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Transgenic and Knockout Models of Neuropsychiatric Disorders, *edited by Gene S. Fisch, Ph.D., and Jonathan Flint, M.D., M.R.C.Psych. Totowa, N.J., Humana Press, 2006, 312 pp., $145.00.*

Modeling human neuropsychiatric disorders in animals has long been a goal of behavioral scientists seeking to understand the etiology of a given disorder or develop a new treatment approach. But can we really model disorders which are, by definition, uniquely human in infrahuman organisms? Since infrahuman creatures cannot talk to us, we cannot know if they feel or think the same things humans feel or think when depressed or suffering from autism or schizophrenia. The advent of genetic manipulation procedures has dramatically broadened the scope and variety of mouse models available for examining a host of disorders, from kidney failure to schizophrenia. But how closely do these genetically manipulated mice model neuropsychiatric disorders? What can we learn from them and what are the limitations of this knowledge as it applies to humans? This book, edited by Drs. Fisch and Flint, explores these questions from a broad and well-balanced perspective, detailing which models are available but also acknowledging the limitations inherent in these models and in the data derived from them. Extensive individual chapters dealing with specific disorders have been contributed by expert scientists in each area.

The book is divided into three sections. The first chapters give an overview of early debates on whether animals have minds and are capable of thoughts and emotions analogous to those in humans. The text then moves forward historically through the first operant conditioning studies and the advent of behaviorism to the present explosion of genetically manipulated mouse models, including transgenic and null-mutant mice. Another chapter gives a general discussion of the relevant models of human psychiatric disorders, including a review of the relevance of potential gene and environmental interactions and the impact of small genetic contributions to a complex, multigenic disorder. There are also two chapters that provide an excellent debate on the implications of the lack of language in mouse models on their relevance to human disorders, the interpretation of data, and implication for the human condition.

The second and third sections deal with specific models; the second is devoted to assessing models of neurocognitive dysfunction, while the third assesses models of neuropsychiatric dysfunction. The second section includes chapters on models of spinocerebellar ataxia, hereditary mental retardation, human speech and language disorders, and autism. The last section begins with a general overview of the advantages, limitations, and challenges of genetic mouse models of psychiatric disorders and goes on to assess models of psychosis, anxiety and depression, and bipolar disorder. Currently available models are presented for each disorder, as well as their advantages and limitations. This discussion is followed with scientific findings from these models, how this information has impacted research in the specific disorder, and what remains to be done. Where adequate models do not exist, there is a discussion of what a relevant model should include and what studies are needed to both validate the model and move knowledge of the disorder forward.

This book provides a condensed and very readable compilation of state-of-the-art mouse models of neuropsychiatric disorders and, as such, is an excellent primer for scientists seeking to gain an understanding of what genetic mouse models are currently in use. The book also points the way for future development of additional models and testing paradigms. This is an outstanding reference book for the practicing behavioral scientist and for students of the discipline.

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Biomedical Ethics: A Multidisciplinary Approach to Moral Issues in Medicine and Biology, *edited by David Steinberg. Lebanon, N.H., University Press of New England, 2007, 346 pp., $40.00.*

> Ethics is pertinent to all fields of human endeavor. Ethical questions emerge in public, professional, and personal affairs. They exist in business, science, law, engineering, politics, agriculture, and military affairs. This volume is devoted to ethical dilemmas in the practice of clinical medicine (medical ethics) and related biological and technological fields (bioethics). These areas may overlap; both arenas are encapsulated in the term biomedical ethics. Although their deliberations may on occasion take a turn into obscure alleys, medical ethics and bioethics are not esoteric theoretical activities because they intimately affect our lives and the lives of the people we care about. The ability to remove your dying grandmother from a mechanical ventilator that would only prolong her suffering, your protection against becoming a research subject without having given informed consent, and your ability to obtain a fairly allocated organ for transplantation are recognized rights as a consequence of antecedent ethical debate. It is virtually certain that some matter of biomedical ethics either has or will intimately affect your life. (p. 3)

This excellent reader in medical bioethics consists of several dozen short essays written for the *Lahey Clinic Medical Ethics Journal* and compiled and edited by David Steinberg, M.D., the long-serving editor of that journal (formerly known as the *Lahey Clinic Medical Ethics Newsletter*). The essays date from 1995 to the present and are mostly written by clinicians and bioethicists from New England, where the Lahey Clinic is located, and in a few cases, from other countries.

The book is organized into six sections, "The Nature of Biomedical Ethics," "The Power of Language," "Novel Technologies," "In the Clinical Arena," "Ethics and the Law," and "Ethics and the Humanities." All but the last of the sections start with well-written introductions by the editor, summarizing nicely the ideas set forth by the essayists within the sections. The last section consists of thoughtful reviews of books (e.g., *The Sweet Hereafter* and *Darkness Visible: A Memoir of Madness*), films