The translation of basic laboratory research findings to clinical application of new therapeutic strategies targeting neurological and psychiatric disorders is critically dependent on the predictive value of preclinical models of human disease. The ultimate goal of translational research is to provide effective or alternative treatments for humans suffering from disease. Given the exorbitant cost of human clinical trials and human cost of expectations for relief, valid preclinical models are essential to facilitate cost-effective and efficient transition of findings from animal models to the human condition.

It is your task to evaluate and discuss at least one example each of successful and unsuccessful translation of laboratory findings in animal models to potential clinical application in neuroscience (Examples: Aum DJ & Tierney TS 2018, Deep brain stimulation: foundations and future trends; Ennaceur A & Chazot PL 2016, Preclinical animal anxiety research-flaws and prejudices; Eckert WA 2011, Rodent Models of Persistent Pain in Drug Discovery and Development; Miczek KA & deWit H 2008, Challenges for translational psychopharmacology research-some basic principles).

Your responses must address:

1. The clinical problem, rationale for the intervention, and preclinical testing and validation with an emphasis on specific animal models of neurological or psychiatric disorders.
2. For each model, highlight the strengths and weaknesses regarding outcomes observed in relevant clinical trials.
3. Provide an overall conclusion on the strengths and weaknesses in utilizing preclinical animal models of human disorders and provide suggestions on how the translational effectiveness from lab to clinic may be improved.

Please limit your answer to 10-15 pages, double-spaced, excluding references.
Be sure to support your statements with proper literature citations.