

## **I. Dementia: Introductory Chapters and Setting the Scene**

1. Mixed dementia: an overview

*Jaques J. De Reuck*

2. Vascular dementia: an overview

*Virginia Cipollini*

3. Small vessel disease and dementia

*Francesco Arba*

4. Linking Amyotrophic lateral sclerosis (ALS) and Frontotemporal dementia

*Philippe Couratier*

5. Mortality in dementia: linking in delirium

*Thiago Silva*

6. Midlife diabetes and the risk of dementia- understanding the link

*Sean Kennelly and Adam H. Dyer*

7. Gait and Alzheimer's disease /Gait and dementia

*Michele Linda Callisaya*

8. Hypertension and dementia

*Rebecca F. Gottesman*

9. Genetics of dementia: focus on Alzheimer's disease

*Francesca Fernandez*

10. Clinical and pathological phenotypes in autosomal dominant frontotemporal dementia

*Innocenzo Rainero*

11. Risk factors in dementia: genetic and nongenetic

*Evangelos Evangelou*

12. Lipidomics and biomarker in Alzheimer's disease

*Perminder S. Sachdev and UNSW*

13. The 5xFAD mouse model of Alzheimer's disease

*Sylvie Claeysen*

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14. Use of cerebrospinal fluid in diagnosis of dementia

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15. Salivary biomarkers in Alzheimer's disease

*Francesca Fernandez*

16. Diacylglycerols as biomarkers in dementia

*Paul Wood*

17. Butyrylcholinesterase (BChE) as a biomarker in Alzheimer's disease

*Sultan Darvesh*

18. Blood brain-derived neurotrophic factor as a biomarker of Alzheimers disease

*Marta Balietti*

19. Methods of amyloid PET Imaging and its applications to Alzheimer's disease spectrum

*Shizuo Hatashita Sr.*

20. Applications of diffusion-weighted imaging (DWI) Tractography and Alzheimer's disease

*Nicola Amoroso*

21. Transcranial Magnetic stimulation and diagnostic applications to dementias

*Matthew Kiernan and Thanuja Dharmasada*

22. Retinal imaging and dementia as a diagnostic tool

*Carol Y. Cheung*

23. The prediction of Alzheimer's disease

*Athanasios Alexou*

24. Addenbrooke's Cognitive Examination

*Jordi A. Matias-Guiu*

25. The Montreal Cognitive Assessment (MoCA) and applications to dementia

*Andrea Bosco*

26. ALBA Screening Instrument (ASI) and applications to dementia

*Angel Golimstok*

27. The Quick Mild Cognitive Impairment (Qmci) screen and applications to dementia

*Roger Clarnette*

28. Assessment of activities of daily living (ADL) applied to dementia

*Patricia De Vriendt*

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30. Choline-containing phospholipids and treatment of adult-onset dementia disorders

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31. Donepezil usage: a focused review

*Francesco Amenta*

32. Memantine: a focused review

*Sergio del Rio Sancho*

33. The benefits of calcium channel blockers for the therapy of dementia

*L. Bergantin*

34. Pitfalls for pharmacotherapeutic trials in dementia

*T. Mueller*

35. All-trans retinoic acid in Alzheimer's disease

*Siamak Beheshti*

36. Dementias and usage of NMDA receptor antagonists

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38. Linking astrocytes' exosomes to Alzheimer's pathogenesis and therapy

*Anna Chiarini*

39. Changing the fate: therapeutic mechanisms focus on the switch of beta-amyloid precursor protein (APP)

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*Kristina Endres*

40. Acetylcholinesterase inhibitory agents in plants and application to dementia: Alzheimers Disease

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41. Removal of blood amyloid as a safety strategy

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45. Aromatherapy in dementia

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46. Dancing in dementia

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50. Cognitive behavioural therapy (CBT) use in Alzheimer's disease

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51. Maximizing cognition in Mild Cognitive Impairment and early-stage dementia

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*Paul D. Loprinzi*

53. Linking care staff, person-focused communications and dementias

*Marie Y. Savundranayagam*

#### **GENETICS, NEUROLOGY, BEHAVIOR, AND DIET IN DEMENTIA**

##### **I. Genetics, Molecular and Cellular Biology**

1. The genetics of Alzheimer's disease: a focus on the neuron navigator 2 gene

*Kesheng Wang and Chun Xu*

2. Interlinking polymorphisms, estrogens and Alzheimer's disease

*Y. Q. Song*

3. Linking EEGs, Alzheimer's disease and the Phosphatidylinositol binding clathrin assembly protein (PICALM) gene

*Natalya Ponomareva*

4. CD36 gene polymorphism and Alzheimer's disease

*O. Sery*

5. Genetic contributions to sporadic frontotemporal dementia

*Jennifer S. Yokoyama and Jessie S. Carr*

6. Dementia and CYP2D6 polymorphisms

*P. Caramelli*

7. A1 purinergic receptor gene expression in dementia

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8. Molecular aspects of metallothionein-1 in dementias

*Juan Hidalgo*

9. MicroRNAs in Alzheimer's disease

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10. Oxidative stress and neurons in dementia

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11. Toward an integrative understanding of the neuroinflammatory molecular milieu in Alzheimer's disease neurodegeneration

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12. Wnt Signalling and dementia

*A. Angeles Martin-Requero Sr.*

13. Linking PKC, PKC $\lambda$  and Alzheimer's disease

*Robert V. Farese*

14. Linking histone deacetylases, phosphodiesterase 5 and novel treatments Alzheimer's disease

*Ana Garcia-Osta*

15. Linking Nrf2 and Alzheimer's disease

*Joshua Park*

16. Role of alpha- and beta-secretase in Alzheimer's disease

*Kristina Endres*

17. Methylation analysis of DNA in Alzheimer's disease

*Fabio Coppedè*

18. The signalosome malfunctions in age-associated neuropathologies

*Raquel Marin*

19. ILE1/FAM3C in Alzheimer's disease

*Masaki Nishimura*

20. Amylin and Alzheimer's disease

*Jack H. Jhamandas*

21. Mammalian target of rapamycin (mTOR) complexes: Regulation and Alzheimer's disease

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22. Mammalian target of rapamycin (mTOR) complexes: Protein synthesis and autophagy, Parkinson's Disease, Amyotrophic Lateral Sclerosis and frontotemporal dementia

*Henry Querfurth and Han Kyu Lee*

23. Linking CD200 in brains and dementia: molecular aspects of neuroinflammation

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24. Hippocampal atrophy and dementia

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25. Inflammation and insulin resistance in AD: partners in crime

*D. Frenkel*

26. Neuronal susceptibility to hypoxia in Alzheimer disease

*Laura Calza*

27. Neuropeptides and Neurolipids: what they are and how they relate to Alzheimer's disease

*Rafael Rodriguez*

28. Brain receptors in Alzheimer's disease

*Rafael Rodriguez*

29. Abeta42-alpha7-like nicotinic acetylcholine receptors and Alzheimer's disease

*Hoau-Yan Wang*

30. Synaptosomal bioenergetics in Alzheimer's disease

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31. Limitations of amyloid-PET imaging

*David Weidman*

32. Linking Gradient Echo Plural Contrast Imaging (GEPCI) Metrics of Tissue Microstructure with Alzheimer

*Dmitry A. Yablonskiy*

33. Hypertensive disorders in pregnancy and later dementia

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34. Sleep architecture and the development of clinical dementia

*Matthew Paul Pase*

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35. An overview of behavioural and psychiatric symptoms of dementia

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36. Delirium superimposed on dementia: from diagnosis to treatment

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39. Frontal Lobe Syndrome and Dementias

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40. The stigma of dementia

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41. Delusions in dementias

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42. Linking motor speech function and dementia

*Adam P. Vogel and Matthew Poole*

43. Spatial Navigation and Alzheimer's disease

*Benjamin Clark*

44. Violence and dementia

*G. Cipriani and Sabrina Danti*

45. Caregiver depression in dementia

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### **IV. Diet, Nutrition and Environment**

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47. Selenium and Alzheimer's disease

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48. Linking adiponectin and obesity in dementia

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49. The gut microbiome in Alzheimer's Disease

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50. (-)-epigallocatechin-3-gallate (EGCG) and Alzheimer disease

*Rafael de la Torre and Laura Xicota*

51. Cadmium and Alzheimer's disease

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53. Use of 192 IgG-saporin as a model of dementia and its application

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54. Abeta1-42 oligomer animal model of dementia

*Josiane Budni*

Resources

*Rajkumar Rajendram*