Norepinephrine transporter Knockout Mice

Duke University is seeking a company interested in commercializing a novel and versatile animal model of anti-depressant-related patients. Depression is the fourth leading contributor of disease worldwide with 18.8 million adult sufferers in the United States alone. Treatment of patients with anti-depressants has led to a world-wide market worth $20 billion. Currently, there are multiple classes of anti-depressants including the selective serotonin-reuptake inhibitors (SSRIs), serotonin-norepinephrine reuptake inhibitors (SNRIs), as well as the newer triple reuptake inhibitors (TRIs). These inhibitors work by targeting reuptake of one or more of the monoamines implicated in depression (serotonin norepinephrine and dopamine) to increase brain levels of monoamines. More specifically, anti-depressants generally function by blocking monoamine transporters which typically function to maintain monoamine levels.

To further understand the function of the monoamine norepinephrine and its transporter, Duke University researchers have recently deleted the norepinephrine transporter (NET) in mice. Given the similar function of norepinephrine-targeting anti-depressants and NET, these mice present a unique opportunity as animal model of anti-depressant-treated patients.

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