



US005922713A

**United States Patent** [19][11] **Patent Number:** **5,922,713****Werner**[45] **Date of Patent:** **Jul. 13, 1999**[54] **INHIBITION OF NITRIC OXIDE SYNTHASE**[76] Inventor: **Ernst Werner**, Hechenbergstrasse 10,  
A-6020 Innsbruck, Austria[21] Appl. No.: **08/882,456**[22] Filed: **Jun. 26, 1997**[51] **Int. Cl.**<sup>6</sup> ..... **A61K 31/495**; A61K 31/505;  
C07D 475/08[52] **U.S. Cl.** ..... **514/249**; 514/258; 544/260[58] **Field of Search** ..... 514/258, 249;  
544/260[56] **References Cited****U.S. PATENT DOCUMENTS**

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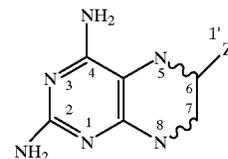
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*Primary Examiner*—John Pak*Attorney, Agent, or Firm*—Lorusso & Loud[57] **ABSTRACT**

The invention comprises a method of effecting nitric oxide synthase inhibition, and nitric oxide level reduction by use of a composition of the structure



wherein Z is an hydroxyl carbon at 1' of the formula CH(OH)—X;

wherein X is selected from the group consisting of CH(OH)—CH<sub>3</sub>, (CH(OH))<sub>n</sub>—Y, and (CH(OH))<sub>n</sub>—CH<sub>2</sub><sub>n</sub>—W;

wherein Y is hydrogen, or lower alkyl, W is hydrogen or hydroxyl, and n is 1–20;

and the 5–6 and 7–8 bonds are each either a single bond or a double bond,

and pharmaceutically acceptable salts thereof (collectively, "C1' aminobiopterin"), and compositions useful in such method.

**13 Claims, No Drawings**