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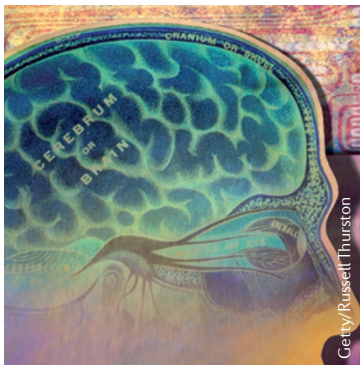

Animal models of schizophrenia p560

Over the past 25 years, monoclonal antibody-based therapeutics have become established as effective medicines for several serious diseases. However, it is only recently that antibodies have also emerged as valuable tools to inform small-molecule drug discovery. In a Perspective article, Lawson discusses the application of antibodies in the validation of targets and design of screening assays, as well as their potential to aid the identification of modulators of traditionally intractable targets, particularly protein–protein interactions. The patents of several biological drugs, including leading monoclonal antibodies, are due to expire soon, providing opportunities to develop biosimilar versions. Yet, the complexity of such biopharmaceuticals raises novel challenges for the development and regulatory evaluation of biosimilars. In their Review, Jones and colleagues discuss key issues in assessing the comparability of biosimilars to pioneering biologics and describe analytical technologies that may be used to measure characteristics such as post-translational modifications that regulatory authorities have identified as being important in such comparisons. Monoclonal antibodies have a range of therapeutic applications in ocular disorders, particularly those targeting angiogenic factors in the treatment of age-related macular degeneration, diabetic macular oedema and retinal vein-occlusive diseases. Focusing on retinal diseases and glaucoma, Zhang and colleagues provide an overview of disease pathogenesis, highlighting recent innovations in ophthalmic drug discovery and delivery. Finally, Pratt and colleagues consider the limitations of current schizophrenia therapies and suggest that the lack of suitable preclinical models may be a key factor hampering the development of novel treatments. They propose how the use of new rodent models, in conjunction with translationally relevant end-point assessments, could increase the chances of success in schizophrenia drug discovery.

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