

Applications

- Irritable Bowel syndrome relief
- Inflammatory Bowel disease treatment
- Opioid Induced Constipation relief
- Pain relief

Advantages

- Effective treatment of both constipation and diarrhea
- Increased selectivity and sensitivity
- No constipation side effects
- Peripherally selective
- No CNS related side effects

Inventors

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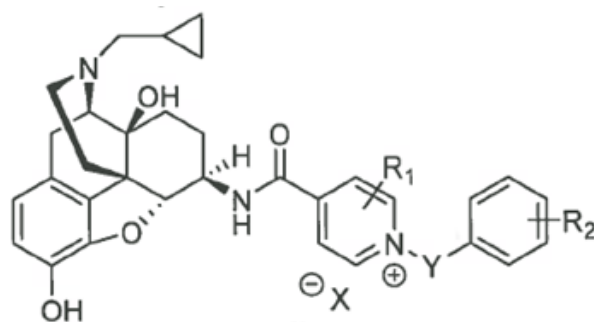
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Technology Summary

While it is not known exactly what causes Irritable Bowel Syndrome (IBS), it is known that the pain IBS evokes is a symptom of increased or longer lasting intestinal visceral muscle contractions. Current medications used for managing IBS symptoms are ones typically given as anti-diarrheal medications and have a tendency to cause constipation and bloating.

In an effort to treat both diarrhea and constipation at once, researchers at VCU have identified dual mu/kappa opioid receptor modulators. These modulators are peripherally selective, mixed Mu/Kappa opioid receptor ligands for the treatment of IBS in patients suffering from visceral pain that is accompanied by both diarrhea and constipation. This ligand may serve as a new template to design novel analgesics for the treatment of visceral pain without the side effects associated with either centrally active Mu or Kappa Opioid receptors. This combination of grouping two properties into one chemical entity provides a novel treatment for IBS and abdominal pain including but not limited to IBS-Diarrhea, IBS-Constipation, Inflammatory bowel disease and Opioid Induced Constipation.



Structural Skeleton. Where X can be any anion, R1 and R2 can be any possible substitutions, Y can be any possible connection. (See manuscript for details)

Technology Status

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This technology is available for licensing to industry for further development and commercialization.