



Duke University Office of Licensing & Ventures Technology Opportunity Report #2759

SMOKING CESSATION AND PREVENTION OF RELAPSE

"Giving up smoking is the easiest thing in the world. I know because I've done it thousands of times." **Mark Twain**

The Opportunity: Over 400,000 Americans still die each year from smoking-related diseases. With the best treatments and intervention available, only 25% of smokers are able to stop smoking without relapse within the first year. Stress is the number one precipitator of relapse, and the only currently available treatment is the development of coping skills (behavioral modification). We have developed a novel treatment strategy for smoking cessation and the prevention of relapse using neuro-active compounds that are already present in the human central nervous system and brain. This treatment is non-nicotine based. Patent protection is pending on this technology.

Features of the Technology:

- Compounds are well-tolerated with minimal side effects.
- Compounds have excellent safety profiles.
- Clinical trials are currently underway.
- There are multiple non-invasive routes of administration.
- Treatment can reduce impulsive behaviors and improve stress management.
- Treatment addresses significant unmet clinical need and large population.
- Compounds may be useful in treating other addictive behaviors and impulse disorders.

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Lead Inventors:

Jed Rose, PhD: Dr. Rose is Director of the Duke Center for Nicotine and Smoking Cessation Research (Duke CNSCR) and Medical Research Professor in the Department of Psychiatry at Duke University Medical Center. Dr. Rose is considered one of the leading authorities on the treatment of nicotine addiction. In the early 1980's, Dr. Rose led the initial studies of transdermal nicotine administration, which helped pave the way for the development of commercial nicotine skin patches as a smoking cessation treatment. Since then, his research program has continued to develop novel smoking cessation treatments and to strive toward a deeper understanding of tobacco dependence. His research is currently applying brain imaging methodologies, including positron emission tomography (PET) and functional magnetic resonance imaging (fMRI), to identify brain substrates underlying craving and addiction. In addition, Dr. Rose's team has worked to develop smoking cessation treatments involving the use of nicotinic antagonists and various substitution strategies to alleviate craving for cigarettes.

Christine Marx, MD: Dr. Marx is assistant professor in the department of psychiatry and behavioral sciences at Duke University Medical Center and the Durham VA Medical Center. Her research interest is the relevance of neurosteroids to schizophrenia pathophysiology and antipsychotic drug action.

For Licensing Information, Please Contact:

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