

TRANSDERMAL METFORMIN GEL

Technology Overview

Metformin is a first-line oral anti-diabetic medication. Metformin however has many gastro-intestinal side effects including nausea, vomiting, anorexia, and diarrhea. The Transdermal Metformin Gel allows delivery of the drug through the skin thus bypassing the digestive system. Metformin is joined with a gel called PLO (pluronic, lecithin, isopropyl palmitate, and water.) PLO has a water phase, which allows the drug to be transmitted into the skin.

Potential Fields of Use

This invention allows an alternative delivery of Metformin for patients that cannot take an oral formulation. It can aid patients suffering from conditions like diabetes, obesity, and polycystic ovary syndrome.

Worldwide, diabetes affects close to 250 million people. In the United States, 23.6 million people have been diagnosed with diabetes. From 1990 until 2005 cases of diabetes have doubled. Studies predict that by 2050, 48 million Americans will develop type-2 diabetes. In 2009 alone, \$174 billion dollars was spent in the U.S. directly and indirectly on diabetes.

Benefit Analysis

This invention has many advantages from orally dosed Metformin

- Avoids gastro-intestinal side effects by avoiding the digestive system.
- Potentially reduces cost through fewer side effects.
- Smaller dose is required when Metformin is applied through the skin.

Stage of Development

Encouraging preliminary data has been collected in a small sample human study.

Future Development

Larger sample human testing has been planned before initiating the formal FDA approval studies.

Licensing Opportunities

A provisional patent was filed in 2009. Licensing Opportunities are available.

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