"COMBINATIONS OF DIETARY AND GRAS COMPOUNDS TO ENHANCE DRUG DELIVERY" VCU #10-92

Applications

- Enhancing bioavailability and pharmacokinetics of lipophilic therapeutics
- Novel approach for drug delivery

Advantages

- Enhanced absorption and solubility of lipophilic compounds
- Does not require additional safety testing
- Increased bioavailability of lipophilic compounds

Inventors

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Market Need

Lipophilic compounds such as phenylephrine and resveratol offer promising treatments for a number of diseases. Phenylephrine, in particular, has become a common substitute in many cold/cough products since the availability of pseudoephredrine has been limited. Unfortunately, these compounds have poor bioavailability caused in part by rapid metabolism processes and early elimination of these compounds. Therefore, new approaches for enhancing drug delivery and increasing the bioavailability of these compounds are needed.

Technology Summary

This technology uses a novel approach to enhance the bioavailability of lipophilic drugs by using a combination of compounds that inhibit the rapid metabolism of these drugs. One major advantage of this technology is that it uses combinations of dietary and Generally Recognized As Safe (GRAS) by the FDA compounds, eliminating the need for additional safety tests. The researchers have used different inhibitors and combinations to effectively limit the presystemic metabolism of phenylephrine, thereby increasing its oral bioavailabilty (Fig). This approach can be used with a number of lipophilic compounds to increase the efficacy of these compounds as therapeutic treatments.

Technology Status

Patent pending: U.S. and foreign rights are available.

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