Small Molecule Analgesic AS1 for Alleviating Pain

AS1 is a novel small molecule that changes how we perceive pain, making painful experiences less unpleasant and reducing the discomfort associated with them. It reverses the negative hedonic valence of painful stimuli, alleviating pain and reducing aversion of negative stimuli associated with pain.

What is the Problem?

Pain and aversive stimuli significantly impact the quality of life for millions of people worldwide. Current pain management solutions often focus on reducing the intensity of pain but do not address the negative hedonic valence associated with noxious stimuli. Additionally, many existing analgesics are ineffective in treating chronic pain or have undesirable side effects. This unmet need highlights the importance of developing new approaches that can alleviate pain without negative side-effects for effective pain management.

What is the Solution?

AS1 is a novel small molecule that targets D1 dopamine receptor pathways to reverse the negative hedonic valence of noxious stimuli. By altering the perception of pain, AS1 makes noxious stimuli attractive rather than aversive. This innovative approach reduces the physical sensation of pain, making even physically harmful environments attractive. AS1 has shown promising results in preclinical studies, demonstrating its potential to transform pain management and improve patient outcomes. This technology can be used to develop a new class of drugs aimed at treating pain and psychiatric conditions that are linked to disruptions in how the brain processes positive and negative experiences, such as anxiety and post-traumatic stress disorder.

What is the Competitive Advantage?

Targeted Mechanism: By specifically targeting D1 dopamine receptor pathways, AS1 offers a novel approach to pain management.

Improved Quality of Life: Patients using AS1 may experience a significant improvement in their overall well-being due to the reduction in pain aversiveness.

Versatility: AS1 has the potential to be effective in treating various types of pain, including chronic and neuropathic pain, making it a versatile option for different patient needs. It may also be used to treat pain in animals following veterinary surgery or in a basic research setting.

Technology ID

BDP 8484

Category

Selection of Available Technologies

Therapeutics/Analgesics & Pain Management

Authors

Ajay Dhaka

Learn more

Reduced Risk of Addiction: Use of novel, non-opioid small molecules can reduce the risk of opioid addiction.

Patent Information:

WO2023019220A2

References

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