Technology Available for License

Enhanced Innate Resistance to Infections

Securinine, a natural non-toxic compound, triggers innate immunity to bacterial, viral, fungal, or parasitic infections.

New Adjuvants for Enhanced Innate Resistance to Infections

Montana State University researchers have discovered that securinine can be used as an adjuvant to promote innate immunity. The researchers have shown securinine functions with new modes of action that potentially eliminate problems of traditional approaches to enhancing innate immunity. *In vivo* and *in vitro* studies have demonstrated securinine triggers innate resistance to bacterial infections. Unlike approaches such as using Toll-like Receptors (TLRs) that may stimulate neutrophil inflammation, securinine promotes innate resistance to infection by activating monocyte/macrophage-specific responses in the absence of effects on the neutrophil. A natural, plant-derived compound, securinine, is known to be safe in humans.

Applications

- Adjunct therapy to compliment vaccines
- Enhanced efficacy of antibiotics
- Combating new and reemerging infections including bioterrorism agents
- Accelerated clearance of pathogens
- Therapy for immune-compromised patients

Benefits

- Targets different receptors—targets receptors for innate resistance that are not addressed by known approaches such as TLR agonists
- Nontoxic
- Efficacious in *in vivo* infection models where minimal benefits of TLR2 and TLR4 agonists are seen

Technology Transfer and Development Status

A Patent is pending and research is ongoing.

Contact for licensing or further details

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