# "Treatment of Opioid Induced Constipation for all Patient Populations"

VCU #13-106

## Applications

- Treatment of Opioid Induced Constipation
- Peripheral antagonist for the mu opioid receptor

## Advantages

- Directly addresses the pathophysiology of OIC
- Does NOT reduce the efficacy of Opioid therapy in CNS
- Highly selective and potent
- Reduced off-target interactions
- Can be used by all patient populations


## Inventor

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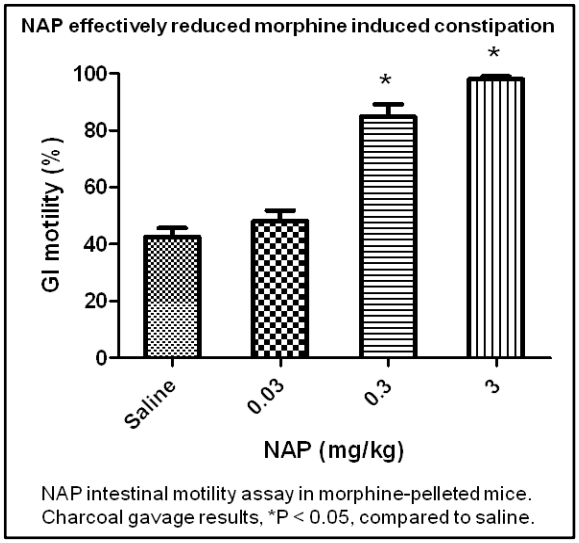
## Market Need

Opioid Induced Constipation (OIC) is a common side effect of long term opioid treatment. It is important to address this painful and debilitating side effect of pain medication. The current treatments, lifestyles changes and over the counter laxatives have a marginal effect on OIC and more often than not prolong the patient's suffering. Other medications have been developed to treat OIC by blocking the mu opioid receptors, BUT many of these medications have systemic effects and interfere with the efficacy of pain management medications prescribed to the patient.

## Technology Summary

This technology is a group of compounds that may treat OIC effectively. These peripheral, selective Mu Opioid Receptor Antagonists address the issue **directly in the GI tract.** This ability to restrict action to the peripheral system with a low binding affinity to other opioid receptors allows the compounds to work without affecting the efficacy of the opioid. Unlike other mu opioid receptor antagonists that are not suitable for patients with certain conditions, this drug would not be limited to treating specific populations.




NAP intestinal motility assay in morphine-pelleted mice. Charcoal gavage results, *P < 0.05, compared to saline.

## Technology Status

*In vitro* and *in vivo* studies demonstrate higher selectivity. Dr Zhang has received a competitive grant from the state of Virginia to continue the development and validation of the compound.

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