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**Currie et al.**

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(54) **METHODS AND COMPOSITIONS FOR THE TREATMENT OF GASTROINTESTINAL DISORDERS**

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(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.  
This patent is subject to a terminal disclaimer.

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(65) **Prior Publication Data**  
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**Related U.S. Application Data**

(60) Division of application No. 11/949,340, filed on Dec. 3, 2007, now Pat. No. 7,745,409, which is a division of application No. 10/796,719, filed on Mar. 9, 2004, now Pat. No. 7,304,036, which is a continuation-in-part of application No. 10/766,735, filed on Jan. 28, 2004, now abandoned.

(60) Provisional application No. 60/443,098, filed on Jan. 28, 2003, provisional application No. 60/471,288, filed on May 15, 2003, provisional application No. 60/519,460, filed on Nov. 12, 2003.

(51) **Int. Cl.**  
**A61K 38/10** (2006.01)

(52) **U.S. Cl.** ..... **514/21.5; 530/327**

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

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(57) **ABSTRACT**

The present invention features compositions and related methods for treating IBS and other gastrointestinal disorders and conditions (e.g., gastrointestinal motility disorders, functional gastrointestinal disorders, gastroesophageal reflux disease (GERD), Crohn's disease, ulcerative colitis, inflammatory bowel disease, functional heartburn, dyspepsia (including functional dyspepsia or nonulcer dyspepsia), gastroparesis, chronic intestinal pseudo-obstruction (or colonic pseudo-obstruction), and disorders and conditions associated with constipation, e.g., constipation associated with use of opiate pain killers, post-surgical constipation (post-operative ileus), and constipation associated with neuropathic disorders as well as other conditions and disorders using peptides and other agents that activate the guanylate cyclase C (GC-C) receptor.

**11 Claims, 19 Drawing Sheets**

LCMS ANALYSIS OF RECOMBINANT PEPTIDE VARIANTS

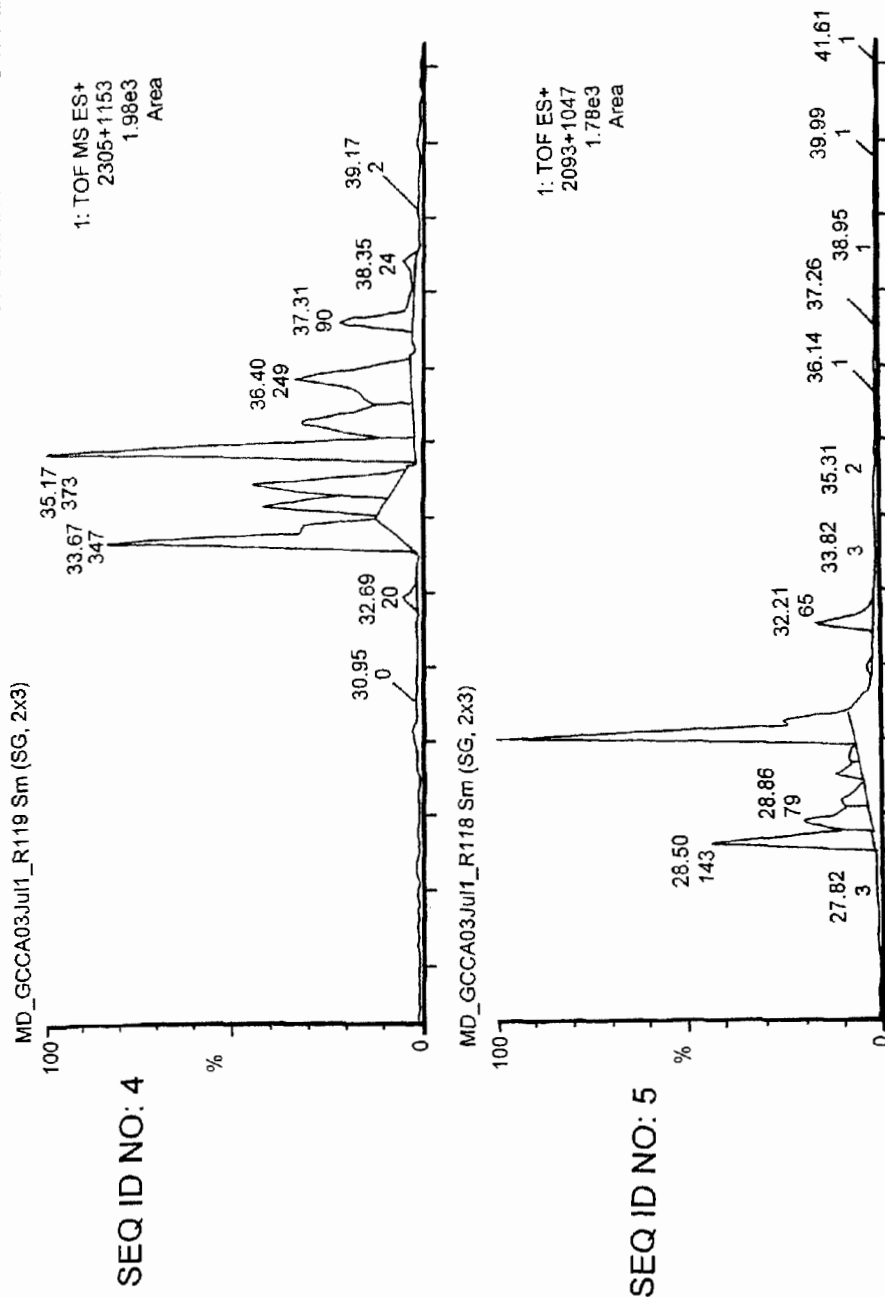


FIG. 1A

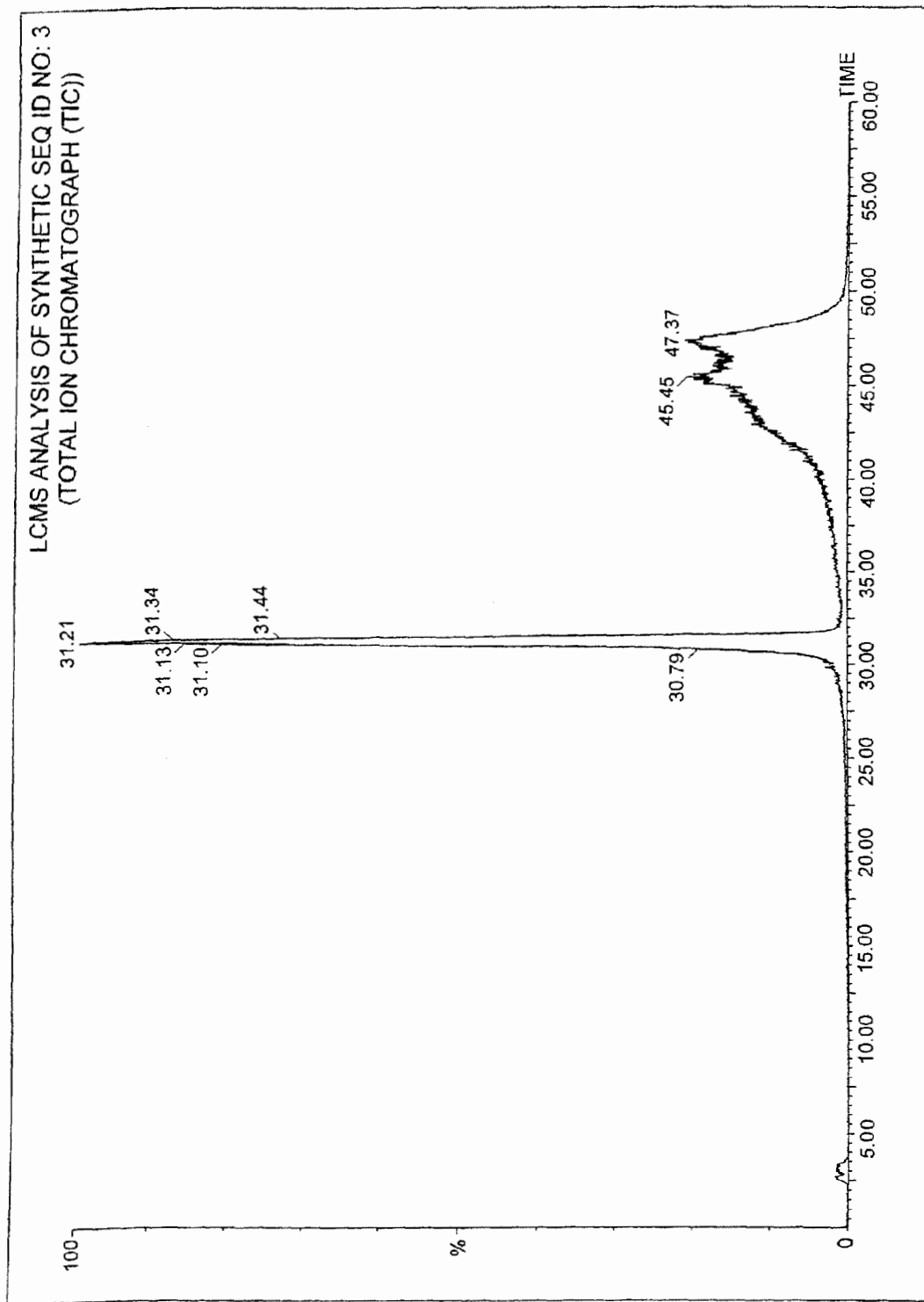


FIG. 1B

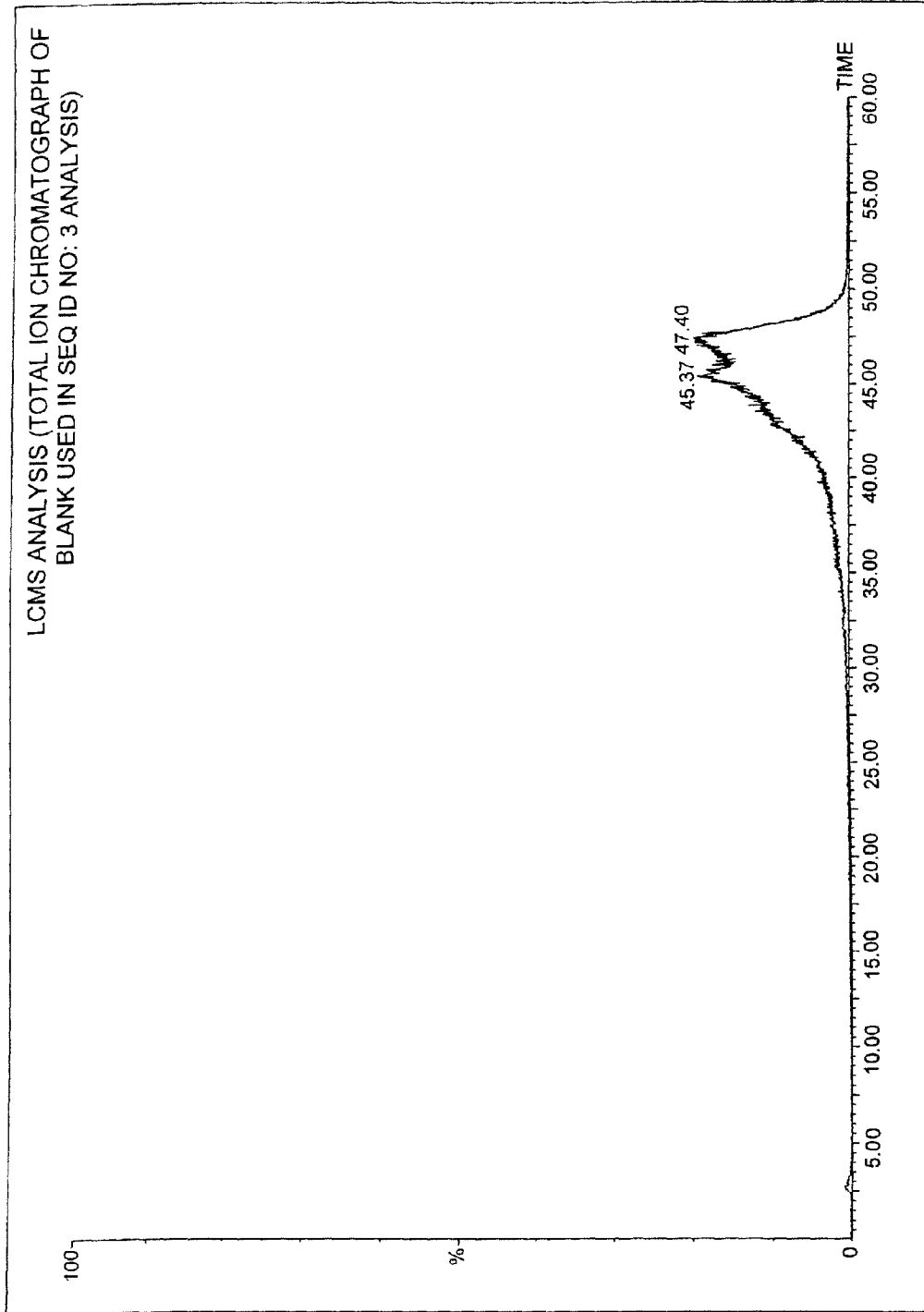


FIG. 1C

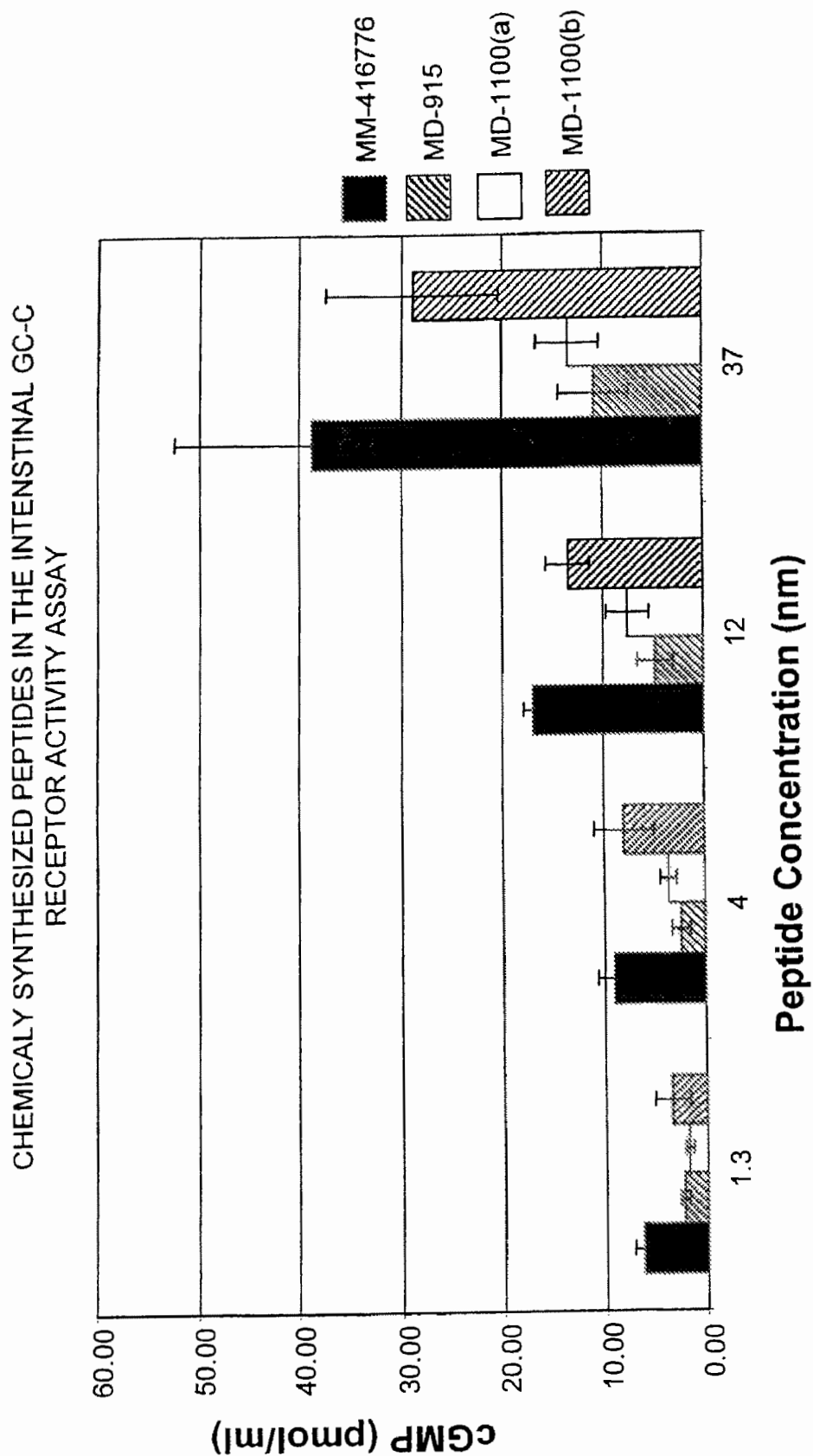


FIG. 2

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