

**Technology**

Oral solution for delivery of nicotine

Inventor

Eric Westman, M.D.
Durham VA Medical Center

Key Features

- Multiple applications including smoking cessation, Alzheimer's disease therapy, attention deficit therapy
- Oral solution without a bitter taste
- Reduces or eliminates gastrointestinal cramping associated with nicotine capsules

Stage of Development

Reduced to practice with successful demonstration in clinical studies

Keywords

Therapeutic
- Nicotine delivery
- Oral nicotine solution
- Smoking cessation
- Alzheimer's disease
- Attention deficit disorder (ADD)

Patent Status

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Contact

Ken Levin, Ph.D.
Technology Transfer Program
Department of Veterans Affairs
Office of Research & Development
(12TT)
810 Vermont Avenue, NW
Washington, DC 20420
Phone: 202-461-1713
Fax: 202-254-0460
E-mail: Ken.levin@va.gov

Solution Containing Nicotine (VA Reference No. 01-094)

Novel method and product for delivering nicotine in a solution that is suitable for oral administration

Technology

The Department of Veterans Affairs has developed a method and product for delivering nicotine in a solution form suitable for oral administration. The invention includes a therapeutic formula to treat various medical conditions, such as to give relief from the craving for tobacco smoking, to treat and alleviate symptoms of attention deficit disorder (ADD), and/or to treat and alleviate the symptoms of Alzheimer's disease (AD).

Description

The technology developed by the VA delivers nicotine in a palatable solution form for oral administration (nicotine in its normal aqueous form is acrid, burning, and bitter in taste). The palatable solution can be used in any aqueous solution such as water, beer, wine, whiskey, milk, soda, or juice; other solvents may be employed as long as they are acceptable for human ingestion and dissolve the nicotine. In addition to a smoking cessation or harm reduction product, the delivery of nicotine could provide therapy to the over 50 million adults that are estimated to have ADD and the 5 million adults suffering from AD.

Competitive Advantage

There are a number of existing nicotine delivery systems available on the market in the form of products that include gums, tablets, lozenges, transdermal patches, inhaler sprays, electronic cigarettes, and salts for retention enema.

This invention:

- Can be delivered without excessive bitter taste.
- May provide an acceptable level of nicotine-related sensory stimulation in the throat that may be important in reducing craving for cigarettes.
- Concentrates nicotine levels in the upper gastrointestinal tract and lessens the likelihood of cramping due to high local concentrations of nicotine, which occurs from swallowing a capsule.

Status

The Department of Veterans Affairs is looking for a partner for further development and commercialization of this technology through a license, and the VA inventors are available to collaborate with interested companies through a Cooperative Research and Development Agreement (CRADA).