



Duke University Office of Licensing & Ventures Technology Opportunity Report # 2612

A MOUSE MODEL FOR OBSESSIVE COMPULSIVE DISORDER

The Opportunity

Anxiety disorders are the most common mental illness in the US, affecting 18% of the population. Obsessive compulsive disorder (OCD), in particular, is one of the most disabling with a diminished quality of life. Only 50% of patients respond to existing treatments. The global anxiety market is valued at \$4.5 billion and the development of novel therapeutics could greatly enhance this value. Researchers at Duke University have developed a mouse model that can be used in the study of OCD and other anxiety disorders. This model can be utilized to screen for novel pharmacological agents that may be useful in treating these disorders.

The Technology

- The SAPAP3 knockout mouse is the first mouse model of an anxiety disorder
- SAPAP3 deficient mice exhibit increased anxiety and compulsive behaviors associated with OCD due to defects in neurotransmission
- The anxiety-like behavior of these mice is alleviated by administration of Prozac, a common OCD treatment
- Mice could be used as a model to study OCD, as well as other OC-spectrum disorders including Tourette's syndrome, trichotillomania, and body dysmorphic disorder
- Mice or cells lacking SAPAP3 would provide a system to screen for novel therapeutic compounds and assess their effects

Facial lesions caused by compulsive grooming
in SAPAP3 deficient (-/-) mice



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Lead Inventor



Dr. Guoping Feng is an Assistant Professor in the Dept of Neurobiology. His lab is interested in molecular mechanisms regulating the assembly and function of the postsynaptic complex, using genetic approaches in mice to dissect the molecular and cellular basis of behavior and to develop cutting edge genetic tools for probing synaptic and circuitry function and dysfunction in mice

Intellectual Property

Patents pending.

Contact Information

For further information regarding this technology, please contact:

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