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Opinion

Pharmacovigilance and Behavioral Research

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Opinion

Pharmacovigilance is a clinical discipline in its own right. It contributes to an ethos of safety and serves as an indicator of the standards of clinical care practiced within a country. In the last decade the field of neuroscience has accepted behavioral research as a necessary part of studies that previously contained only cellular or histologic findings. Behavioral assessment has become a part of Pre-clinical Pharmacovigilance. Pharmaceutical companies and toxicologist find themselves needing to comprehensively assess drug efficacy in a high throughput fashion, something that can take years to do in both humans and non-human primates over the course of the life span. Here transgenic mice have contributed enormous amount of data to this subject.

Genetically mutated mice are engineered to determine the effects of a specific gene, or intervention, in an effort to mimic human symptom. The development of the transgenic mouse, allows pre-clinical screening, on a mass level in a comparatively short period of time. The major concern for drug research studies are to accurately determine what changes can be attributed to the drug as opposed to the changes in behavior due to transgene manipulation. Therefore prior to using the mouse model the researcher needs to know what changes the gene modification has caused in the mouse model. Behavioral phenol typing is done. Currently such research is being done for Alzheimer's disease. The Alzheimer's disease (AD) mouse model carries the human gene for amyloid precursor protein, which is responsible for the formation of AD like plaques in humans. Such activity has also being done for Huntington's disease. Behavioral research identifies subtle phenotypic behavioral changes early in experimentation, and ones closely related to human behavior. This helps to streamline the pre-clinical drug efficacy process and increases pre-clinical pharmacovigilance [1-4].

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