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# United States Patent [19]

Cincotta et al.

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[54] **METHOD FOR THE LONG TERM REDUCTION OF BODY FAT STORES, INSULIN RESISTANCE, HYPERINSULINEMIA AND HYPERGLYCEMIA IN VERTEBRATES**

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**Related U.S. Application Data**

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[52] **U.S. Cl.** ..... **514/288**; 514/250; 514/866

[58] **Field of Search** ..... 514/250, 288, 866

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[57] **ABSTRACT**

A process for the long term modification and regulation of lipid and glucose metabolism—generally to reduce obesity, insulin resistance, and hyperinsulinemia or hyperglycemia, or both (these being the hallmarks of noninsulin dependent, or Type II diabetes)—by administration to a vertebrate, animal or human, of a dopamine agonist and a prolactin stimulator. The dopamine agonist and prolactin stimulator are administered in daily dosages, respectively, at a time of day dependent on the normal circadian rhythm of fat and lean members of a similar species. Decreases in body fat deposits result by treatment of an obese species on a daily timed sequence based on circadian rhythms of the peak prolactin, or peak prolactin and peak glucocorticosteroid, blood level established for lean insulin sensitive members of a similar species. The dopamine agonist is administered at the time of, or just after the time of peak plasma prolactin concentration found in lean animals of the same species and the prolactin stimulator is administered at a time just before the plasma prolactin rhythm reaches its peak in lean animals. Insulin resistance, and hyperinsulinemia or hyperglycemia, or both, can also be controlled in humans on a long term basis by treatment corresponding to that of the treatment for obesity. The short term daily injections reset hormonal timing in the neural centers of the brain to produce long term effects.

**24 Claims, No Drawings**