

[54] **NOVEL, TRANSIENT PRO-DRUG FORMS OF L-DOPA USEFUL IN THE TREATMENT OF PARKINSON'S DISEASE**

[75] Inventors: **Nicolae S. Bodor; Kenneth B. Sloan; Anwar A. Hussain**, all of Lawrence, Kans.

[73] Assignee: **Interx Research Corporation**, Lawrence, Kans.

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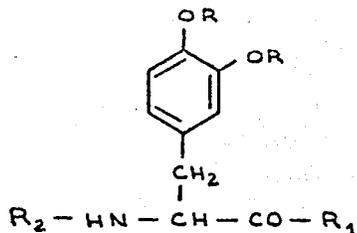
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Primary Examiner—Stanley J. Friedman
Attorney, Agent, or Firm—Charles N. Blitzer

[57] **ABSTRACT**

There is provided, novel, transient pro-drug forms of L-DOPA (3,4-dihydroxy-L-phenylalanine), having the formula:



wherein R represents a member selected from the group consisting of a hydrogen atom, a $-COCH_3$

group, a $-COC_2H_5$ group, a $-COOC_2H_5$ group, and a $-CO-C(CH_3)_3$ group; wherein R_1 represents a member selected from the group consisting of a hydroxyl group, a $-OM$ group (wherein M represents an alkali metal or an ammonium ion), a $-OCH_2-C_6H_5$ group, a $-OCH_3$ group, a $-OC_2H_5$ group, and $-NH-CH(R_3)COOH$ group, wherein R_3 represents the residue of any naturally occurring amino acid; and wherein R_2 represents a member selected from the group consisting of a hydrogen atom, a formyl group, a $-CO-C_6H_5$ group, a $-CO$ -pyridyl group, a $-CO(R_5)-CH=CH(R_4)$ group, and a $NH_2-CH(R_6)-CO-$ group, wherein R_4 represents a methyl group and wherein R_5 represents a member selected from the group consisting of a methyl group, a $-OC_2H_5$ group, and a C_6H_5- group, and wherein R_6 represents the residue of any naturally occurring amino acid,

with the proviso that simultaneously,

R_1 cannot represent a hydrogen atom when R_1 represents a $-OCH_3$ group or a $-OH$ group and when R_2 represents a hydrogen atom respectively;

R cannot represent a hydrogen atom when R_1 represents either a hydroxyl group or a $-OCH_3$ group and R_2 represents a $-COCH_3$ group, respectively;

R cannot represent a hydrogen atom when R_1 represents a hydroxyl group and R_2 represents a formyl group respectively,

R cannot represent a hydrogen atom when R_1 represents a hydroxyl group and R_2 represents a benzoyl group, respectively; and,

R cannot represent a hydrogen atom when R_1 represents a hydroxyl group and R_6 represents the residue of L-leucine, respectively.

These compounds are useful in the treatment of Parkinson's Disease.

15 Claims, No Drawings