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## (12) United States Patent

Young et al.

# (54) METHODS OF TREATMENT USING EXENDIN PEPTIDES OR GLP-1 PEPTIDES

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This patent is subject to a terminal dis-

claimer.

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- (60) Provisional application No. 60/075,122, filed on Feb. 13, 1998.

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(52) **U.S. Cl.** USPC ...... **514/11.7**; 514/15.4; 514/15.7; 514/16.4

(58) Field of Classification Search
None
See application file for complete search history.

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5 055 4₹⋒	Δ	0/1000	Chang

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## (57) ABSTRACT

Methods for increasing urine flow are disclosed, comprising administration of an effective amount of GLP-1, an exendin, or an exendin or GLP-1 agonist. Methods for increasing urinary sodium excretion and decreasing urinary potassium concentration are also disclosed. The methods are useful for treating conditions or disorders associated with toxic hypervolemia, such as renal failure, congestive heart failure, nephrotic syndrome, cirrhosis, pulmonary edema, and hypertension. The present invention also relates to methods for inducing an inotropic response comprising administration of an effective amount of GLP-1, an exendin, or an exendin or GLP-1 agonist. These methods are useful for treating conditions or disorders that can be alleviated by an increase in cardiac contractility such as congestive heart failure. Pharmaceutical compositions for use in the methods of the invention are also disclosed.



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## Response of MAP to GLP-1

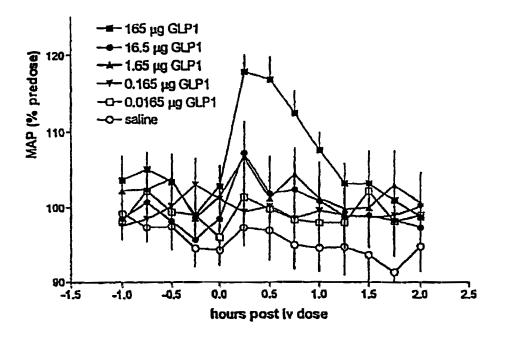


FIGURE 1A

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# Dose-response curve: MAP to GLP-1

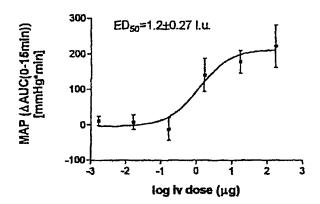


FIGURE 1B

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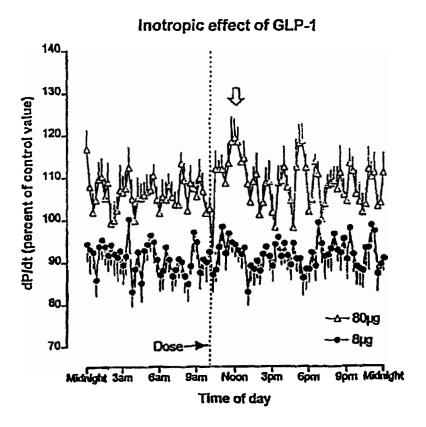


FIGURE 2

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