The Neuropathology of Dementia

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Second Edition

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Abbreviations

Aβ	beta amyloid peptide
AD	Alzheimer's disease
ALS	amyotrophic lateral sclerosis
APP	beta amyloid precursor protein
ApoE	apolipoprotein E protein
*APOE*ε	apolipoprotein E alleles
CAA	congophilic amyloid angiopathy
CJD	Creutzfeldt–Jakob disease
CNS	central nervous system
CSF	cerebrospinal fluid
CT	computerized tomography
DLB	dementia with Lewy bodies
DRPLA	dentate-rubro-pallido-luysian atrophy
FTD	frontotemporal dementia
FTDP-17	frontotemporal dementia with parkinsonism linked to chromosome 17
FTLD	frontotemporal lobar degeneration
GFAP	glial fibrillary acidic protein
GSS	Gerstmann–Sträussler–Scheinker syndrome
HD	Huntington's disease
IHC/ICC	immunohisto/cytochemistry
MAP	microtubule-associated protein
MND	motor neuron disease
MRI	magnetic resonance imaging
MT	microtubule(s)
NFT	neurofibrillary tangle
PD	Parkinson's disease
PDC	Parkinson–dementia complex
PHF	paired helical filament(s)
PiD	Pick's disease
PrP	prion protein
PSP	progressive supranuclear palsy
SF	straight filament(s)
TG	transgenic
VaD	vascular dementia
WM	white matter
WT	wild type

Preface to second edition

The first edition of this book was conceived with the intention of providing a practical guide to the neuropathological diagnosis of dementia. It was intended particularly for those who did not regard themselves as experts in this increasingly complex field. The relatively small number of authors was encouraged to share their diagnostic experience with others. This second edition still aims to provide practical assistance in this way, but it now goes further than that. The pace of scientific research advances in this field of dementia is such that it has become a formidable enough task for an expert to remain fully conversant with his or her own subfield, let alone with the field as a whole. Therefore we have aimed to widen the authorship greatly so that many chapters could be written by those specialists with research interests in the topic that is covered by each. We are delighted that those approached have responded so generously and enthusiastically since the outstanding contributions from the authors have made the second edition the most up-to-date and comprehensive monograph on the neuropathology of dementia. Because of the wider international authorship it has also been possible to extend the scope of the coverage of each topic to include more about research findings and the background science so that the book can now claim to provide comprehensive coverage of current understanding of the dementias rather than a more restricted practical guide. We hope, therefore, that a wider readership of neurobiologists and clinicians as well as pathologists will find much of interest here. Those familiar with the first edition will find that there are many new chapters and even more new authors contributing to the second edition. In addition, many more of the illustrations are now in colour in order to provide maximum assistance with diagnosis and to add extra clarity generally. The book has been rapidly produced and is therefore thoroughly up-to-date – an essential feature when covering a fast-developing field.

We particularly want to thank our authors and publisher for their splendid efforts on which the success of the book depends. We hope that you, our readers, will find it comprehensive, readable and, above all, useful.