

## **MICHEL GOEDERT: CURRICULUM VITAE**

### **Address**

Medical Research Council (MRC) Laboratory of Molecular Biology  
Francis Crick Avenue, Cambridge CB2 0QH, United Kingdom  
Phone: 0044 1223 267056  
Fax: 0044 1223 268305  
E-mail: mg@mrc-lmb.cam.ac.uk

### **Date and place of birth**

May 22, 1954, Luxembourg. Luxembourg national.

### **Education**

Secondary school diploma, Luxembourg 1973.

### **Medical studies**

Medical School, University of Basel, Switzerland, 1973-1980.  
Student in the Department of Pharmacology, Biozentrum of the University of Basel (H. Thoenen). M.D. degree, Basel 1980.

### **Ph.D. studies**

Ph.D. in Pharmacology, University of Cambridge, United Kingdom, 1981-1984. Member of Trinity College. Student in the Medical Research Council (MRC) Neurochemical Pharmacology Unit (L.L. Iversen). Ph.D. degree, Cambridge 1984.

### **Postdoctoral training**

Postdoctoral Fellow, Department of Pharmacology, Biozentrum of the University of Basel, 1980-1981.  
Postdoctoral Fellow, MRC Laboratory of Molecular Biology, Cambridge, 1984-1987.

### **Previous position**

Head (sole or joint) of the Division of Neurobiology, MRC Laboratory of Molecular Biology, Cambridge, 2003-2016.

### **Current position**

Programme Leader (since 1988), MRC Laboratory of Molecular Biology, Cambridge.

### **Honours**

Winner of the "5th European Contest for Young Scientists and Inventors", London 1973.  
Hoechst Foundation Award 1981.  
Metropolitan Life Foundation Award for Medical Research, Washington D.C. 1996.  
Elected to the Membership, European Molecular Biology Organization (EMBO), Heidelberg 1997.  
Potamkin Prize for Pick's, Alzheimer's and Related Disorders, American Academy of Neurology, Minneapolis 1998.  
Elected to the Fellowship, The Royal Society of London 2000.  
Prix Lions, Luxembourg 2002.  
Elected to the Fellowship, U.K. Academy of Medical Sciences 2006.  
European Grand Prix for Research 2014, Fondation pour la Recherche sur Alzheimer, Paris.  
Honorary Professor of Experimental Molecular Neurology, Department of Clinical Neurosciences, University of Cambridge 2014.  
Theodore L. Sourkes Award and Lecture, McGill University, Montreal 2016.  
The Brain Prize, Lundbeck Foundation, Copenhagen 2018.  
Honorary Doctorate, University of Dundee 2018.

### **Committee memberships**

MRC Neurosciences and Mental Health Board Grants Committee, 1991-1995.  
Scientific Advisory Board, Alzheimer's Research Trust, 1998-2004.  
Committee advising the U.K. Government on the Origin of BSE  
(Horn Committee), 2001.  
Research Appointments Panel B(i), The Royal Society, 2001-2004.  
Sectional Committee 10, The Royal Society, 2007-2009.  
EMBO Membership Committee, 2009-2011.  
MRC Neurosciences and Mental Health Board, 2008-2012.  
Biological Sciences Awards Committee, The Royal Society, 2011-2014.  
Cambridge Neuroscience Committee, 2009-2016.  
Conseil de Gouvernance, Université du Luxembourg, 2004-present.  
Research Committee, U.K. Progressive Supranuclear Palsy Association, 2014-present.  
Research Strategy Board, Parkinson's U.K., 2015-present.  
Scientific Advisory Board, Fondation pour la Recherche sur Alzheimer, Paris, 2016-present.  
Sectional Committee 8, The Royal Society, 2018-present.  
Scientific Advisory Board, Institut Baulieu, Paris, 2018-present.

## BIBLIOGRAPHY

### MICHEL GOEDERT

H-index (Web of Science) = 113

#### Research articles

Goedert, M.: *Agrobacterium tumefaciens* (Smith et Town) Conn: Détermination des concentrations minimales inhibitrices de différents antibiotiques et sulfamides. Annales de Microbiologie (Institut Pasteur), 124A, 237-241 (1973).

Goedert, M., Schaeffer, F. and Neuberg, P.: White cells and uric acid in alcoholism. The Lancet, i, 52 (1975).

Goedert, M. and Bühler, F.R.: Nerve growth factor antibodies in idiopathic orthostatic hypotension? New England Journal of Medicine, 297, 336-337 (1977).

Goedert, M., Otten, U. and Thoenen, H.: Biochemical effects of antibodies against nerve growth factor on developing and differentiated sympathetic ganglia. Brain Research, 148, 264-268 (1978).

Goedert, M., Otten, U. and Thoenen, H.: Biochemical effects of nerve growth factor and its antibody on the vas deferens and the adrenal medulla. Neuroscience Letters, 8, 71-76 (1978).

Goedert, M.: The role of nerve growth factor for the development and function of the peripheral sympathetic nervous system. M.D. thesis, University of Basel 1978.

Otten, U., Goedert, M., Schwab, M. and Thibault, J.: Immunization of adult rats against 2.5 S NGF: Effects on the peripheral sympathetic nervous system. Brain Research, 176, 79-90 (1979).

Goedert, M., Otten, U., Suda, K., Heitz, P.U., Stalder, G.A., Obrecht J.P., Holzach, P. and Allgöwer, M.: Dopamine, norepinephrine and serotonin production by an intestinal carcinoid tumor. Cancer, 45, 104-107 (1980).

Otten, U., Goedert, M., Mayer, N. and Lembeck, F.: Requirement of nerve growth factor for development of substance P-containing sensory neurones. Nature, 287, 158-159 (1980).

Goedert, M., Otten, U., Schäfer, T., Schwab, M. and Thoenen, H.:

Immunosympathectomy: Lack of evidence for a complement-mediated cytotoxic mechanism. *Brain Research*, 201, 399-409 (1980).

Otten, U., Goedert, M., Baumann, J.B. and Girard, J.: Stimulation of the pituitary-adrenocortical axis and induction of tyrosine hydroxylase by nerve growth factor are not dependent on mouse submaxillary gland isorenin. *Brain Research*, 217, 207-211 (1981).

Goedert, M., Stoeckel, K. and Otten, U.: Biological importance of the retrograde axonal transport of nerve growth factor in sensory neurons. *Proceedings of the National Academy of Sciences (USA)*, 78, 5895-5898 (1981).

Mayer, N., Lembeck, F., Goedert, M. and Otten, U.: Effects of anti NGF-antibodies on the development of postnatal substance P-containing sensory neurons. *Neuroscience Letters*, 29, 47-52 (1982).

Emson, P.C., Goedert, M., Horsfield, P., Rioux, F. and St. Pierre, S.: The regional distribution and chromatographic characterization of neuropeptidyl-like immunoreactivity in the rat central nervous system. *Journal of Neurochemistry*, 38, 992-999 (1982).

Goedert, M., Lightman, S.L., Nagy, J.I., Marley, P.D. and Emson, P.C.: Neuropeptidyl in the rat anterior pituitary gland. *Nature*, 298, 163-165 (1982).

Goedert, M., Nagy, J.I. and Emson, P.C.: The origin of substance P in the rat submandibular gland and its major duct. *Brain Research*, 252, 327-333 (1982).

Nagy, J.I., Goedert, M., Hunt, S.P. and Bond, A.: The nature of the substance P-containing nerve fibres in taste papillae of the rat tongue. *Neuroscience*, 7, 3137-3151 (1982).

Goedert, M., Reynolds, G.P. and Emson, P.C.: Neuropeptidyl in the adrenal medulla. *Neuroscience Letters*, 35, 155-160 (1983).

Nagy, J.I., Iversen, L.L., Goedert, M., Chapman, D. and Hunt, S.P.: Dose-dependent effects of capsaicin on primary sensory neurons in the neonatal rat. *The Journal of Neuroscience*, 3, 399-406 (1983).

Goedert, M. and Emson, P.C.: The regional distribution of neuropeptidyl-like immunoreactivity in central and peripheral tissues of the cat. *Brain Research*, 272, 291-297 (1983).

Goedert, M., Mantyh, P.W., Hunt, S.P. and Emson, P.C.: Mosaic distribution of neuropeptidyl-like immunoreactivity in the cat striatum. *Brain*

Research, 274, 176-179 (1983).

Bannon, M.J., Elliott, P.J., Alpert, J.E., Goedert, M., Iversen, S.D. and Iversen, L.L.: Role of endogenous substance P in stress-induced activation of mesocortical dopamine neurones. *Nature*, 306, 791-792 (1983).

Goedert, M., Mantyh, P.W., Emson, P.C. and Hunt, S.P.: Inverse relationship between neurotensin receptors and neurotensin-like immunoreactivity in the cat striatum. *Nature*, 307, 543-546 (1984).

Goedert, M., Otten, U., Hunt, S.P., Bond, A., Chapman, D., Schlumpf, M. and Lichtensteiger, W.: Biochemical and anatomical effects of antibodies against nerve growth factor on developing rat sensory ganglia. *Proceedings of the National Academy of Sciences (USA)*, 81, 1580-1584 (1984).

Goedert, M., Lightman, S.L., and Emson, P.C.: Neurotensin in the rat anterior pituitary gland: Effects of endocrinological manipulations. *Brain Research*, 299, 160-163 (1984).

Goedert, M., Pittaway, K. and Emson, P.C.: Neurotensin receptors in the rat striatum: Lesion studies. *Brain Research*, 299, 164-168 (1984).

Goedert, M., Mantyh, P.W., Hunt, S.P. and Emson, P.C.: Localization of specific neurotensin binding sites in the rat adrenal gland. *Brain Research*, 299, 389-392 (1984).

Mantyh, P.W., Goedert, M. and Hunt, S.P.: Autoradiographic visualization of receptor binding sites for substance P in the gastrointestinal tract of the guinea-pig. *European Journal of Pharmacology*, 100, 133-134 (1984).

Marley, P.D., Lightman, S.L., Forsling, M., Todd, K., Goedert, M., Rehfeld, J.F. and Emson, P.C.: Localization and actions of cholecystokinin peptides in the rat pituitary neurointermediate lobe. *Endocrinology*, 114, 1902-1912 (1984).

Mantyh, P.W., Pinnock, R.D., Downes, C.P., Goedert, M. and Hunt, S.P.: Correlation between inositol phospholipid hydrolysis and substance P receptors in the rat CNS. *Nature*, 309, 795-797 (1984).

Bannon, M.J. and Goedert, M.: Changes in substance P concentrations after protein synthesis inhibition provide an index of substance P turnover. *Brain Research*, 301, 184-186 (1984).

Goedert, M., Pittaway, K., Williams, B.J. and Emson, P.C.: Specific binding of tritiated neurotensin to rat brain membranes: Characterization and regional distribution. *Brain Research*, 304, 71-81 (1984).

Goedert, M., Sturmy, N., Williams, B.J. and Emson, P.C.: The comparative distribution of xenopsin-like and neurotensin-like immunoreactivity in *Xenopus laevis* and rat tissues. Brain Research, 308, 273-280 (1984).

Goedert, M., Reeve, J.G., Emson, P.C. and Bleehen, N.M.: Neurotensin in human small cell lung carcinoma. British Journal of Cancer, 50, 179-183 (1984).

Goedert, M., Hunter, J.C. and Ninkovic, M.: Evidence for neurotensin as a non-adrenergic, non-cholinergic neurotransmitter in the guinea-pig ileum. Nature, 311, 59-62 (1984).

Goedert, M.: Neurotensin in neuronal and endocrine tissues. Ph.D. thesis, University of Cambridge 1984.

Goedert, M., Pinnock, R.D., Downes, C.P., Mantyh, P.W. and Emson, P.C.: Neurotensin stimulates inositol phospholipid hydrolysis in rat brain slices. Brain Research, 323, 193-197 (1984).

Fitzgerald, M., Wall, P.D., Goedert, M. and Emson, P.C.: Nerve growth factor counteracts the neurophysiological and neurochemical effects of chronic sciatic nerve section. Brain Research, 332, 131-141 (1985).

Goedert, M., Hunt, S.P., Mantyh, P.W. and Emson, P.C.: The ontogenetic development of neurotensin-like immunoreactivity and neurotensin receptors in the cat striatum. Developmental Brain Research, 20, 127-131 (1985).

Goedert, M., Iversen, S.D. and Emson, P.C.: The effects of chronic neuroleptic treatment on neurotensin-like immunoreactivity in the rat central nervous system. Brain Research, 335, 334-336 (1985).

Goedert, M., Schwartz, W.N. and Williams, B.J.: The comparative distribution of (Lys<sup>8</sup>Asn<sup>9</sup>) neurotensin (8-13)-like immunoreactivity in chicken and rat tissues. Brain Research, 342, 259-265 (1985).

Hunter, J.C., Goedert, M. and Pinnock, R.D.: Mammalian tachykinin-induced hydrolysis of inositol phospholipids in rat brain slices. Biochemical and Biophysical Research Communications, 127, 616-622 (1985).

Emson, P.C., Horsfield, P.M., Goedert, M., Rossor, M.N. and Hawkes, C.H.: Neurotensin in human brain: Regional distribution and effects of neurological illness. Brain Research, 347, 239-244 (1985).

Goedert, M., Lightman, S.L., Mantyh, P.W., Hunt, S.P. and Emson, P.C.:

Neurotensin-like immunoreactivity and neurotensin receptors in the rat hypothalamus and in the neurointermediate lobe of the pituitary gland. *Brain Research*, 358, 59-69 (1985).

Goedert, M., Fine, A., Hunt, S.P. and Ullrich, A.: Nerve growth factor mRNA in peripheral and central rat tissues and in the human central nervous system: Lesion effects in the rat brain and levels in Alzheimer's disease. *Molecular Brain Research*, 1, 85-92 (1986).

Goedert, M.: Molecular cloning of the chicken nerve growth factor gene: mRNA distribution in developing and adult tissues. *Biochemical and Biophysical Research Communications*, 141, 1116-1122 (1986).

Goedert, M. and Hunt, S.P.: The cellular localization of preprotachykinin A messenger RNA in the bovine nervous system. *Neuroscience*, 22, 983-992 (1987).

Goedert, M.: Neuronal localization of amyloid beta protein precursor mRNA in normal human brain and in Alzheimer's disease. *The EMBO Journal*, 6, 3627-3632. (1987).

Rogers, J., Goedert, M. and Wilson, P.W.: An extra sequence in the lambda EMBL3 polylinker. *Nucleic Acids Research*, 16, 1633 (1988).

Goedert, M., Wischik, C.M., Crowther, R.A., Walker, J.E. and Klug, A.: Cloning and sequencing of the cDNA encoding a core protein of the paired helical filament of Alzheimer disease: Identification as the microtubule-associated protein tau. *Proceedings of the National Academy of Sciences (USA)*, 85, 4051-4055 (1988).

Jackson, T.R., Blair, L.A.C., Marshall, J., Goedert, M. and Hanley, M.R.: The mas oncogene encodes an angiotensin receptor. *Nature*, 335, 437-440 (1988).

Goedert, M., Fine, A., Dawbarn, D., Wilcock, G.K. and Chao, M.V.: Nerve growth factor receptor mRNA distribution in human brain: Normal levels in basal forebrain in Alzheimer's disease. *Molecular Brain Research*, 5, 1-7 (1989).

Goedert, M., Spillantini, M.G., Potier, M.C., Ulrich, J. and Crowther, R.A.: Cloning and sequencing of the cDNA encoding an isoform of microtubule-associated protein tau containing four tandem repeats: Differential expression of tau protein mRNAs in human brain. *The EMBO Journal*, 8, 393-399 (1989).

Spillantini, M.G., Hunt, S.P., Ulrich, J. and Goedert, M.: Expression and

cellular localization of amyloid beta protein precursor transcripts in normal human brain and in Alzheimer's disease. *Molecular Brain Research*, 6, 143-150 (1989).

Allen, S.J., Dawbarn, D., Spillantini, M.G., Goedert, M., Wilcock, G.K., Moss, T.H. and Semenko, F.M.: Distribution of beta-nerve growth factor receptors in the human basal forebrain. *Journal of Comparative Neurology*, 289, 626-640 (1989).

Spillantini, M.G., Aloe, L., Alleva, E., De Simone, R., Goedert, M. and Levi-Montalcini, R.: Nerve growth factor mRNA and protein increase in hypothalamus in a mouse model of aggression. *Proceedings of the National Academy of Sciences (USA)*, 86, 8555-8559 (1989).

Goedert, M., Spillantini, M.G., Jakes, R., Rutherford, D. and Crowther, R.A.: Multiple isoforms of human microtubule-associated protein tau: Sequences and localization in neurofibrillary tangles of Alzheimer's disease. *Neuron*, 3, 519-526 (1989).

Spillantini, M.G., Goedert, M., Jakes, R. and Klug, A.: Close associations between beta amyloid deposits and neurofibrillary tangles in Alzheimer disease. *Proceedings of the National Academy of Sciences (USA)*, 87, 3947-3951 (1990).

Spillantini, M.G., Goedert, M., Jakes, R. and Klug, A.: Topographical relationship between beta-amyloid and tau protein epitopes in tangle-bearing cells in Alzheimer disease. *Proceedings of the National Academy of Sciences (USA)*, 87, 3952-3956 (1990).

Steiner, B., Mandelkow, E.M., Biernat, J., Gustke, N., Meyer, H.E., Schmidt, B., Mieskes, G., Söling, H.D., Drechsel, D., Kirschner, M.W., Goedert, M. and Mandelkow, E.: Phosphorylation of microtubule-associated protein tau: Identification of the site for  $\text{Ca}^{2+}$ -calmodulin dependent kinase and relationship with tau phosphorylation in Alzheimer tangles. *The EMBO Journal*, 9, 3539-3544 (1990).

Kindler, S., Schulz, B., Goedert, M. and Garner, C.C.: Molecular structure of microtubule-associated proteins 2b and 2c from rat brain. *Journal of Biological Chemistry*, 265, 19679-19684 (1990).

Goedert, M. and Jakes, R.: Expression of separate isoforms of human tau protein: Correlation with the tau pattern in brain and effects on tubulin polymerization. *The EMBO Journal*, 9, 4225-4230 (1990).

Goedert, M., Spillantini, M.G. and Jakes, R.: Localization of the Alz-50 epitope in recombinant human microtubule-associated protein tau. *Neuroscience Letters*, 126, 149-154 (1991).

Dingus, J., Obar, R.A., Hyams, J.S., Goedert, M. and Vallee, R.B.: Use of a microtubule-associated protein class-specific antibody to investigate the mechanism of microtubule binding. *Journal of Biological Chemistry*, 266, 18854-18660 (1991).

Goedert, M., Spillantini, M.G., Cairns, N.J. and Crowther, R.A.: Tau proteins of Alzheimer paired helical filaments: Abnormal phosphorylation of all six brain isoforms. *Neuron*, 8, 159-168 (1992).

Goedert, M., Spillantini, M.G. and Crowther, R.A.: Cloning of a big tau microtubule-associated protein characteristic of the peripheral nervous system. *Proceedings of the National Academy of Sciences (USA)*, 89, 1983-1987 (1992).

Biernat, J., Mandelkow, E.M., Schröter, C., Lichtenberg-Kraag, B., Steiner, B., Berling, B., Meyer, H., Mercken, M., Vandermeeren, A., Goedert, M. and Mandelkow, E.: The switch of tau protein to an Alzheimer-like state includes the phosphorylation of two serine-proline motifs upstream of the microtubule binding region. *The EMBO Journal*, 11, 1593-1597 (1992).

Gustke, N., Steiner, B., Mandelkow, E.M., Biernat, J., Meyer, H., Goedert, M. and Mandelkow, E.: The Alzheimer-like phosphorylation of tau protein reduces microtubule binding and involves Ser-Pro and Thr-Pro motifs. *FEBS Letters*, 307, 199-205 (1992).

Crowther, R.A., Olesen, O.F., Jakes, R. and Goedert, M.: The microtubule binding repeats of tau protein assemble into filaments like those found in Alzheimer's disease. *FEBS Letters*, 309, 199-202 (1992).

Potier, M.C., Kuo, W.L., Dutriaux, A., Gray, J. and Goedert, M.: Construction and characterization of a yeast artificial chromosome library containing 1.5 equivalents of human chromosome 21. *Genomics*, 14, 481-483 (1992).

Goedert, M., Cohen, E.S., Jakes, R. and Cohen, P.: p42 MAP kinase phosphorylation sites in microtubule-associated protein tau are dephosphorylated by protein phosphatase 2A<sub>1</sub>: Implications for Alzheimer's disease. *FEBS Letters*, 312, 95-99 (1992).

Ulrich, J., Spillantini, M.G., Goedert, M., Dukas, L. and Stähelin, H.B.: Abundant neurofibrillary tangles without senile plaques in a subset of patients with senile dementia. *Neurodegeneration*, 1, 257-264 (1992).

Goedert, M., Jakes, R., Crowther, R.A., Six, J., Lübke, U., Vandermeeren, M., Cras, P., Trojanowski, J.Q. and Lee, V.M.-Y.: The abnormal

phosphorylation of tau protein at Ser-202 in Alzheimer disease recapitulates phosphorylation during development. *Proceedings of the National Academy of Sciences (USA)*, 90, 5066-5070 (1993).

Lee, J.H., Goedert, M., Hill, W.D., Lee, V.M.-Y. and Trojanowski, J.Q.: Tau proteins are abnormally expressed in olfactory epithelium of Alzheimer patients and developmentally regulated in human fetal spinal cord. *Experimental Neurology*, 121, 93-105 (1993).

Bramblett, G.T., Goedert, M., Jakes, R., Merrick, S.E., Trojanowski, J.Q. and Lee V.M.-Y.: Abnormal tau phosphorylation at Ser<sup>396</sup> in Alzheimer's disease recapitulates development and contributes to reduced microtubule binding. *Neuron*, 10, 1089-1099 (1993).

Robertson, J., Loviny, T.L.F., Goedert, M., Jakes, R., Murray, K.J., Anderton, B.H. and Hanger, D.P.: Phosphorylation of tau by cyclic AMP-dependent protein kinase. *Dementia*, 4, 256-263 (1993).

Lo, M.M.S., Fieles, A.W., Norris, T.E., Dargis, P.G., Caputo, C.B., Scott, C.W., Lee, V.M.-Y. and Goedert, M.: Human tau isoforms confer distinct morphological and functional properties to stably transfected fibroblasts. *Molecular Brain Research*, 20, 209-220 (1993).

Crowther, R.A., Olesen, O.F., Smith, M.J., Jakes, R. and Goedert, M.: Assembly of Alzheimer-like filaments from full-length tau protein. *FEBS Letters*, 337, 135-138 (1994).

Jakes, R., Spillantini, M.G. and Goedert, M.: Identification of two distinct synucleins from human brain. *FEBS Letters*, 345, 27-32 (1994).

Goedert, M., Jakes, R., Crowther, R.A., Cohen, P., Vanmechelen, E., Vandermeeren, M. and Cras, P.: Epitope mapping of monoclonal antibodies to the paired helical filaments of Alzheimer's disease: Identification of phosphorylation sites in tau protein. *Biochemical Journal*, 301, 871-877 (1994).

Fawcett, J.W., Mathews, G., Housden, E., Goedert, M. and Matus, A.: Regenerating sciatic nerve axons contain the adult rather than the embryonic pattern of microtubule associated proteins. *Neuroscience*, 61, 789-804 (1994).

Strittmatter, W.J., Saunders, A.M., Goedert, M., Weisgraber, K.H., Dong, L.-M., Jakes, R., Huang, D.Y., Pericak-Vance, M., Schmeichel, D. and Roses, A.D.: Isoform-specific interactions of apolipoprotein E with microtubule-associated protein tau: Implications for Alzheimer disease. *Proceedings of the National Academy of Sciences (USA)*, 91, 11183-11186 (1994).

Huang, D.Y., Goedert, M., Jakes, R., Weisgraber, K., Garner, C.C., Saunders, A.M., Pericak-Vance, M., Schmechel, D., Roses, A.D. and Strittmatter, W.J.: Isoform-specific interactions of apolipoprotein E with the microtubule-associated protein MAP2c: Implications for Alzheimer's disease. *Neuroscience Letters*, 182, 55-58 (1994).

Otvos, L., Feiner, L., Lang, E., Szendrei, G.I., Goedert, M. and Lee, V.M.-Y.: Monoclonal antibody PHF-1 recognizes tau protein phosphorylated at serine residues 396 and 404. *Journal of Neuroscience Research*, 39, 669-673 (1994).

Craxton, M. and Goedert, M.: Synaptotagmin V: A novel synaptotagmin isoform expressed in rat brain. *FEBS Letters*, 361, 196-200 (1995).

Götz, J., Probst, A., Spillantini, M.G., Schäfer, T., Jakes, R., Bürki, K. and Goedert, M.: Somatodendritic localisation and hyperphosphorylation of tau protein in transgenic mice expressing the longest human brain tau isoform. *The EMBO Journal*, 14, 1304-1313 (1995).

Jakes, R., Harrington, C.R., Spillantini, M.G., Goedert, M. and Klug, A.: Characterisation of an antibody relevant to the neuropathology of Alzheimer disease. *Alzheimer Disease and Associated Disorders*, 9, 47-51 (1995).

Goedert, M., Jakes, R. and Vanmechelen, E.: Monoclonal antibody AT8 recognises tau protein phosphorylated at both serine 202 and threonine 205. *Neuroscience Letters*, 189, 167-170 (1995).

Spillantini, M.G., Divane, A. and Goedert, M.: Assignment of human alpha-synuclein and beta-synuclein genes to chromosomes 4q21 and 5q35. *Genomics*, 27, 379-381 (1995).

Huang, D.Y., Weisgraber, K.H., Goedert, M., Saunders, A.M., Roses, A.D. and Strittmatter, W.J.: ApoE3 binding to tau tandem repeat I is abolished by serine 262 phosphorylation. *Neuroscience Letters*, 192, 209-212 (1995).

Seubert, P., Mawal-Dewan, M., Barbour, R., Jakes, R., Goedert, M., Johnson, G.V.W., Litersky, J.M., Schenk, D., Lieberburg, I., Trojanowski, J.Q. and Lee, V.M.-Y.: Detection of phosphorylated Ser<sup>262</sup> in fetal tau, adult tau and paired helical filament tau. *Journal of Biological Chemistry*, 270, 18917-18922 (1995).

Sperber, B.R., Leight, S., Goedert, M. and Lee, V.M.-Y.: Glycogen synthase kinase-3β phosphorylates tau protein at multiple sites in intact cells. *Neuroscience Letters*, 197, 149-153 (1995).

Goedert, M., Jakes, R., Qi, Z., Wang, J.H. and Cohen, P.: Protein phosphatase 2A is the major enzyme in brain that dephosphorylates tau protein phosphorylated by proline-directed protein kinases or cyclic AMP-dependent protein kinase. *Journal of Neurochemistry*, 65, 2804-2807 (1995).

Ghetti, B., Piccardo, P., Spillantini, M.G., Ichimiya, Y., Porro, M., Perini, F., Kitamoto, T., Tateishi, J., Seiler, C., Frangione, B., Bugiani, O., Giaccone, G., Prelli, F., Goedert, M., Dlouhy, S. and Tagliavini, F.: Vascular variant of prion protein cerebral amyloidosis with tau-positive neurofibrillary tangles: The phenotype of the stop codon 145 mutation in PRNP. *Proceedings of the National Academy of Sciences (USA)*, 93, 744-748 (1996).

Andrä, K., Abramowski, D., Duke, M., Probst, A., Wiederhold, K.H., Bürki, K., Goedert, M., Sommer, B. and Staufenbiel, M.: Expression of APP in transgenic mice: A comparison of neuron-specific promoters. *Neurobiology of Aging*, 17, 183-190 (1996).

Goedert, M., Marsh, S. and Carter, N.: Localization of the human kinesin light chain (KLC) gene to chromosome 14q32.3 by fluorescence *in situ* hybridization. *Genomics*, 32, 173-175 (1996).

Mertens, S., Craxton, M. and Goedert, M.: SAP kinase-3, a new member of the family of mammalian stress-activated protein kinases. *FEBS Letters*, 383, 273-276 (1996).

Hasegawa, M., Jakes, R., Crowther, R.A., Lee, V.M.-Y., Ihara, Y. and Goedert, M.: Characterization of mAb AP422, a novel phosphorylation-dependent monoclonal antibody against tau protein. *FEBS Letters*, 384, 25-30 (1996).

Spillantini, M.G., Crowther, R.A. and Goedert, M.: Comparison of the neurofibrillary pathology in Alzheimer's disease and familial presenile dementia with tangles. *Acta Neuropathologica*, 92, 42-48 (1996).

Buée-Scherrer, V., Condamin, O., Mourton-Gilles, C., Jakes, R., Goedert, M., Pau, B. and Delacourte, A.: AD2, a phosphorylation-dependent monoclonal antibody directed against tau proteins found in Alzheimer's disease. *Molecular Brain Research*, 39, 79-88 (1996).

Litersky, J.M., Johnson, G.V.W., Jakes, R., Goedert, M., Lee, M. and Seubert, P.: Tau protein is phosphorylated by cAMP-dependent protein kinase and calcium/calmodulin-dependent protein kinase II within its microtubule-binding domains at Ser262 and Ser356. *Biochemical Journal*, 316, 655-660 (1996).

Goedert, M., Jakes, R., Spillantini, M.G., Hasegawa, M., Smith, M.J. and Crowther, R.A.: Assembly of microtubule-associated protein tau into Alzheimer-like filaments induced by sulphated glycosaminoglycans. *Nature*, 383, 550-553 (1996).

Goedert, M., Baur, C.P., Ahringer, J., Jakes, R., Hasegawa, M., Spillantini, M.G., Smith, M.J. and Hill, F.: PTL-1, a microtubule-associated protein with tau-like repeats from the nematode *Caenorhabditis elegans*. *Journal of Cell Science*, 109, 2661-2672 (1996).

Probst, A., Tolnay, M., Langui, D., Goedert, M. and Spillantini, M.G.: Pick's disease: Hyperphosphorylated tau protein segregates to the somatoaxonal compartment. *Acta Neuropathologica*, 92, 588-596 (1996).

Cuenda, A., Cohen, P., Buée-Scherrer, V. and Goedert, M.: Activation of stress-activated protein kinase-3 (SAPK3) by cytokines and cellular stresses is mediated via SAPKK3 (MAPKK6); comparison of the specificities of SAPK3 and SAPK2 (RK/p38). *The EMBO Journal*, 16, 295-305 (1997).

Tolnay, M., Spillantini, M.G., Goedert, M., Ulrich J., Langui, D. and Probst, A.: Argyrophilic grain disease: Widespread hyperphosphorylation of tau protein in limbic neurons. *Acta Neuropathologica*, 93, 477-484 (1997).

Goedert, M., Hasegawa, J., Craxton, M., Leversha, M.A. and Clegg, S.: Assignment of the human stress-activated protein kinase-3 gene (SAPK3) to chromosome 22q13.3 by fluorescence *in situ* hybridization. *Genomics*, 41, 501-502 (1997).

Chevallier, N., Vizzanova, J., Marambaud, P., Baur, C.P., Spillantini, M.G., Fulcrand, P., Martinez, J., Goedert, M., Vincent, J.P., and Checler, F.: Cathepsin D displays *in vitro* beta secretase-like specificity. *Brain Research*, 750, 11-19 (1997).

Chevallier, N., Jiracek, J., Vincent, B., Baur, C.P., Spillantini, M.G., Goedert, M., Dive, V. and Checler, F.: Examination of the role of endopeptidase 3.4.24.15 in A $\beta$  secretion in human transfected cells. *British Journal of Pharmacology*, 121, 556-562 (1997).

Spillantini, M.G., Goedert, M., Crowther, R.A., Murrell, J.R., Farlow, M.R. and Ghetti, B.: Familial multiple system tauopathy with presenile dementia: A disease with abundant neuronal and glial tau filaments. *Proceedings of the National Academy of Sciences (USA)*, 94, 4113-4118 (1997).

Craxton, M., Olsen, A. and Goedert, M.: Human synaptotagmin V: Sequence, genomic structure and chromosomal location. *Genomics*,

42, 165-169 (1997).

Goedert, M., Cuenda, A., Craxton, M., Jakes, R. and Cohen, P.: Activation of the novel stress-activated protein kinase SAPK4 by cytokines and cellular stresses is mediated by SKK3 (MKK6); comparison of its substrate specificity with that of other SAP kinases. *The EMBO Journal*, 16, 3563-3571 (1997).

Goedert, M., Hasegawa, M., Jakes, R., Lawler, S., Cuenda, A. and Cohen, P.: Phosphorylation of microtubule-associated protein tau by stress-activated protein kinases. *FEBS Letters*, 409, 57-62 (1997).

Sergeant, N., David, J.P., Goedert, M., Jakes, R., Vermersch, P., Buée, L., Lefranc, D., Wattez, A. and Delacourte, A.: Two-dimensional characterization of paired helical filament-tau from Alzheimer's disease: Demonstration of an additional 74-kDa component and age-related biochemical modifications. *Journal of Neurochemistry*, 69, 834-844 (1997).

Spillantini, M.G., Schmidt, M.L., Lee, V.M.-Y., Trojanowski, J.Q., Jakes, R. and Goedert, M.:  $\alpha$ -Synuclein in Lewy bodies. *Nature*, 388, 839-840 (1997).

Lawler, S., Cuenda, A., Goedert, M. and Cohen, P.: SKK4, a novel activator of stress-activated protein kinase-1 (SAPK1/JNK). *FEBS Letters*, 414, 153-158 (1997).

Murrell, J.R., Koller, D., Foroud, T., Goedert, M., Spillantini, M.G., Edenberg, H.J., Farlow, M.R. and Ghetti, B.: Familial multiple system tauopathy with presenile dementia is localized to chromosome 17. *American Journal of Human Genetics*, 61, 1131-1138 (1997).

Hasegawa, M., Crowther, R.A., Jakes, R. and Goedert, M.: Alzheimer-like changes in microtubule-associated protein tau induced by sulfated glycosaminoglycans. Inhibition of microtubule binding, stimulation of phosphorylation and filament assembly depend on the degree of sulfation. *Journal of Biological Chemistry*, 272, 33118-33124 (1997).

Qi, Z., Zhu, X., Goedert, M., Fujita, D.J. and Wang, J.H.: Effect of heparin on phosphorylation site specificity of neuronal Cdc2-like kinase. *FEBS Letters*, 423, 227-230 (1998).

Spillantini, M.G., Crowther, R.A., Jakes, R., Hasegawa, M. and Goedert, M.:  $\alpha$ -Synuclein in filamentous inclusions of Lewy bodies from Parkinson's disease and dementia with Lewy bodies. *Proceedings of the National Academy of Sciences (USA)*, 95, 6469-6473 (1998).

Eyers, P.A., Craxton, M., Morrice, N., Cohen, P. and Goedert, M.: Conversion of SB 203580-insensitive MAP kinase family members to drug-sensitive forms by a single amino acid substitution. *Chemistry and Biology*, 5, 321-328 (1998).

Spillantini, M.G., Murrell, J.R., Goedert, M., Farlow, M.R., Klug, A. and Ghetti, B.: Mutation in the tau gene in familial multiple system tauopathy with presenile dementia. *Proceedings of the National Academy of Sciences (USA)*, 95, 7737-7741 (1998).

Spillantini, M.G., Crowther, R.A., Jakes, R., Cairns, N.J., Lantos, P.L. and Goedert, M.: Filamentous  $\alpha$ -synuclein inclusions link multiple system atrophy with Parkinson's disease and dementia with Lewy bodies. *Neuroscience Letters*, 251, 205-208 (1998).

Crowther, R.A., Jakes, R., Spillantini, M.G. and Goedert, M.: Synthetic filaments assembled from C-terminally truncated  $\alpha$ -synuclein. *FEBS Letters*, 436, 309-312 (1998).

Jensen, P.H., Nielsen, M.H., Jakes, R., Dotti, C.G. and Goedert, M.: Binding of  $\alpha$ -synuclein to rat brain vesicles is abolished by familial Parkinson's disease mutation. *Journal of Biological Chemistry*, 273, 26292-26294 (1998).

Hasegawa, M., Smith, M.J. and Goedert, M.: Tau proteins with FTDP-17 mutations have a reduced ability to promote microtubule assembly. *FEBS Letters*, 437, 207-210 (1998).

Lawler, S., Fleming, Y., Goedert, M. and Cohen, P.: Synergistic activation of SAPK1/JNK1 by two MAP kinases *in vitro*. *Current Biology*, 8, 1387-1390 (1998).

Hasegawa, M., Smith, M.J., Iijima, M., Tabira, T. and Goedert, M.: FTDP-17 mutations N279K and S305N in tau produce increased splicing of exon 10. *FEBS Letters*, 443, 93-96 (1999).

Rizzu, P., Van Swieten, J.C., Joosse, M., Hasegawa, M., Stevens, M., Tibben, A., Niermeijer, M.F., Hillebrand, M., Ravid, R., Oostra, B.A., Goedert, M., Van Duijn, C.M. and Heutink, P.: High prevalence of mutations in the microtubule-associated protein tau in a population study of frontotemporal dementia in the Netherlands. *American Journal of Human Genetics*, 64, 414-421 (1999).

Hall-Jackson, C.A., Goedert, M., Hedge, P. and Cohen, P.: Effect of SB 203580 on the activity of c-Raf *in vitro* and *in vivo*. *Oncogene*, 18, 2047-2054 (1999).

Goedert, M., Spillantini, M.G., Crowther, R.A., Chen, S.G., Parchi, P., Tabaton, M., Lanska, D.J., Markesberry, W.R., Wilhelmsen, K.C., Dickson, D.W., Petersen, R.B. and Gambetti, P.: *Tau* gene mutation in familial progressive subcortical gliosis. *Nature Medicine*, 5, 454-457 (1999).

Mirra, S.S., Murrell, J.R., Gearing, M., Spillantini, M.G., Goedert, M., Crowther, R.A., Levey, A.I., Jones, R., Green, J., Shoffner, J.M., Wainer, B.H., Schmidt, M.L., Trojanowski, J.Q. and Ghetti, B.: Tau pathology in a family with dementia and a P301L mutation in tau. *Journal of Neuropathology and Experimental Neurology*, 58, 335-345 (1999).

Hasegawa, M., Cuenda, A., Spillantini, M.G., Thomas, G.M., Buée-Scherrer, V., Cohen, P. and Goedert, M.: Stress-activated protein kinase-3 interacts with the PDZ domain of  $\alpha$ 1-syntrophin: a mechanism for specific substrate recognition. *Journal of Biological Chemistry*, 274, 12626-12631 (1999).

Goedert, M., Jakes, R. and Crowther, R.A.: Effects of frontotemporal dementia FTDP-17 mutations on heparin-induced assembly of tau filaments. *FEBS Letters*, 450, 306-311 (1999).

Bugiani, O., Murrell, J.R., Giaccone, G., Hasegawa, M., Ghigo, G., Tabaton, M., Morbin, M., Primavera, A., Carella, F., Solaro, C., Grisoli, M., Savoardo, M., Spillantini, M.G., Tagliavini, F., Goedert, M. and Ghetti, B.: Frontotemporal dementia and corticobasal degeneration in a family with a P301S mutation in *Tau*. *Journal of Neuropathology and Experimental Neurology*, 58, 667-677 (1999).

Spillantini, M.G., Tolnay, M., Love, S. and Goedert, M.: Microtubule-associated protein tau, heparan sulphate and  $\alpha$ -synuclein in several neurodegenerative diseases. *Acta Neuropathologica*, 97, 585-594 (1999).

Eyers, P.A., van den IJssel, P., Quinlan, R., Goedert, M. and Cohen, P.: Use of a drug-resistant mutant of stress-activated protein kinase 2a/p38 to validate the *in vivo* specificity of SB 203580. *FEBS Letters*, 451, 191-196 (1999).

Varani, L., Hasegawa, M., Spillantini, M.G., Smith, M.J., Murrell, J.R., Ghetti, B., Klug, A., Goedert, M. and Varani, G.: Structure of tau exon 10 splicing regulatory element RNA and destabilization by mutations of frontotemporal dementia and parkinsonism linked to chromosome 17. *Proceedings of the National Academy of Sciences (USA)*, 96, 8229-8234 (1999).

Jakes, R., Crowther, R.A., Lee, V.M.-Y., Trojanowski, J.Q., Iwatsubo, T.

and Goedert, M.: Epitope mapping of LB509, a monoclonal antibody directed against human  $\alpha$ -synuclein. *Neuroscience Letters*, 269, 13-16 (1999).

Hall-Jackson, C.A., Eyers, P.A., Cohen, P., Goedert, M., Boyle, F.T., Hewitt, N., Plant, H. and Hedge, P.: Paradoxical activation of Raf by a novel Raf inhibitor. *Chemistry and Biology*, 6, 559-568 (1999).

Thomas, G.M., Frame, S., Goedert, M., Nathke, I., Polakis, P. and Cohen, P.: A GSK3-binding peptide from FRAT1 selectively inhibits the GSK3-catalysed phosphorylation of axin and  $\beta$ -catenin. *FEBS Letters*, 458, 247-251 (1999).

Börsch-Haubold, A.G., Ghomashchi, F., Pasquet, S., Goedert, M., Cohen, P., Gelb, M.H. and Watson, S.P.: Phosphorylation of cytosolic phospholipase A<sub>2</sub> in platelets is mediated by multiple stress-activated protein kinase pathways. *European Journal of Biochemistry*, 265, 195-203 (1999).

Craxton, M. and Goedert, M.: Alternative splicing of synaptotagmins involving transmembrane exon skipping. *FEBS Letters*, 460, 417-423 (1999).

Murrell, J.R., Spillantini, M.G., Zolo, P., Guazzelli, M., Smith, M.J., Hasegawa, M., Redi, F., Crowther, R.A., Pietrini, P., Ghetti, B. and Goedert, M.: *Tau* gene mutation G389R causes a tauopathy with abundant Pick body-like inclusions and axonal deposits. *Journal of Neuropathology and Experimental Neurology*, 58, 1207-1226 (1999).

Varani, L., Spillantini, M.G., Goedert, M. and Varani, G.: Structural basis for recognition of the RNA major groove in the tau exon 10 splicing regulatory element by aminoglycoside antibiotics. *Nucleic Acids Research*, 28, 710-719 (2000).

Giasson, B.I., Jakes, R., Goedert, M., Duda, J.E., Leight, S., Trojanowski, J.Q. and Lee, V.M.-Y.: A panel of epitope-specific antibodies detects protein domains distributed throughout human  $\alpha$ -synuclein in Lewy bodies of Parkinson's disease. *Journal of Neuroscience Research*, 59, 528-533 (2000).

Yasuda, M., Takamatsu, J., D'Souza, I., Crowther, R.A., Kawamata, T., Hasegawa, M., Hasegawa, H., Spillantini, M.G., Tanimukai, S., Poorkaj, P., Varani, L., Varani, G., Iwatsubo, T., Goedert, M., Schellenberg, G.D. and Tanaka, C.: A novel mutation at position +12 in the intron following exon 10 of the tau gene in familial frontotemporal dementia (FTD-Kumamoto). *Annals of Neurology*, 47, 422-429 (2000).

Serpell, L.C., Berriman, J., Jakes, R., Goedert, M. and Crowther, R.A.: Fiber diffraction of synthetic  $\alpha$ -synuclein filaments shows amyloid-like cross- $\beta$  conformation. Proceedings of the National Academy of Sciences (USA), 97, 4897-4902 (2000).

Probst, A., Götz, J., Wiederhold, K.H., Tolnay, M., Mistl, C., Jaton, A.L., Hong, M., Ishihara, T., Lee, V.M.-Y., Trojanowski, J.Q., Jakes, R., Crowther, R.A., Spillantini, M.G., Bürki, K. and Goedert, M.: Axonopathy and amyotrophy in mice transgenic for human four-repeat tau protein. Acta Neuropathologica, 99, 469-481 (2000).

Duff, K., Knight, H., Refolo, L.M., Sanders, S., Yu, X., Picciano, M., Malester, B., Hutton, M., Adamson, J., Goedert, M., Bürki, K. and Davies, P.: Characterization of pathology in transgenic mice over-expressing human genomic and cDNA tau transgenes. Neurobiology of Disease, 7, 87-98 (2000).

Crowther, R.A., Daniel, S.E. and Goedert, M.: Characterisation of isolated  $\alpha$ -synuclein filaments from substantia nigra of Parkinson's disease brain. Neuroscience Letters, 292, 128-130 (2000).

Goedert, M., Satumtira, S., Jakes, R., Smith, M.J., Kamibayashi, C., White, C.L. and Sontag, E.: Reduced binding of protein phosphatase 2A to tau protein with frontotemporal dementia and parkinsonism linked to chromosome 17 mutations. Journal of Neurochemistry, 75, 2155-2162 (2000).

Rizzini, C., Goedert, M., Hodges, J.R., Smith, M.J., Jakes, R., Hills, R., Xuereb, J.H., Crowther, R.A. and Spillantini, M.G.: Tau gene mutation K257T causes a tauopathy similar to Pick's disease. Journal of Neuropathology and Experimental Neurology, 59, 990-1001 (2000).

Smith, M.J., Crowther, R.A. and Goedert, M.: The natural osmolyte trimethylamine N-oxide (TMAO) restores the ability of mutant tau to promote microtubule assembly. FEBS Letters, 484, 265-270 (2000).

Fleming, Y., Armstrong, C.G., Morrice, N., Paterson, A., Goedert, M. and Cohen, P.: Synergistic activation of stress-activated protein kinase 1/c-Jun N-terminal kinase (SAPK1/JNK) isoforms by mitogen-activated protein kinase kinase 4 (MKK4) and MKK7. Biochemical Journal, 352, 145-154 (2000).

Spillantini, M.G., Yoshida, H., Rizzini, C., Lantos, P.L., Khan, N., Rossor, M.N., Goedert, M. and Brown, J.: A novel tau mutation (N296N) in familial dementia with swollen achromatic neurons and corticobasal inclusion

bodies. *Annals of Neurology*, 48, 939-943 (2000).

Woods, Y.L., Cohen, P., Becker, W., Jakes, R., Goedert, M., Wang, X. and Proud, C.G.: The kinase DYRK phosphorylates protein-synthesis initiation factor eIF2B $\epsilon$  at Ser<sup>539</sup> and the microtubule-associated protein tau at Thr<sup>212</sup>: potential role for DYRK as a glycogen synthase kinase 3-priming kinase. *Biochemical Journal*, 355, 609-615 (2001).

Hartmann, A.M., Rujesku, D., Giannakouros, T., Nikolakaki, E., Goedert, M., Mandelkow, E., Gao, Q.S., Andreadis, A. and Stamm, S.: Regulation of alternative splicing of human tau exon 10 by phosphorylation of splicing factors. *Molecular and Cellular Neuroscience*, 18, 80-90 (2001).

Neumann, M., Schulz-Schaeffer, W., Crowther, R.A., Smith, M.J., Spillantini, M.G., Goedert, M. and Kretzschmar, H.: Pick's disease associated with the novel *Tau* gene mutation K369I. *Annals of Neurology*, 50, 503-513 (2001).

Syme, C.D., Blanch, E.W., Holt, C., Jakes, R., Goedert, M., Hecht, L. and Barron, L.D.: A Raman optical activity study of rheomorphism in caseins, synucleins and tau: New insight into the structure and behaviour of natively unfolded proteins. *European Journal of Biochemistry*, 269, 148-156 (2002).

Yoshida, H., Crowther, R.A. and Goedert, M.: Functional effects of *tau* gene mutations ΔN296 and N296H. *Journal of Neurochemistry*, 80, 548-551 (2002).

Rosso, S.M., van Herpen, E., Deelen, W., Kamphorst, W., Severijnen, L.A., Willemse, R., Ravid, R., Niermeijer, M.F., Dooijes, D., Smith, M.J., Goedert, M., Heutink, P. and van Swieten, J.C.: A novel *tau* mutation, S320F, causes a tauopathy with inclusions similar to those in Pick's disease. *Annals of Neurology*, 51, 373-376 (2002).

Delobel, P., Flament, S., Hamdane, M., Jakes, R., Rousseau, A., Delacourte, A., Vilain, J.P., Goedert, M. and Buée, L.: Functional characterization of FTDP-17 *tau* gene mutations through their effects on *Xenopus* oocyte maturation. *Journal of Biological Chemistry*, 277, 9199-9205 (2002).

Uversky, V.N., Li, J., Souillac, P., Millett, I.S., Doniach, S., Jakes, R., Goedert, M. and Fink, A.L.: Biophysical properties of the synucleins and their propensities to fibrillate: Inhibition of α-synuclein assembly by β- and γ-synucleins. *Journal of Biological Chemistry*, 277, 11970-11978 (2002).

Buée-Scherrer, V. and Goedert, M.: Phosphorylation of microtubule-

associated protein tau by stress-activated protein kinases in intact cells. FEBS Letters, 515, 151-154 (2002).

David, D.C., Layfield, R., Serpell, L., Narain, Y., Goedert, M. and Spillantini, M.G.: Proteasomal degradation of tau protein. Journal of Neurochemistry, 83, 176-185 (2002).

Allen, B., Ingram, E., Takao, M., Smith, M.J., Jakes, R., Virdee, K., Yoshida, H., Holzer, M., Craxton, M., Emson, P.C., Atzori, C., Micheli, A., Crowther, R.A., Ghetti, B., Spillantini, M.G. and Goedert, M.: Abundant tau filaments and nonapoptotic neurodegeneration in transgenic mice expressing human P301S tau protein. The Journal of Neuroscience, 22, 9340-9351 (2002).

Yoshida, H. and Goedert, M.: Molecular cloning and functional characterization of chicken brain tau: Isoforms with up to five tandem repeats. Biochemistry, 41, 15203-15211 (2002).

Kar, S., Fan, J., Smith, M.J., Goedert, M. and Amos, L.A.: Repeat motifs of tau bind to the insides of microtubules in the absence of taxol. The EMBO Journal, 22, 70-77 (2003).

Berriman, J., Serpell, L.C., Oberg, K.A., Fink, A.L., Goedert, M. and Crowther, R.A.: Tau filaments from human brain and from *in vitro* assembly of recombinant protein show cross- $\beta$  structure. Proceedings of the National Academy of Sciences (USA), 100, 9034-9038 (2003).

Van Herpen, E., Rosso, S.M., Severijnen, L.A., Yoshida, H., Breedveld, G., Van de Graaf, R., Kamphorst, W., Ravid, R., Willemse, R., Dooijes, D., Majoor-Krakauer, D., Kros, J.M., Crowther, R.A., Goedert, M., Heutink, P. and van Swieten, J.C.: Variable phenotypic expression and extensive tau pathology in two families with the novel tau mutation L315R. Annals of Neurology, 54, 573-581 (2003).

Takao, M., Ghetti, B., Yoshida, H., Piccardo, P., Narain, Y., Murrell, J.R., Vidal, R., Glazier, B.S., Jakes, R., Tsutsui, M., Spillantini, M.G., Crowther, R.A., Goedert, M. and Koto, A.: Early-onset dementia with Lewy bodies. Brain Pathology, 14, 137-147 (2004).

Sabio, G., Reuver, S., Feijoo, C., Hasegawa, M., Thomas, G.M., Centeno, F., Kuhlendahl, S., Leal-Ortiz, S., Goedert, M., Garner, C. and Cuenda, A.: Stress- and mitogen-induced phosphorylation of the synapse-associated protein SAP90/PSD95 by activation of SAPK3/p38 $\gamma$  and ERK1/ERK2. Biochemical Journal, 380, 19-30 (2004).

Yoshida, H., Hastie, C.J., McLauchlan, H., Cohen, P. and Goedert, M.:

Phosphorylation of microtubule-associated protein tau by isoforms of c-Jun N-terminal kinase (JNK). *Journal of Neurochemistry*, 90, 352-358 (2004).

Holzer, M., Craxton, M., Jakes, R., Arendt, T. and Goedert, M.: *Tau gene (MAPT) sequence variation among primates.* *Gene*, 341, 313-322 (2004).

Choi, W., Zibaee, S., Jakes, R., Serpell, L.C., Davletov, B., Crowther, R.A. and Goedert, M.: Mutation E46K increases phospholipid binding and assembly into filaments of human  $\alpha$ -synuclein. *FEBS Letters*, 576, 363-368 (2004).

Bellucci, A., Westwood, A.J., Ingram, E., Casamenti, F., Goedert, M. and Spillantini, M.G.: Induction of inflammatory mediators and microglial activation in mice transgenic for mutant human P301S tau protein. *American Journal of Pathology*, 165, 1643-1652 (2004).

Feijoo, C., Campbell, D.G., Jakes, R., Goedert, M. and Cuenda, A.: Evidence that phosphorylation of the microtubule-associated protein tau by SAPK4/p38 $\delta$  at Thr50 promotes microtubule assembly. *Journal of Cell Science*, 118, 397-408 (2005).

Taniguchi, S., Suzuki, N., Masuda, M., Hisanaga, S.I., Iwatsubo, T., Goedert, M. and Hasegawa, M.: Inhibition of heparin-induced tau filament formation by phenothiazines, polyphenols and porphyrins. *Journal of Biological Chemistry*, 280, 7614-7623 (2005).

Sabio, S., Arthur, J.S.C., Kuma, Y., Peggie, M., Carr, J., Murray-Tait, V., Centeno, F., Goedert, M., Morrice, N.A. and Cuenda A.: p38 $\gamma$  regulates the localisation of SAP97 in the cytoskeleton by modulating its interaction with GKAP. *The EMBO Journal*, 24, 1134-1145 (2005).

Yamaguchi, K., Cochran, E.J., Murrell, J.R., Polymeropoulos, M.H., Shannon, K.M., Crowther, R.A., Goedert, M. and Ghetti, B.: Abundant neuritic inclusions and microvacuolar changes in a case of diffuse Lewy body disease with the A53T mutation in the  $\alpha$ -synuclein gene. *Acta Neuropathologica*, 110, 298-305 (2005).

Yoshida, H., Craxton, M., Jakes, R., Zibaee, S., Tavaré, R., Fraser, G., Serpell, L.C., Davletov, B., Crowther, R.A. and Goedert, M.: Synuclein proteins of the pufferfish *Fugu rubripes*: Sequences and functional characterization. *Biochemistry*, 45, 2599-2607 (2006).

Delobel, P., Lavenir, I., Ghetti, B., Holzer, M. and Goedert, M.: Cell-cycle markers in a transgenic mouse model of human tauopathy: Increased

levels of cyclin-dependent kinase inhibitors p21Cip1 and p27Kip1. American Journal of Pathology, 168, 878-887 (2006).

Masuda, M., Dohmae, N., Nonaka, T., Oikawa, T., Hisanaga, S.I., Goedert, M. and Hasegawa, M.: Cysteine misincorporation in bacterially expressed human  $\alpha$ -synuclein. FEBS Letters, 580, 1775-1779 (2006).

Tofaris, G.K., Reitböck, P.G., Humby, T., Lambourne, S.L., O'Connell, M., Ghetti, B., Gossage, H., Emson, P.C., Wilkinson, L.S., Goedert, M. and Spillantini, M.G.: Pathological changes in dopaminergic nerve cells of the substantia nigra and olfactory bulb in mice transgenic for truncated human  $\alpha$ -synuclein (1-120): Implications for Lewy body disorders. Journal of Neuroscience, 26, 3942-3950 (2006).

Masuda, M., Suzuki, N., Taniguchi, S., Oikawa, T., Nonaka, T., Iwatsubo, T., Hisanaga, S.I., Goedert, M. and Hasegawa, M.: Small molecule inhibitors of  $\alpha$ -synuclein filament assembly. Biochemistry, 45, 6085-6094 (2006).

Yoshida, H. and Goedert, M.: Sequential phosphorylation of tau protein by cAMP-dependent protein kinase and SAPK4/p38 $\delta$  or JNK2 in the presence of heparin generates the AT100 epitope. Journal of Neurochemistry, 99, 154-164 (2006).

Broersen, K., van den Brink, D., Fraser, G., Goedert, M. and Davletov, B.:  $\alpha$ -Synuclein adopts an  $\alpha$ -helical conformation in the presence of polyunsaturated fatty acids to hinder micelle formation. Biochemistry, 45, 15610-15616 (2006).

Spina, S., Murrell, J.R., Yoshida, H., Ghetti, B., Birmingham, N., Sweeney, B., Dlouhy, S.R., Crowther, R.A., Goedert, M. and Keohane, C.: The novel Tau mutation G335S: clinical, neuropathological and molecular characterization. Acta Neuropathologica, 113, 461-470 (2007).

Zibaee, S., Makin, O.S., Goedert, M. and Serpell, L.C.: A simple algorithm locates  $\beta$ -strands in the amyloid fibril core of  $\alpha$ -synuclein, A $\beta$ , and tau using the amino acid sequence alone. Protein Science, 16, 906-918 (2007).

Virdee, K., Yoshida, H., Peak-Chew, S. and Goedert, M.: Phosphorylation of human microtubule-associated protein tau by protein kinases of the AGC subfamily. FEBS Letters, 581, 2657-2662 (2007).

Ishii, A., Nonaka, T., Taniguchi, S., Saito, T., Arai, T., Mann, D., Iwatsubo, T., Hisanaga, S., Goedert, M. and Hasegawa, M.: Casein kinase 2 is the major enzyme in brain that phosphorylates Ser129 of human  $\alpha$ -synuclein:

Implications for  $\alpha$ -synucleinopathies. FEBS Letters, 581, 4711-4717 (2007).

Zibaee, S., Jakes, R., Fraser, G., Serpell, L.C., Crowther, R.A. and Goedert, M.: Sequence determinants for amyloid fibrillogenesis of human  $\alpha$ -synuclein. Journal of Molecular Biology, 374, 454-464 (2007).

Magnani, E., Fan, J., Gasparini, L., Golding, M., Williams, M., Schiavo, G., Goedert, M., Amos, L. and Spillantini, M.G.: Interaction of tau protein with the dynein complex. The EMBO Journal, 26, 4546-4554 (2007).

Spina, S., Farlow, M.R., Unverzagt, F.W., Kareken, D.A., Murrell, J.R., Fraser, G., Epperson, F., Crowther, R.A., Spillantini, M.G., Goedert, M. and Ghetti, B.: The tauopathy associated with mutation +3 in intron 10 of *Tau*: characterization of the MSTD family. Brain, 131, 72-89 (2008).

Delobel, P., Lavenir, I., Fraser, G., Ingram, E., Holzer, M., Ghetti, B., Spillantini, M.G., Crowther, R.A. and Goedert, M.: Analysis of tau phosphorylation and truncation in a mouse model of human tauopathy. American Journal of Pathology, 172, 123-131 (2008).

Velasco, A., Fraser, G., Delobel, P., Ghetti, B., Lavenir, I. and Goedert, M.: Detection of filamentous tau inclusions by the fluorescent Congo red derivative FSB [(*trans,trans*)-1-fluoro-2,5-bis(3-hydroxycarbonyl-4-hydroxy)styrylbenzene]. FEBS Letters, 582, 901-906 (2008).

Ye, L., Velasco, A., Fraser, G., Beach, T.G., Sue, L., Osredkar, T., Libri, V., Spillantini, M.G., Goedert, M. and Lockhart, A.: *In vitro* high affinity  $\alpha$ -synuclein binding sites for the amyloid imaging agent PIB are not matched by binding to Lewy bodies in postmortem human brain. Journal of Neurochemistry, 105, 1428-1437 (2008).

Kovacs, G.G., Majtenyi, K., Spina, S., Murrell, J.R., Gelpi, E., Höftberger, R., Fraser, G., Crowther, R.A., Goedert, M., Budka, H. and Ghetti, B.: White matter tauopathy with globular glial inclusions: A distinct sporadic frontotemporal lobar degeneration. Journal of Neuropathology and Experimental Neurology, 67, 963-975 (2008).

Masuda, M., Hasegawa, M., Nonaka, T., Oikawa, T., Yonetani, M., Yamaguchi, Y., Kato, K., Hisanaga, S.-I. and Goedert, M.: Inhibition of  $\alpha$ -synuclein fibril assembly by small molecules: Analysis using epitope-specific antibodies. FEBS Letters, 583, 787-791 (2009).

Clavaguera, F., Bolmont, T., Crowther, R.A., Abramowski, D., Frank, S., Probst, A., Fraser, G., Stalder, A.K., Beibel, M., Staufenbiel, M., Jucker, M., Goedert, M.\* and Tolnay, M.\*: Transmission and spreading of tauopathy in transgenic mouse brain. Nature Cell Biology, 11, 909-913 (2009).

\*Equal contributions.

Yamashita, M., Nonaka, T., Arai, T., Kametani, F., Buchman, V.L., Ninkina, N., Bachurin, S.O., Akiyama, H., Goedert, M. and Hasegawa, M.: Methylene blue and dimebon inhibit aggregation of TDP-43 in cellular models. *FEBS Letters*, 583, 2419-2424 (2009).

Chamraud, B., Sardin, E., Giustiniani, J., Dounane, O., Schumacher, M., Goedert, M. and Baulieu, E.E.: A role for FKBP52 in tau protein function. *Proceedings of the National Academy of Sciences (USA)*, 107, 2658-2663 (2010).

Scattoni, M.L., Gasparini, L., Alleva, E., Goedert, M., Calamandrei, G. and Spillantini, M.G.: Early behavioural markers of disease in P301S tau transgenic mice. *Behavioural Brain Research*, 208, 250-257 (2010).

Coomaraswamy, J., Kilger, E., Wölfig, H., Schäfer, C., Kaeser, S.A., Wegenast-Braun, B., Hefendehl, J.K., Wolburg, H., Mazzella, M., Ghiso, J., Goedert, M., Akiyama, H., Garcia-Sierra, F., Wolfer, D.P., Mathews, P.M. and Jucker, M.: Modeling familial Danish dementia in mice supports the concept of the amyloid hypothesis of Alzheimer's disease. *Proceedings of the National Academy of Sciences (USA)*, 107, 7969-7974 (2010).

Garcia-Reitböck, P., Anichtchik, O., Bellucci, A., Iovino, M., Ballini, C., Fineberg, E., Ghetti, B., Della Corte, L., Spano, P., Tofaris, G.K., Goedert M. and Spillantini, M.G.: SNARE protein redistribution and synaptic failure in a transgenic mouse model of Parkinson's disease. *Brain*, 133, 2032-2044 (2010).

Hampton, D.W., Webber, D.J., Bilican, B., Goedert, M., Spillantini, M.G. and Chandran, S.: Cell-mediated neuroprotection in a mouse model of human tauopathy. *Journal of Neuroscience*, 30, 9973-9983 (2010).

Zibaee, S., Fraser, G., Jakes, R., Owen, D., Serpell, L.C., Crowther, R.A. and Goedert, M.: Human  $\beta$ -synuclein rendered fibrillogenic by designed mutations. *Journal of Biological Chemistry*, 285, 38555-38567 (2010).

Gasparini, L., Crowther, R.A., Martin, K.R., Berg, N., Coleman, M., Goedert, M. and Spillantini, M.G.: Tau inclusions in retinal ganglion cells of human P301S tau transgenic mice: Effects on axonal viability. *Neurobiology of Aging*, 32, 419-433 (2011).

Yoshida, H. and Goedert, M.: Phosphorylation of microtubule-associated protein tau by AMPK-related kinases. *Journal of Neurochemistry*, 120, 165-176 (2012).

Bull, N.D., Guidi, A., Goedert, M., Martin, K.R. and Spillantini, M.G.: Reduced axonal transport and increased excitotoxic retinal ganglion cell degeneration in mice transgenic for human mutant P301S tau. PLoS ONE, 7: e34724 (2012).

Schaeffer, V., Lavenir, I., Ozcelik, S., Tolnay, M., Winkler, D.T. and Goedert, M.: Stimulation of autophagy reduces neurodegeneration in a mouse model of human tauopathy. Brain, 135, 2169-2177 (2012).

Schön, C., Hoffmann, N.A., Ochs, S.M., Burgold, S., Filser, S., Steinbach, S., Seeliger, M.W., Arzberger, T., Goedert, M., Kretzschmar, H.A., Schmidt, B. and Herms, J.: Long-term *in vivo* imaging of fibrillar tau in the retina of P301S transgenic mice. PLoS ONE , 7: e53547 (2012).

Morris, K.L., Zibaee, S., Chen, L., Goedert, M., Sikorski, P. and Serpell, L.C.: The structure of cross- $\beta$  tapes and tubes formed by an octapeptide,  $\alpha$ S $\beta$ 1. Angewandte Chemie International Edition, 52, 2279-2283 (2013).

Ozcelik, S., Fraser, G., Castets, P., Schaeffer, V., Skachokova, Z., Breu, K., Clavaguera, F., Sinnreich, M., Kappos, L., Goedert, M., Tolnay, M. and Winkler, D.T.: Rapamycin attenuates the progression of tau pathology in P301S transgenic mice. PLoS ONE, 8: e62459 (2013).

Clavaguera, F., Akatsu, H., Fraser, G., Crowther, R.A., Frank, S., Hench, J., Probst, A., Winkler, D.T., Reichwald, J., Staufenbiel, M., Ghetti, B., Goedert, M.\* and Tolnay, M.\*: Brain homogenates from human tauopathies induce tau inclusions in mouse brain. Proceedings of the National Academy of Sciences (USA), 110, 9535-9540 (2013). \*Equal contributions.

Klingstedt, T., Shirani, H., Aslund, K.O.A., Cairns, N.J., Sigurdson, C.J., Goedert, M. and Nilsson, K.P.R.: The structural basis for optimal performance of oligothiophene-based fluorescent amyloid ligands: Conformational flexibility is essential for spectral assignment of a diversity of protein aggregates. Chemistry, a European Journal, 19, 10179-10192 (2013).

Mellone, M., Kestoras, D., Andrews, M.R., Dassie, E., Crowther, R.A., Stokin, G.B., Tinsley, J., Horne, G., Goedert, M., Tolkovsky, A.M. and Spillantini, M.G.: Tau pathology is present *in vivo* and develops *in vitro* in sensory neurons from human P301S tau transgenic mice: A system for screening drugs against tauopathies. Journal of Neuroscience, 33, 18175-18189 (2013).

Hoffmann, N.A., Dorostkar, M.M., Blumenstock, S., Goedert, M. and Herms, J.: Impaired plasticity of cortical dendritic spines in P301S tau transgenic mice. Acta Neuropathologica Communications, 1, 82 (2013).

Iovino, M., Pfisterer, U., Holton, J.L., Lashley, T., Swingler, R.J., Calo, L., Treacy, R., Revesz, T., Parmar, G., Goedert, M., Muqit, M.M.K. and Spillantini, M.G.: The novel *MAPT* mutation K298E: mechanisms of mutant tau toxicity, brain pathology and tau expression in induced fibroblast-derived neurons. *Acta Neuropathologica*, 127, 283-295 (2014).

Clavaguera, F., Hench, J., Lavenir, I., Schweighauser, G., Frank, S., Goedert, M.\* and Tolnay, M.\*: Peripheral administration of tau aggregates triggers intracerebral tauopathy in transgenic mice. *Acta Neuropathologica*, 127, 299-301 (2014). \*Equal contributions.

Ahmed, Z., Cooper, J., Murray, T.K., Garn, K., McNaughton, E., Clarke, H., Parhizkar, S., Ward, M.A., Cavallini, A., Jackson, S., Bose, S., Clavaguera, F., Tolnay, M., Lavenir, I., Goedert, M., Hutton, M.L. and O'Neill, M.J.: A novel *in vivo* model of tau propagation with rapid and progressive neurofibrillary tangle pathology: the pattern of spread is determined by connectivity, not proximity. *Acta Neuropathologica*, 127, 667-683 (2014).

Herva, M.E., Zibaee, S., Fraser, G., Barker, R.A., Goedert, M. and Spillantini, M.G.: Anti-amyloid compounds inhibit  $\alpha$ -synuclein aggregation induced by protein misfolding cyclic amplification (PMCA). *Journal of Biological Chemistry*, 289, 11897-11905 (2014).

Xu, H., Rösler, T.W., Carlsson, T., de Andrade, A., Fiala, O., Höllerhage, M., Oertel, W.H., Goedert, M., Aigner, A. and Höglinder, G.U.: Tau silencing by siRNA in P301S mouse model of tauopathy. *Current Gene Therapy*, 14, 343-351 (2014).

Höllerhage, M., Deck, R., de Andrade, A., Respondek, G., Xu, H., Rösler, T.W., Salama, M., Carlsson, T., Yamada, E.S., Gad El Hak, S.A., Goedert, M., Oertel, W.H. and Höglinder, G.U.: Piericidin A aggravates tau pathology in P301S transgenic mice. *PLoS ONE* 9, e113557 (2014).

Flach, K., Ramminger, E., Hilbrich, I., Arsalen-Werner, A., Albrecht, F., Herrmann, L., Goedert, M., Arendt, T. and Holzer, M.: Axotrophin/MARCH7 acts as an E3 ubiquitin ligase and ubiquitinates tau protein *in vitro* impairing microtubule binding. *Biochimica et Biophysica Acta*, 1842, 1527-1538 (2014).

Falcon, B., Cavallini, A., Angers, R., Glover, S., Murray, T.K., Barnham, L., Jackson, S., O'Neill, M.J., Isaacs, A.M., Hutton, M.L., Szekeres, P.G., Goedert, M.\* and Bose, S.\*: Conformation determines the seeding potencies of native and recombinant tau aggregates. *Journal of Biological Chemistry*, 290, 1049-1065 (2015). \*Equal contributions.

Klingstedt, T., Shirani, H., Mahler, J., Wegenast-Braun, B.M., Nyström, S., Goedert, M., Jucker, M. and Nilsson, K.P.R.: Distinct spacing between anionic groups: An essential chemical determinant for achieving thiophene-based ligands to distinguish  $\beta$ -amyloid or tau polymorphic aggregates. *Chemistry, a European Journal*, 21, 9072-9082 (2015).

Brelstaff, J., Ossola, B., Neher, J.J., Klingstedt, T.,M., Nilsson, K.P.R., Goedert, M., Spillantini, M.G. and Tolokovsky, A.M.: The fluorescent pentameric oligothiophene pFTAA identifies filamentous tau in live neurons cultured from adult P301S tau mice. *Frontiers in Neuroscience*, 9, 184 (2015).

Jackson, S.J., Kerridge, C., Cooper, J., Cavallini, A., Falcon, B., Cella, C.V., Landi, A., Szekeres, P.G., Murray, T.K., Ahmed, Z., Goedert, M., Hutton, M., O'Neill, M.J. and Bose, S.: Short fibrils constitute the major species of seed-competent tau in the brains of mice transgenic for human P301S tau. *Journal of Neuroscience*, 36, 762-772 (2016).

Mazzaro, N., Barini, E., Spillantini, M.G., Goedert, M., Medini, P. and Gasparini, L.: Tau-driven neuronal and neurotrophic dysfunction in a mouse model of early tauopathy. *Journal of Neuroscience*, 36, 2086-2100 (2016).

Ozcelik, S., Sprenger, F., Skachokova, Z., Fraser, G., Abramowski, D., Clavaguera, F., Probst, A., Frank, S., Müller, M., Staufenbiel, M., Goedert, M., Tolnay, M. and Winkler, D.T.: Co-expression of truncated and full-length tau induces severe neurotoxicity. *Molecular Psychiatry*, 21, 1790-1798 (2016).

McEwan, W.A., Falcon, B., Vaysburd, M., Clift, D., Oblak, A.L., Ghetti, B., Goedert, M. and James, L.C.: Cytosolic Fc receptor TRIM21 inhibits seeded tau aggregation. *Proceedings of the National Academy of Sciences (USA)*, 114, 574-579 (2017).

Fitzpatrick, A.W.P., Falcon, B., He, S., Murzin, A.G., Murshudov, G., Garringer, H.J., Crowther, R.A., Ghetti, B., Goedert, M.\* and Scheres S.H.W.\*: Cryo-EM structures of tau filaments from Alzheimer's disease. *Nature*, 547, 185-190 (2017). \*Joint supervision of the work.

Falcon, B., Noad, J., McMahon H., Randow, F.\* and Goedert, M.\*: Galectin-8-mediated selective autophagy protects against seeded tau aggregation. *Journal of Biological Chemistry*, 293, 2438-2451 (2018).

\*Equal contributions.

Kundel, F., Hong, L., Falcon, B., McEwan, W.A., Michaels, T.C.T., Meisl, G., Esteras, N., Abramov, A.Y., Knowles, T.J.P., Goedert, M. and

Kleinerman, D.: Measurement of tau filament fragmentation provides insights into prion-like spreading. ACS Chemical Neuroscience, in press.

Brelstaff, J., Tolkovsky, A.M., Ghetti, B., Goedert, M. and Spillantini, M.G.: Living neurons with tau aggregates expose phosphatidylserine and are eaten alive by microglia. Submitted for publication.

Sangwan, S., Sahay, S., Murray, K.A., Morgan, S., Guenther, E.L., Jiang, L., Goedert, M. and Eisenberg, D.S.: Inhibition of synucleinopathic seeding by rationally designed inhibitors. Submitted for publication.

Passarella, D. and Goedert, M.: Aggregation of tau and neurodegeneration in *D. melanogaster*. Submitted for publication.

Falcon, B., Zhang, W., Murzin, A.G., Murshudov, G., Garringer, H.J., Vidal, R., Crowther, R.A., Ghetti, B., Scheres, S.H.W.\* and Goedert, M.\*: Structures of filaments from Pick's disease reveal a novel tau protein fold. Submitted for publication. \*Joint supervision of the work.

Mund, T., Masuda-Suzukake, M., Goedert, M. and Pelham, H.R.: Ubiquitination of alpha-synuclein filaments by Nedd4 ligases. Submitted for publication.

## **Review articles**

Goedert, M.: Pflanzenkrebs. Bild der Wissenschaft, 1465, Dezember 1973.

Goedert, M.: De la causalité des tumeurs crown-gall. Bulletin de la Société des Naturalistes Luxembourgeois, 78, 3-20 (1973).

Otten, U., Goedert, M. and Thoenen, H.: Role of nerve growth factor for development and maintenance of function of sympathetic neurons and adrenal medullary cells. In: "Maturation of Neurotransmission" (A. Vernadakis, G. Filogamo and E. Giacobini, eds.), pp. 76-82. S. Karger Publishers 1978.

Goedert, M.: Nerve growth factor: Its growing importance for neurobiology and medicine. Bulletin de la Société des Sciences Médicales du G.D. de Luxembourg, 2, 69-74 (1978).

Goedert, M., Otten, U. and Heitz, P.U.: Carcinoid tumours, biogenic amines and cancer. Reviews on Endocrine-related Cancer, 7, 13-20 (1980).

Goedert, M., Otten, U. and Metz, H.: Endogenous opioid peptides. Bulletin de la Société des Sciences Médicales du G.D. de Luxembourg, 2, 7-17 (1981).

Emson, P.C., Goedert, M., Benton, H., St. Pierre, S. and Rioux, F.: The regional distribution and chromatographic characterization of neuropeptides-like immunoreactivity in the rat. In: "Regulatory Peptides: From Molecular Biology to Function" (M. Trabucchi and E. Costa, eds.), pp. 477-485. Raven Press 1982.

Emson, P.C., Goedert, M., Williams, B.J., Ninkovic, M. and Hunt, S.P.: Neurotensin: Regional distribution, characterization and inactivation. Annals of the New York Academy of Sciences, 400, 198-217 (1982).

Goedert, M., Lightman, S.L. and Emson, P.C.: Neurotensin in the pituitary gland. Annals of the New York Academy of Sciences, 400, 411-412 (1982).

Goedert, M.: Neurotensin - a status report. Trends in Neurosciences, 7, 3-5 (1984).

Bannon, M.J., Goedert, M. and Williams, B.J.: The possible relationship of glutathione, melanin and 1-methyl-4-phenyl-1,2,5,6-tetrahydropyridine (MPTP) to Parkinson's disease. Biochemical Pharmacology, 33, 2697-2698 (1984).

Emson, P.C., Goedert, M. and Mantyh, P.W.: Neurotensin-containing neurones. In: "Handbook of Chemical Neuroanatomy", Volume 4 (A. Björklund and T. Hökfelt, eds.), pp. 355-405. Elsevier Publishers 1985.

Goedert, M.: Receptors for non-opioid neuropeptides. In: "Neuromethods", Volume 4 (A.A. Boulton, G.B. Baker and P. Hrdina, eds.), pp. 251-327. Humana Press 1986.

Goedert, M. and Hunt, S.P.: The cellular localization of preprotachykinin, preproenkephalin A and pronerve growth factor mRNA. In: "In situ Hybridization in Brain" (G.R. Uhl, ed.), pp. 151-170. Plenum Publishers 1986.

Goedert, M.: Molecular biology of chemical neurotransmission. In: "Molecular Biology of Neurological Disease" (A. Harding and R. Rosenberg, eds.), pp. 44-62. Butterworths Publishers 1988.

Goedert, M., Wischik, C.M., Crowther, R.A., Spillantini, M.G., Walker, J.E. and Klug, A.: Molecular cloning of cDNAs for human tau protein, a component of the PHF core. In: "The Molecular Biology of Alzheimer's disease" (C.E. Finch and P. Davies, eds.), pp. 143-149. Cold Spring Harbor Publications 1988.

Klug, A., Goedert, M. and Wischik, C.M.: Summary of the conference. In: "The Molecular Biology of Alzheimer's disease" (C.E. Finch and P. Davies, eds.), pp. 187-197. Cold Spring Harbor Publications 1988.

Hunt, S.P., Wisden, W., Davies, S.W., Morris, B.J., Spillantini, M.G. and Goedert, M.: *In situ* hybridization in the vertebrate nervous system. In: "Neuropeptides: A Methodology" (G. Fink and A.J. Harmar, eds.),

pp. 55-82. Wiley and Sons 1989.

Goedert, M.: Radioligand binding assays for the study of neuropeptides receptors. In: "Methods in Enzymology, Hormone Action, Part K: Neuroendocrine Peptides" (P.M. Conn ed.), Volume 168, pp. 462-481. Academic Press 1989.

Crowther, R.A., Goedert, M. and Wischik, C.M.: The repeat region of microtubule-associated protein tau forms part of the core of the paired helical filament of Alzheimer's disease. *Annals of Medicine*, 21, 127-132 (1989).

Goedert, M. and Crowther, R.A.: Amyloid plaques, neurofibrillary tangles and their relevance for the study of Alzheimer's disease. *Neurobiology of Aging*, 10, 405-406 (1989).

Goedert, M.: Characterization of molecular pathology of Alzheimer's disease. In: "Methods in Neurosciences" (P.M. Conn, ed.), Volume 1, pp. 425-442. Academic Press 1989.

Goedert, M. and Spillantini, M.G.: Molecular neuropathology of Alzheimer's disease: *In situ* hybridization studies. *Molecular and Cellular Neurobiology*, 10, 159-174 (1990).

Hanley, M.R., Cheung, W.T., Hawkins, P., Poyner, D., Benton, H.P., Blair, L., Jackson, T.R. and Goedert, M.: The mas oncogene as a neural peptide receptor: Expression, regulation and mechanism of action. In: "Proto-oncogenes in Cell Development" (J. Marsh, ed.), CIBA Symposium 150, pp. 23-46. Wiley and Sons 1990.

Wright, A.N., Goedert, M. and Hastie, N.D.: Familial Alzheimer's disease. Beta amyloid resurrected. *Nature*, 349, 653-654 (1991).

Goedert, M., Crowther, R.A. and Garner, C.C.: Molecular characterization of microtubule-associated proteins tau and MAP2. *Trends in Neurosciences*, 14, 193-199 (1991).

Goedert, M., Spillantini, M.G. and Crowther, R.A.: Tau proteins and neurofibrillary degeneration. *Brain Pathology*, 1, 279-286 (1991).

Goedert, M., Sisodia, S.S. and Price, D.L.: Neurofibrillary tangles and beta-amyloid deposits in Alzheimer's disease. *Current Opinion in Neurobiology*, 1, 441-447 (1991).

Goedert, M., Potier, M.C. and Spillantini, M.G.: Molecular neuropathology of Alzheimer's disease. In: "Cambridge Medical Reviews, Neurobiology and

*Psychiatry*" (R. Kerwin, ed.), Volume 1, pp. 95-122. Cambridge University Press 1991.

Goedert, M.: Molekularbiologie der Alzheimer-Krankheit. In: "Demenz" (E. Lungershausen, Hrsg.), pp. 27-36. Springer Verlag 1992.

Goedert, M.: Tau protein and the neurofibrillary pathology of Alzheimer's disease. *Trends in Neurosciences*, 16, 460-465 (1993).

Goedert, M.: Tau proteins and Alzheimer's disease. In "Neuronal Cytoskeleton: Morphogenesis, transport and synaptic transmission" (N. Hirokawa, ed.), pp. 233-246. Japan Scientific Societies Press/CRC Press 1993.

Trojanowski, J.Q., Schmidt, M.L., Shin, R.-W., Bramblett, G.T., Goedert, M. and Lee, V.M.-Y.: PHF-Tau (A68): From pathological marker to potential mediator of neuronal dysfunction and degeneration in Alzheimer's disease. *Clinical Neuroscience*, 1, 184-191 (1993).

Goedert, M., Jakes, R., Spillantini, M.G. and Crowther, R.A.: Tau protein and Alzheimer's disease. In "Microtubules" (J.S. Hyams and C.W. Lloyd, eds.), pp. 183-200. Wiley and Sons 1994.

Strittmatter, W.J., Weisgraber, K.H., Goedert, M., Saunders, A.M., Huang, D., Corder, E.H., Dong, L.-M., Jakes, R., Alberts, M.J., Gilbert, J.R., Han, S.-H., Hulette, C., Einstein, G., Schmechel, D.E., Pericak-Vance, M.A. and Roses, A.D.: Hypothesis: Microtubule instability and paired helical filament formation in the Alzheimer disease brain are related to apolipoprotein E genotype. *Experimental Neurology*, 125, 163-171 (1994).

Goedert, M., Strittmatter, W.J. and Roses, A.D.: Alzheimer's disease. Risky apolipoprotein in brain. *Nature*, 372, 45-46 (1994).

Strittmatter, W.J., Huang, D.Y., Saunders, A., Schmechel, D., Pericak-Vance, M., Roses, A.D., Weisgraber, K.H. and Goedert, M.: Apolipoprotein E and Alzheimer's disease: Therapeutic implications. In: "Alzheimer's Disease: Therapeutic Strategies" (E. Giacobini and R. Becker, eds.), pp. 65-71. Birkhäuser 1994.

Goedert, M., Jakes, R., Spillantini, M.G., Crowther, R.A., Cohen, P., Vanmechelen, E., Probst, A., Götz, J. and Bürki, K.: Tau protein in Alzheimer's disease. *Biochemical Society Transactions*, 23, 80-85 (1995).

Goedert, M.: Molecular dissection of the neurofibrillary lesions of Alzheimer's disease. *Arzneimittelforschung/Drug Research*, 45, 403-409 (1995).

Roses, A.D., Saunders, A.M., Corder, E.H., Pericak-Vance, M.A., Han, S.-H., Einstein, G., Hulette, C., Schmechel, D.E., Holsti, M., Huang, D., Risch, N.J., Haines, J.L., Goedert, M., Jakes, R., Dong, L.-M., Weisgraber, K.H. and Strittmatter, K.H.: Influence of the susceptibility genes apolipoprotein E4 and apolipoprotein E2 on the rate of disease expressivity of late-onset Alzheimer's disease. *Arzneimittelforschung/Drug Research*, 45, 413-417 (1995).

Goedert, M., Spillantini, M.G., Jakes, R., Crowther, R.A., Cohen, P., Vanmechelen, E., Probst, A., Götz, J. and Bürki, K.: Molecular dissection of the paired helical filament. In: "Research Advances in Alzheimer's Disease and Related Disorders" (K. Iqbal, J.A. Mortimer, B. Winblad and H.M. Wisniewski, eds.), pp. 493-502. Wiley and Sons Ltd. 1995.

Roses, A.D., Saunders, A.M., Corder, E.H., Risch, N.J., Haines, J.L., Pericak-Vance, M.A., Han, S.H., Einstein, G., Hulette, C., Schmechel, D.E., Goedert, M., Jakes, R., Dong, L.M., Weisgraber, K.H., Holsti, M., Huang, D. and Strittmatter, W.J.: Apolipoprotein E and Alzheimer's disease. In: "Research Advances in Alzheimer's Disease and Related Disorders" (K. Iqbal, J.A. Mortimer, B. Winblad and H.M. Wisniewski, eds.), pp. 85-96. Wiley and Sons Ltd. 1995.

Goedert, M., Spillantini, M.G., Jakes, R., Crowther, R.A., Vanmechelen, E., Probst, A., Götz, J., Bürki, K. and Cohen, P.: Molecular dissection of the paired helical filament. *Neurobiology of Aging*, 16, 325-334 (1995).

Goedert, M.: Tau protein and the neurofibrillary pathology of Alzheimer's disease. *Annals of the New York Academy of Sciences*, 777, 121-131 (1996).

Roses, A.D., Einstein, G., Gilbert, J., Goedert, M., Han, S.H., Huang, D., Hulette, C., Masliah, E., Pericak-Vance, M.A., Saunders, A.M., Schmechel, D.E., Strittmatter, W.J., Weisgraber, K.H. and Xi, P.T.: Morphological, biochemical and genetic support for an apolipoprotein E effect on microtubular metabolism. *Annals of the New York Academy of Sciences*, 777, 146-157 (1996).

Goedert, M.: Tau protein and the neurofibrillary pathology of Alzheimer's disease. In: "Apolipoprotein E and Alzheimer's disease" (A.D. Roses, K.H. Weisgraber and Y. Christen, eds.), pp. 103-125. Springer Publishers 1996.

Roses, A.D., Saunders, A.M., Corder, E.H., Risch, N.J., Haines, J.L., Pericak-Vance, M.A., Han, S.-H., Einstein, G., Hulette, C., Schmechel, D.E., Goedert, M., Jakes, R., Dong, L.-M., Weisgraber, K.H., Holsti, M., Huang, D. and Strittmatter, W.J.: Apolipoprotein E and Alzheimer's

disease. In: "Preclinical and clinical strategies for the treatment of neurodegenerative, cerebrovascular and mental disorders" (T. Shibuya, ed.), pp. 187-197. Karger Publishers 1996.

Goedert, M., Spillantini, M.G., Hasegawa, M., Jakes, R., Crowther, R.A. and Klug, A.: Molecular dissection of the neurofibrillary lesions of Alzheimer's disease. Cold Spring Harbor Symposia on Quantitative Biology, LXI, 565-573 (1996).

Goedert, M., Trojanowski, J.Q. and Lee, V.M.-Y.: Tau protein and the neurofibrillary pathology of Alzheimer's disease. In: "Molecular Mechanisms of Dementia" (W. Wasco and R.E. Tanzi, editors), pp. 199-218. Humana Press 1997.

Goedert, M., Trojanowski, J.Q. and Lee, V.M.-Y.: The neurofibrillary pathology of Alzheimer's disease. In: "The Molecular and Genetic Basis of Neurological Disease" (R.N. Rosenberg, S.B. Prusiner, S. DiMauro and R.L. Barchi, eds.). Second edition, pp. 613-627. Butterworth/Heinemann Publishers 1997.

Spillantini, M.G., Goedert, M., Crowther, R.A., Murrell, J.R., Farlow, M.R. and Ghetti, B.: Characterization of familial multiple system tauopathy with pre-senile dementia. In: "Alzheimer's Disease: Biology, Diagnosis and Therapeutics" (K. Iqbal, B. Winblad, T. Nishimura, M. Takeda and H.M. Wisniewski, eds.), pp. 213-223. Wiley and Sons Ltd 1997.

Goedert, M.: The neurofibrillary pathology of Alzheimer's disease. The Neuroscientist, 3, 131-141 (1997).

Goedert, M.: Familial Parkinson's disease. The awakening of  $\alpha$ -synuclein. Nature, 388, 232-233 (1997).

Goedert, M.: Unravelling the filaments that strangle the brain. MRC News, issue 76, pp. 22-25 (1997).

Goedert, M., Jakes, R. and Spillantini, M.G.: Alpha-Synuclein and the Lewy body. Neuroscience News, 1, 47-52 (1998).

Cohen, P. and Goedert, M.: Engineering protein kinases with distinct nucleotide specificities and inhibitor sensitivities by mutation of a single amino acid. Chemistry and Biology, 5, R161-R164 (1998).

Goedert, M., Jakes, R., Crowther, R.A., Hasegawa, M., Smith, M.J. and Spillantini, M.G.: Intraneuronal filamentous tau protein and  $\alpha$ -synuclein deposits in neurodegenerative diseases. Biochemical Society

Transactions, 26, 463-471 (1998).

Spillantini, M.G. and Goedert, M.: Tau protein pathology in neurodegenerative diseases. Trends in Neurosciences, 21, 428-433 (1998).

Goedert, M., Spillantini, M.G. and Davies, S.W.: Filamentous nerve cell inclusions in neurodegenerative diseases. Current Opinion in Neurobiology, 8, 619-632 (1998).

Trojanowski, J.Q., Goedert, M., Iwatsubo, T. and Lee, V.M.-Y.: Fatal attractions: Abnormal protein aggregation and neuron death in Parkinson's disease and Lewy body dementia. Cell Death and Differentiation, 5, 832-837 (1998).

Goedert, M., Crowther, R.A. and Spillantini, M.G.: Tau mutations cause frontotemporal dementias. Neuron, 21, 955-958 (1998).

Goedert, M. and Spillantini, M.G.: Lewy body diseases and multiple system atrophy as  $\alpha$ -synucleinopathies. Molecular Psychiatry, 3, 462-465 (1998).

Goedert, M.: Neurofibrillary pathology of Alzheimer's disease and other tauopathies. In: Progress in Brain Research, Volume 117 (F.W. Van Leeuwen, A. Salehi, R.J. Giger, A.J.G.D. Holtmaat and J. Verhaagen, eds.), pp. 287-306. Elsevier Science 1998.

Goedert, M. and Hasegawa, M.: The Tauopathies. Toward an experimental animal model. American Journal of Pathology, 154, 1-6 (1999).

Hasegawa, M. and Goedert, M.: Tau protein [in Japanese]. In: "Recent Advances in Alzheimer's Disease Research" (Y. Ihara, ed.), pp. 81-92. Yodosha & Co. Ltd. 1999.

Goedert, M., Crowther, R.A., Jakes, R., Hasegawa, M., Smith, M.J., Murrell, J.R., Ghetti, B. and Spillantini, M.G.: Filamentous tau protein and  $\alpha$ -synuclein deposits in neurodegenerative diseases. In: "Alzheimer's Disease and Related Disorders" (K. Iqbal, D.F. Swaab, B. Winblad and H.M. Wisniewski, eds.), pp. 245-258. Wiley & Sons Ltd. 1999.

Goedert, M.: Alzheimer's disease. Pinning down phosphorylated tau. Nature, 399, 739-740 (1999).

Goedert, M.: Filamentous nerve cell inclusions in neurodegenerative diseases: tauopathies and  $\alpha$ -synucleinopathies. Philosophical Transactions of The Royal Society of London, Series B, 354, 1101-1118 (1999). [Reprinted in: "Glutamine repeats and neurodegenerative diseases: Molecular aspects" (P.S. Harper and M. Perutz, eds.), pp. 272-306. Oxford

University Press 2001].

Goedert, M. and Klug, A.: Highlights in Twentieth Century Neuroscience. Tau protein and the paired helical filament of Alzheimer's disease. *Brain Research Bulletin*, 50, 469-470 (1999).

Spillantini, M.G., Van Swieten, J.C. and Goedert, M.: *Tau* gene mutations in frontotemporal dementia and parkinsonism linked to chromosome 17 (FTDP-17). *Neurogenetics*, 2, 193-205 (2000).

Spillantini, M.G. and Goedert, M.: *Tau* mutations in familial frontotemporal dementia. *Brain*, 123, 857-859 (2000).

Goedert, M. and Spillantini, M.G.: Tauopathies and  $\alpha$ -Synucleinopathies. In: "Fatal Attractions: Protein Aggregates in Neurodegenerative Disorders" (V.M.-Y. Lee, J.Q. Trojanowski, L. Buée and Y. Christen, eds.), pp. 65-86. Springer Publishers 2000.

Goedert, M. and Spillantini, M.G.: Tau mutations in frontotemporal dementia FTDP-17 and their relevance for Alzheimer's disease. *Biochimica et Biophysica Acta – Molecular Basis of Disease*, 1502, 110-121 (2000).

Crowther, R.A. and Goedert, M.: Abnormal tau-containing filaments in neurodegenerative diseases. *Journal of Structural Biology*, 130, 271-279 (2000).

Spillantini, M.G. and Goedert, M.: The  $\alpha$ -Synucleinopathies: Parkinson's disease, dementia with Lewy bodies, and multiple system atrophy. *Annals of the New York Academy of Sciences*, 920, 16-27 (2000).

Ghetti, B., Murrell, J.R., Zolo, P., Spillantini, M.G. and Goedert, M.: Progress in hereditary tauopathies: A mutation in the *Tau* gene (G389R) causes a Pick disease-like syndrome. *Annals of the New York Academy of Sciences*, 920, 52-62 (2000).

Goedert, M., Ghetti, B. and Spillantini, M.G.: *Tau* gene mutations in frontotemporal dementia and parkinsonism linked to chromosome 17 (FTDP-17): Their relevance for understanding the neurodegenerative process. *Annals of the New York Academy of Sciences*, 920, 74-83 (2000).

Götz, J., Barmettler, R., Ferrari, A., Goedert, M., Probst, A. and Nitsch, R.M.: In vivo analysis of wild-type and FTDP-17 tau transgenic mice. *Annals of the New York Academy of Sciences*, 920, 126-133 (2000).

St George-Hyslop, P.H., Farrer, L.A. and Goedert, M.: Alzheimer disease and the frontotemporal dementias: Diseases with cerebral deposition of

fibrillar proteins. In: "The Metabolic & Molecular Bases of Inherited Disease" (C.R. Scriver, A.L. Beaudet, W.S. Sly and D. Valle, eds.), 8<sup>th</sup> Edition, pp. 5875-5899. McGraw-Hill, New York 2001.

Yasuda, M., Takamatsu, J., Komure, O., Kuno, S., D'Souza, I., Kawamata, T., Hasegawa, M., Iwatsubo, T., Poorkaj, P., Goedert, M., Schellenberg, G.D. and Tanaka, C.: Tau mutations altering splicing of tau exon 10 in Japanese frontotemporal dementia. In: "Neuroscientific Basis of Dementia" (C. Tanaka, P.L. McGeer and Y. Ihara, eds.), pp. 81-84. Birkhäuser Verlag 2001.

Goedert, M., Spillantini, M.G., Serpell, L.C., Berriman, J., Smith, M.J., Jakes, R. and Crowther, R.A.: From genetics to pathology: tau and  $\alpha$ -synuclein assemblies in neurodegenerative diseases. Philosophical Transactions of The Royal Society of London, Series B, 356, 213-227 (2001).

Goedert, M. and Spillantini, M.G.: *Tau* gene mutations and neurodegeneration. In: "Neural signal transduction and Alzheimer's disease" (C.O. O'Neill and B.H. Anderton, eds.). Biochemical Society Symposium 67, 59-71 (2001).

Goedert, M., Jakes, R., Crowther, R.A. and Spillantini, M.G.: Parkinson's disease, dementia with Lewy bodies and multiple system atrophy as  $\alpha$ -synucleinopathies. In: "Methods in Molecular Medicine, Volume 62: Parkinson's disease: Methods and Protocols" (M.M. Mouradian, ed.), pp. 33-59. Humana Press 2001.

Goedert, M.: Parkinson's disease and other  $\alpha$ -synucleinopathies. Clinical Chemistry and Laboratory Medicine, 39, 308-312 (2001).

Spillantini, M.G. and Goedert, M.: Tau gene mutations and tau pathology in frontotemporal dementia and parkinsonism linked to chromosome 17. In: "Neuropathology and Genetics of Dementia" (M. Tolnay and A. Probst, eds.), pp. 21-37. Kluver Academic/Plenum Publishers, New York 2001.

Götz, J., Tolnay, M., Barmettler, R., Ferrari, A., Bürki, K., Goedert, M., Probst, A. and Nitsch, R.M.: Human tau transgenic mice. Towards an animal model for neuro- and glialfibrillary lesions. In: "Neuropathology and Genetics of Dementia" (M. Tolnay and A. Probst, eds.), pp. 71-83. Kluver Academic Press/Plenum Publishers, New York 2001.

Goedert, M.: The significance of tau and  $\alpha$ -synuclein inclusions in neurodegenerative diseases. Current Opinion in Genetics & Development, 11, 343-351 (2001).

Lee, V.M.-Y., Goedert, M. and Trojanowski, J.Q.: Neurodegenerative Tauopathies. *Annual Review of Neuroscience*, 24, 1121-1159 (2001).

Goedert, M.: Alpha-Synuclein and neurodegenerative diseases. *Nature Reviews Neuroscience*, 2, 492-501 (2001).

Horn, G., Bobrow, M., Bruce, M., Goedert, M., McLean, A. and Webster, J.: Review of the origin of BSE. Report to the U.K. Government. Department for the Environment, Food and Rural Affairs, London 2001.

Spillantini, M.G. and Goedert, M.: Tau and Parkinson disease. *The Journal of the American Medical Association*, 286, 2324-2326 (2001).

Spillantini, M.G. and Goedert, M.: The neurobiology of the tauopathies. In: "Disorders of Brain and Mind 2" (M.A. Ron and T.W. Robbins, eds.), pp. 245-261. Cambridge University Press 2003.

Goedert, M.: Introduction to the Tauopathies. In: "Neurodegeneration: The Molecular Pathology of Dementia and Movement Disorders", 1<sup>st</sup> Edition (D. Dickson, ed.), pp. 82-85. ISN Neuropath Press, Basel 2003.

Goedert, M.: Neurodegenerative tauopathy in the worm. *Proceedings of the National Academy of Sciences (USA)*, 100, 9653-9655 (2003).

Goedert, M.: Relevance of mutations in *Tau* for understanding the tauopathies. *Current Medicinal Chemistry – Immunology, Endocrine & Metabolic Agents*, 3, 341-348 (2003).

Goedert, M.: Tau protein and neurodegeneration. *Seminars in Cell & Developmental Biology*, 15, 45-49 (2004).

Goedert, M.:  $\alpha$ -Synuclein and neurodegeneration. In: "Primer on the Autonomic Nervous System" (D. Robertson, I. Biaggioni, G. Burnstock and P.A. Low, eds.), pp. 204-207. Elsevier Academic Press 2004.

Cohen, P. and Goedert, M.: GSK3 inhibitors: Development and therapeutic potential. *Nature Reviews Drug Discovery*, 3, 479-487 (2004).

Goedert, M. and Jakes, R.: Mutations causing neurodegenerative tauopathies. *Biochimica et Biophysica Acta – Molecular Basis of Disease*, 1739, 240-250 (2005).

Goedert, M. and Spillantini, M.G.: Neurodegenerative

$\alpha$ -Synucleinopathies. In: "Current Clinical Neurology: Atypical Parkinsonian Disorders" (I. Litvan, ed.), pp. 77-94. Humana Press 2005.

Goedert, M.: Tau gene mutations and their effects. Movement Disorders, 20, S45-S52 (2005).

Goedert, M. and Spillantini, M.G.: Neurodegenerative  $\alpha$ -synucleinopathies and tauopathies. In: "Basic Neurochemistry", 7<sup>th</sup> Edition (G.J. Siegel, R.W. Albers, S.T. Brady and D.L. Price, eds.), pp. 745-759. Elsevier Academic Press 2006.

Goedert, M., Klug, A. and Crowther, R.A.: Tau protein, the paired helical filament and Alzheimer's disease. Journal of Alzheimer's Disease, 9, 195-207 (2006).

Spillantini, M.G., Murrell, J.R., Goedert, M., Farlow, M., Klug, A. and Ghetti, B.: Mutations in the tau gene (*MAPT*) in FTDP-17: the family with multiple system tauopathy with presenile dementia (MSTD). Journal of Alzheimer's Disease, 9, 373-380 (2006).

Goedert, M., Spillantini, M.G., Ghetti, B., Crowther, R.A. and Klug, A.: The Alzheimer tangle – 100 years on. In: "Alzheimer: 100 years and beyond" (M. Jucker, K. Beyreuther, C. Haass, R. Nitsch and Y. Christen, eds.), pp. 297-304. Springer Publishers 2006.

Goedert, M. and Spillantini, M.G.: Frontotemporal lobar degeneration through loss of progranulin function. Brain, 129, 2808-2810 (2006).

Goedert, M. and Spillantini, M.G.: A century of Alzheimer's disease. Science, 314, 777-781 (2006).

Ghetti, B. and Goedert, M.: Introduction to Symposium: Tau protein and neurodegeneration. Brain Pathology, 17, 56 (2007).

Goedert, M. and Ghetti, B.: Alois Alzheimer: his life and times. Brain Pathology, 17, 57-62 (2007).

Spillantini, M.G. and Goedert, M.: Inherited and sporadic tauopathies. In: "Parkinson's Disease and Movement Disorders", 5<sup>th</sup> Edition (J. Jankovic and E. Tolosa, eds.), pp. 203-212. Lippincott Williams & Wilkins 2007.

Goedert, M. and Spillantini, M.G.: Tau protein and the dementias. In: "The Dementias 2" (J.H. Growdon and M.N. Rossor, eds.), pp. 99-111. Butterworth Heinemann Elsevier 2007.

Radde, R., Duma, C., Goedert, M. and Jucker, M.: The value of incomplete mouse models of Alzheimer's disease. European Journal of Nuclear Medicine and Molecular Imaging, 35 (Suppl. 1), S70-S74 (2008).

Goedert, M.: Parkinson's disease: Alpha-synuclein and neurodegeneration. In: "Encyclopedia of Neuroscience" (Squire L.R., ed.), Volume 7, pp. 461-467. Academic Press, Oxford 2009.

Goedert, M.: Oskar Fischer and the study of dementia. Brain, 132, 1102-1111 (2009).

Clavaguera, F., Goedert, M. and Tolnay, M.: Induction and spreading of tau pathology in a mouse model of Alzheimer's disease [in French]. Médecine Sciences, 26, 121-124 (2010).

Goedert, M., Clavaguera, F. and Tolnay, M.: The propagation of prion-like protein inclusions in neurodegenerative diseases. Trends in Neurosciences, 33, 317-325 (2010).

Goedert, M.: The hyperphosphorylation of tau and Alzheimer's disease. In: "Protein Phosphorylation" (P. Cohen, ed.). The Biomedical & Life Sciences Collection, Henry Stewart Talks Ltd, London 2010.

Goedert, M.: Introduction to the Tauopathies. In: "Neurodegeneration: The Molecular Pathology of Dementia and Movement Disorders", 2<sup>nd</sup> Edition (D.W. Dickson and R.O. Weller, eds.), pp. 105-109. Wiley-Blackwell, Oxford 2011.

Ghetti, B., Wszolek, Z.W., Boeve, B.F., Spina, S. and Goedert, M.: Frontotemporal dementia and parkinsonism linked to chromosome 17. In: "Neurodegeneration: The Molecular Pathology of Dementia and Movement Disorders", 2<sup>nd</sup> Edition (D.W. Dickson and R.O. Weller, eds.), pp. 110-134. Wiley-Blackwell, Oxford 2011.

Goedert, M. and Spillantini, M.G.: Pathogenesis of the Tauopathies. Journal of Molecular Neuroscience, 45, 425-431 (2011).

Goedert, M., Ghetti, B. and Spillantini, M.G.: Frontotemporal dementia: Implications for understanding Alzheimer disease. Cold Spring Harbor Perspectives in Medicine 4: a006254 (2012). [Reprinted in: "The Biology of Alzheimer Disease" (D.J. Selkoe, E. Mandelkow and D.M. Holtzman, eds.), pp. 159-179. Cold Spring Harbor Laboratory Press 2012].

Goedert, M. and Spillantini, M.G.: Synucleinopathies and Tauopathies. In: "Basic Neurochemistry", 8<sup>th</sup> Edition (S.T. Brady, G.J. Siegel, R.W. Albers and D.L. Price, eds.), pp. 829-843. Elsevier Academic Press 2012.

Schaeffer, V. and Goedert, M.: Stimulation of autophagy is neuroprotective in a mouse model of human tauopathy. *Autophagy*, 8, 1686-1687 (2012).

Goedert, M., Spillantini, M.G., Del Tredici, K. and Braak, H.: 100 years of Lewy pathology. *Nature Reviews Neurology*, 9, 13-24 (2013).

Jenner, P., Morris, H.R., Robbins, T.W., Goedert, M., Hardy, J., Ben-Shlomo, Y., Bolam, P., Burn, D., Hindle, J.V. and Brooks, D.: Parkinson's disease – the debate on the clinical phenomenology, aetiology, pathology and pathogenesis. *Journal of Parkinson's Disease*, 3, 1-11 (2013).

Clavaguera, F., Tolnay, M. and Goedert, M.: Prion-like properties of assembled tau protein. In: "Proteopathic seeds and neurodegenerative diseases" (M. Jucker and Y. Christen, eds.), pp. 87-95. Springer Publishers 2013.

Clavaguera, F., Lavenir, I., Falcon, B., Frank, S., Goedert, M. and Tolnay, M.: "Prion-like" templated misfolding in tauopathies. *Brain Pathology*, 23, 342-349 (2013).

Spillantini, M.G. and Goedert, M.: Tau pathology and neurodegeneration. *Lancet Neurology*, 12, 609-622 (2013).

Hastings, M.H. and Goedert, M.: Circadian clocks and neurodegenerative diseases: Time to aggregate? *Current Opinion in Neurobiology*, 23, 880-887 (2013).

Goedert, M.: Prions and the like. *Brain*, 137, 301-305 (2014).

Goedert, M., Falcon, B., Clavaguera, F. and Tolnay, M.: Prion-like mechanisms in the pathogenesis of tauopathies and synucleinopathies. *Current Neurology and Neuroscience Reports*, 14, 495 (2014).

Ghetti, B., Oblak A.L., Boeve, B.F., Johnson, K.A., Dickerson, B.C. and Goedert, M.: Frontotemporal dementia caused by microtubule-associated protein tau gene (*MAPT*) mutations: a chameleon for neuropathology and neuroimaging. *Neuropathology and Applied Neurobiology*, 41, 24-46 (2015).

Clavaguera, F., Hench, J., Goedert, M. and Tolnay, M.: Prion-like transmission and spreading of tau pathology. *Neuropathology and Applied Neurobiology*, 41, 47-58 (2015).

Duyckaerts, C., Braak, H., Brion, J.P., Buée, L., Del Tredici, K., Goedert, M., Halliday, G., Neumann, M., Spillantini, M.G., Tolnay, M. and Uchihara,

T.: PART is part of Alzheimer disease. *Acta Neuropathologica*, 129, 749-756 (2015).

Goedert, M.: Alzheimer's and Parkinson's diseases: The prion concept in relation to assembled A $\beta$ , tau, and  $\alpha$ -synuclein. *Science*, 349, 1255555 (2015).

Goedert, M. and Cheng, Y.: Crystals of a toxic core. *Nature*, 525, 458-459 (2015).

Goedert, M., Spillantini, M.G. and Crowther, R.A.: Citation Classic: A brief history of Tau. *Clinical Chemistry*, 61, 1417-1418 (2015).

Gauthier, S., Albert, M., Fox, N., Goedert, M., Kivipelto, M., Mestre-Ferrandiz, J. and Middleton, L.Y.: Why has therapy development for dementia failed in the last two decades? *Alzheimer's & Dementia*, 12, 60-64 (2016).

Spillantini, M.G. and Goedert, M.: Synucleinopathies: past, present and future. *Neuropathology and Applied Neurobiology*, 42, 3-5 (2016).

Holtzman, D.M., Carrillo, M.C., Hendrix, J.A., Bain, L.J., Catafau, A.M., Gault, L.M., Goedert, M., Mandelkow, E., Mandelkow, E.M., Miller, D.S., Ostrowitzki, S., Polydoro, M., Smith, S., Wittmann, M. and Hutton, M.: Tau: From research to clinical development. *Alzheimer's & Dementia*, 12, 1033-1039 (2016).

Goedert, M.: The ordered assembly of tau is the gain of toxic function that causes human tauopathies. *Alzheimer's & Dementia*, 12, 1040-1050 (2016).

Clavaguera, F., Tolnay, M. and Goedert, M.: The prion-like behavior of assembled Tau in transgenic mice. *Cold Spring Harbor Perspectives in Medicine*, 7: a024372 (2017). [Reprinted in: "Prion Diseases" (S.B. Prusiner, ed.), pp. 137-148. Cold Spring Harbor Laboratory Press 2017].

Tofaris, G.K., Goedert, M. and Spillantini, M.G.: The transcellular propagation and intracellular trafficking of  $\alpha$ -synuclein. *Cold Spring Harbor Perspectives in Medicine*, 7: a024380 (2017). [Reprinted in: "Prion Diseases" (S.B. Prusiner, ed.), pp. 331-342. Cold Spring Harbor Laboratory Press 2017].

Goedert, M., Masuda-Suzukake, M. and Falcon, B.: Like prions: the propagation of aggregated tau and  $\alpha$ -synuclein in neurodegeneration. *Brain*, 140, 266-278 (2017).

Goedert, M., Jakes, R. and Spillantini, M.G.: The Synucleinopathies: Twenty years on. *Journal of Parkinson's Disease*, 7, S51-S69 (2017).

Goedert, M.: Protein aggregation and neurodegeneration: Tauopathies and Synucleinopathies. In: "Neurodegeneration" (A. Schapira, Z. Wszolek, T. Dawson and N. Wood, eds.), pp. 12-24. Wiley 2017.

Goedert, M. and Spillantini, M.G.: Propagation of Tau aggregates. *Molecular Brain*, 10:18 (2017).

Goedert, M., Eisenberg, D.S. and Crowther, R.A.: Propagation of Tau aggregates and neurodegeneration. *Annual Review of Neuroscience*, 40, 189-210 (2017).

Mudher, A., Colin, M., Dujardin, S., Medina, M., Dewachter, I., Alavi Naini, S.M., Mandelkow, E.M., Mandelkow, E., Buée, L., Goedert, M. and Brion, J.P.: What is the evidence that tau pathology spreads through prion-like propagation? *Acta Neuropathologica Communications* 5:99 (2017).

Goedert, M. and Compston, A.: Parkinson's disease – the story of an eponym. *Nature Reviews Neurology*, 14, 57-62 (2018).

Goedert, M., Yamaguchi, Y., Mishra, S.K., Higuchi, M. and Sahara, N.: Tau filaments and the development of positron emission tomography tracers. *Frontiers in Neuroscience*, 9:70 (2018).

Goedert, M.: Neurodegeneration and the ordered assembly of tau. In: "The molecular and cellular basis of neurodegenerative diseases" (M.S. Wolfe, ed.), pp. 81-98. Elsevier-Academic Press 2018.

Spillantini, M.G. and Goedert, M.: Neurodegeneration and the ordered assembly of  $\alpha$ -synuclein. *Cell & Tissue Research*, in press.