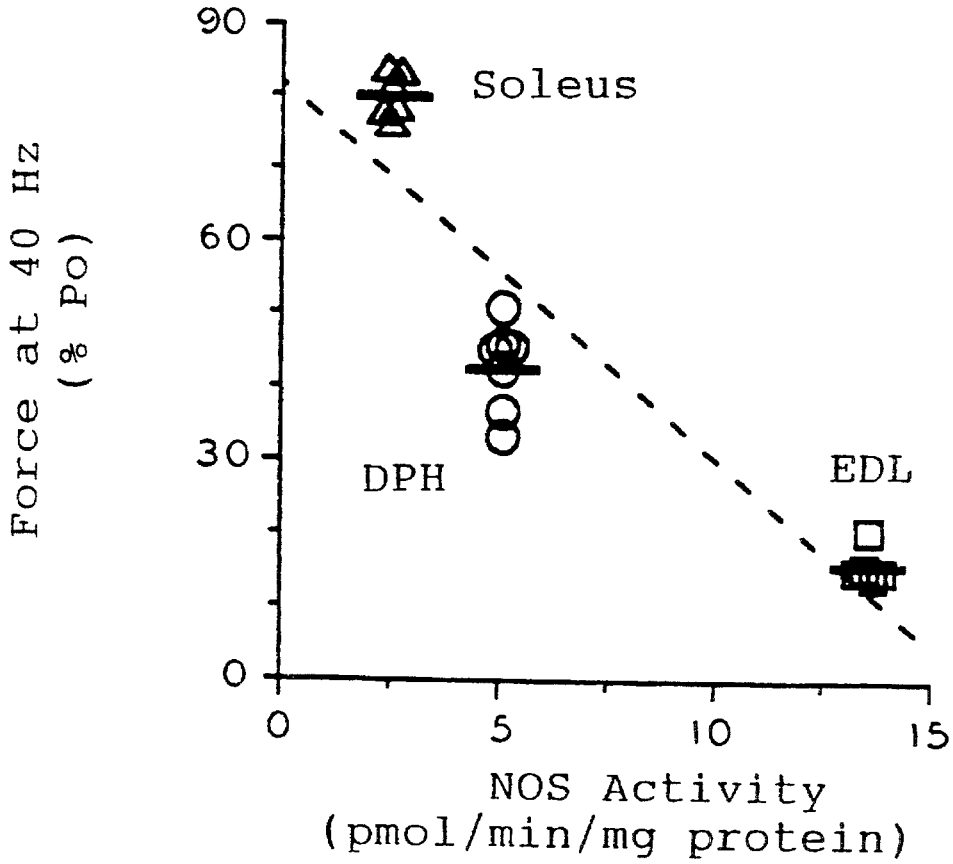
[57] **ABSTRACT**

A method for inhibiting or relaxing skeletal muscle contractions and for treating disease states resulting from or exacerbated by undesirable skeletal muscle contractions by administering a skeletal muscle relaxing amount of nitroxyl ion($NO^-$), nitrosonium ion($NO^+$), nitric oxide and nitric oxide adducts or providers. A process for stimulating, improving or enhancing muscle contraction in a mammal by treating the mammal with an effective amount of (i) a nitric oxide synthase inhibitor or (ii) a nitric oxide scavenger.

**7 Claims, 5 Drawing Sheets**