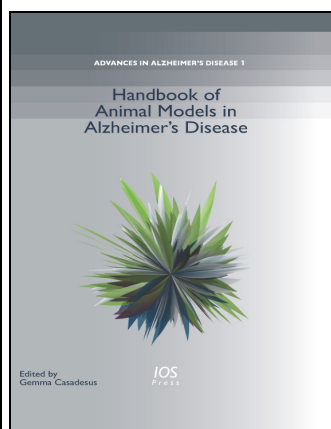


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Handbook of Animal Models in Alzheimer's Disease

Volume 1 Advances in Alzheimer's Disease

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Animals have been used to model diseases or test new treatments since around 300 BC, and undoubtedly our ability to model disease in animals – including transgenic animals – has provided major breakthroughs in all fields of biomedical research. Due to their complexity and plurality of pathology and symptomatology, the study of neurodegenerative diseases relies heavily on animal models. These models have been developed in many species in the attempt to undercover the complex nature of the disease mechanisms involved. The ultimate goal is to test promising therapies and to manage, prevent or cure neurodegenerative disease. But because most animal models in this area do not reproduce the full phenotypical disease spectrum and the etiology and clinical presentation of neurodegenerative diseases differ from one patient to the next, the testing of these diseases in animal models often translates poorly to indices of efficacy when applied to the clinical population. Written by experts in the field with these advances and challenges in mind, this handbook provides an updated overview of the animal models being developed and used to study complex disease dynamics. The first part of the book presents an overview of animal models of various species and includes a review of new invertebrate animal models to study neurodegeneration. The second section presents the use of animal models to pinpoint disease mechanisms, and the last part of the handbook examines the various therapeutic interventions being used in models of neurodegenerative disease.

Contents:

Overview of Animal Models of Alzheimer's Disease

- Estimation of Working Memory in Macaques for Studying Drugs for the Treatment of Cognitive Disorders / J.J. Buccafusco
- The Canine Model of Human Aging and Disease / C.W. Cotman and E. Head
- Unveiling "The Switch" from Aging to Alzheimer's Disease with the Senescence-Accelerated Mouse Model (SAMP8) / J. Chang, M. Pallas, X. Zhu, H.-J. Kim, A. Camins, H.-G. Lee, G. Perry, M.A. Smith and G. Casadesus
- Alzheimer's Disease Selective Vulnerability and Modelling in Transgenic Mice / J. Götz, N. Schonrock, B. Vissel and L.M. Ittner
- The Cholesterol-Fed Rabbit as a Model of Alzheimer's Disease: The Old, the New and the Pilot / D.L. Sparks
- A Rabbit Model of Alzheimer's Disease: Valid at Neuropathological, Cognitive, and Therapeutic Levels / D.S. Woodruff-Pak, A. Agelan and L. Del Valle
- Transgenic Drosophila Models of Alzheimer's Amyloid- β 42 Toxicity / K. Iijima and K. Iijima-Ando

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- Estrogen, Progesterone and Hippocampal Plasticity in Rodent Models / *M.R. Foy, M. Baudry, R. Diaz Brinton and R.F. Thompson*
- Apparent Behavioral Benefits of Tau Overexpression in P301L Tau Transgenic Mice / *D. Morgan, S. Munireddy, J. Alamed, J. DeLeon, D.M. Diamond, P. Bickford, M. Hutton, J. Lewis, E. McGowan and M.N. Gordon*
- Activation of Cell Cycle Proteins in Transgenic Mice in Response to Neuronal Loss But Not A β and Tau Pathology / *J.P. Lopes, M. Blurton-Jones, T.R. Yamasaki, P. Agostinho and F.M. LaFerla*
- Electron Microscopic 3D Reconstruction Analysis of Amyloid Deposits in 3xTg-AD Mice and Aged Canines / *P. Nuntagij, S. Oddo, F.M. LaFerla, N. Kotchabhakdi, O.P. Ottersen and R. Torp*
- The Cholesterol-Fed Rabbit as a Model System for Cholesterol-Alzheimer's Disease Studies / *R.P.J. Prasanthi, G. Marwarha and O. Ghribi*
- Hepatic Ceramide May Mediate Brain Insulin Resistance and Neurodegeneration in Type 2 Diabetes and Non-alcoholic Steatohepatitis / *S.M. De La Monte, L.E. Lyn-Cook Jr., M. Lawton, M. Tong, E. Silbermann, L. Longato, P. Jiao, P. Mark, H. Xu and J.R. Wands*
- Animal Model of Insulin-Resistant Brain State: Intracerebroventricular Streptozotocin Injection Deteriorates Alzheimer-Like Changes in Tg2576 APP-Overexpressing Mice / *K. Plaschke, J. Kopitz, M. Siegelin, R. Schliebs, M. Salkovic-Petrisic, P. Riederer and S. Hoyer*
- Hippocampal Alterations in Rats Submitted to Streptozotocin-Induced Dementia Model: Neuroprotection with Aminoguanidine / *L. Rodrigues, R. Biasibetti, A. Swarowsky, M.C. Leite, A. Quincozes-Santos, M. Achaval and C.-A. Gonçalve*

Alzheimer's Disease Therapies Using Animal Models

- Developing Immunotherapies for Alzheimer's Disease Using a Cholesterol-Fed Rabbit Model in the Context of Th Cell Differentiation / *R. Coico and D. Woodruff-Pak*
- Anti-Amyloid- β Immunotherapy in Alzheimer's Disease: Relevance of Transgenic Mouse Studies to Clinical Trials / *D.M. Wilcock and C.A. Colton*
- Heterogeneity in Red Wine Polyphenolic Contents Differentially Influences Alzheimer's Disease-Type Neuropathology and Cognitive Deterioration / *L. Ho, L.H. Chen, J. Wang, W. Zhao, S.T. Talcott, K. Ono, D. Teplow, N. Humala, A. Cheng, S.S. Percival, M. Ferruzzi, E. Janle, D.L. Dickstein and G.M. Pasinetti*
- Delivery of NGF to the Brain: Intranasal Versus Ocular Administration in Anti-NGF Transgenic Mice / *S. Capsoni, S. Covaceuszach, G. Ugolini, F. Spirito, D. Vignone, B. Stefanini, G. Amato and A. Cattaneo*
- Cholinomimetic Actions of Memantine on Learning and Hippocampal Plasticity / *B. Drever, W. Anderson, H. Johnson, M. O'Callaghan, S. Seo, D.-Y. Choi, G. Riedel and B. Platt*
- Cognitive Performances of Cholinergically Depleted Rats Following Chronic Donepezil Administration / *D. Cutuli, F. Foti, L. Mandolesi, P. De Bartolo, F. Gelfo, D. Laricchiuta and L. Petrosini*

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