Murine model for anorexia nervosa

Technology #cu15171

Anorexia nervosa (AN) is a devastating psychiatric illness in which patients refuse food, in some cases to the point of severe health complications or death. Psychiatric interventions for the disease have not been proven to be effective in many cases, and other avenues of research into treatments for the disease are hindered by a lack of animal models. This technology is a mouse model for AN. It can potentially be used to study the progression of the disease and to identify therapeutics to treat it.

Mice with mutant Val66Met gene display AN-like symptoms and have unique neurochemistry

This technology takes advantage of the brain-derived neurotrophic factor Val66Met gene variant that is associated with a number of psychiatric disorders. Mice with the mutant version of the gene display symptoms consistent with AN in humans, including anxiety and self-imposed food withdrawal, as well as aphagia, all of which are further aggravated by environmental and social stresses. These mice were also shown to have increased circulating levels of arginine vasopressin (AVP) and increased expression of its receptor, AVPR1A, suggesting AVP as a potential therapeutic target.

A press release highlighting this technology can be found here.

Lead Inventor:

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Applications:

- Research tool for investigating the pathology of anorexia nervosa
- Development of treatments for anorexia nervosa
- Identification of individuals at risk for development of anorexia nervosa

Advantages:

- First animal model for anorexia nervosa
- Has been used to identify a potential therapeutic target arginine vasopressin
Patent Information:

Patent Pending
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Inventors

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