ANTAGONIST OF TRPV1 RECEPTOR

THERAPEUTICS
Peptides that irreversibly inactivate TRPV1 and a method for delivering these peptides while limiting off-site toxicity.

TECHNOLOGY TYPE
Peptides
Central Nervous System
Nociception
Chronic Pain
Hyperalgesia

STAGE OF DEVELOPMENT
Proof of concept demonstrated through testing of TRPV1 activity.

TECHNOLOGY SUMMARY
Transient Receptor Potential Vanilllaoid-1 (TRPV1) mediates pain and inflammation. Stimuli, such as heat, protons, and chemical ligands, generate action potentials that release neurotransmitters and neuroactive peptides to stimulate nerves causing a painful, burning sensation. Studies indicate inhibiting TRPV1 could suppress pain, as well as treat chronic pain and inflammatory hyperalgesia.

The proposed invention is a series of peptides that act as TRPV1 channel antagonists. These peptides are delivered to the TRPV1 channel using a carrier that prevents off-site toxicity, but still allows the antagonist to bind to the TRPV1 channel. The peptides can be delivered topically or intravenously for use in pain treatment.

FEATURES AND BENEFITS
• Inhibits TRPV1 activity.
• Alleviates chronic pain.
• Reduces side effects and off-site toxicity through increased binding site selectivity.

RECENT PUBLICATIONS

INVENTOR PROFILE
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