ADS012, A SINGLE STRAIN LIVE BIOTHERAPEUTIC PRODUCT, ATTENUATES TOLERANCE TO REPEATED MORPHINE DOSING IN MICE

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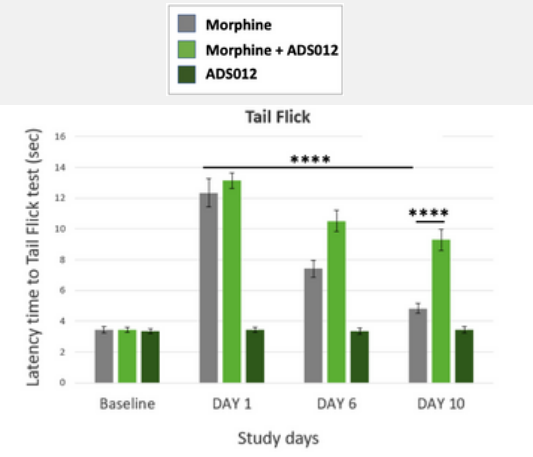
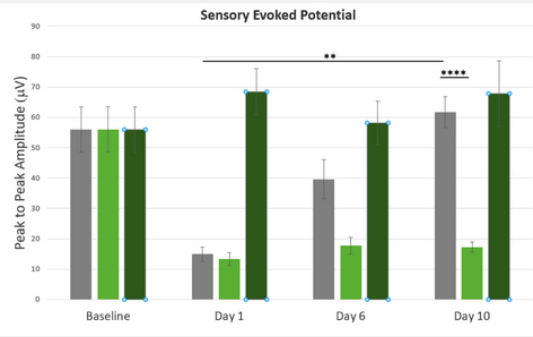
RESULTS



Tail Flick Test: ADS012 significantly attenuated morphine tolerance as evaluated by increased latency to tail flick.



Sensory Evoked Potentials: ADS012 attenuated development of morphine tolerance as determined by reduced sensory evoked potential (pain signal in brain).

OBJECTIVES

This study aimed at determining if the treatment of a single strain of bacteria with a very narrow bactericidal activity could have an impact on the development of morphine tolerance induced in mice by repeated subcutaneous (s.c.) morphine administration. The bacteria chosen was ADS012, a Bacillus velezensis strain with C. difficile bactericidal activity.

PRECLINICAL MODEL

Morphine tolerance was induced in mice via repeated subcutaneous morphine-HCl dosing. One group received ADS012 alongside morphine treatment. Pain response was assessed using the tail flick test, and sensory evoked potentials were recorded from the tibial nerve to evaluate pain-related brain activity.

CONCLUSIONS

These results suggest that the single strain LBP ADS012 attenuates the development of tolerance to repeated morphine dosing and highlights the gut-brain axis in morphine tolerance. LBP ADS012 can be an important adjunct to limit levels of morphine exposure needed over time to maintain analgesia.

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