

DAFTAR KEPUSTAKAAN

- Ahmed, E., Khan, M.M., Javed, H., Vaibhav, K., Khan, A., Tabassum, R., Ashafaq, M., Islam, F., Safhi, M.M., Islam, F., 2013. Amelioration of cognitive impairment and neurodegeneration by catechin hydrate in rat model of streptozotocin-induced experimental dementia of Alzheimer's type. *Neurochem. Int.* 62, 492–501. doi:10.1016/j.neuint.2013.02.006
- Alzheimer's Association, 2015. 2015 Alzheimer's disease facts and figures. *Alzheimers. Dement.* 11, 332–84. doi:10.1016/j.jalz.2015.02.003
- Avila, J., Lucas, J.J., Perez, M., Hernandez, F., 2004. Role of tau protein in both physiological and pathological conditions. *Physiol Rev* 84, 361–384. doi:10.1152/physrev.00024.2003
- Baptista, F.I., Henriques, A.G., Silva, A.M.S., Wiltfang, J., da Cruz e Silva, O.A.B., 2014. Flavonoids as Therapeutic Compounds Targeting Key Proteins Involved in Alzheimer's Disease. *ACS Chem. Neurosci.* 5, 83–92. doi:10.1021/cn400213r
- Baudier, J., Cole, R.D., 1987. Phosphorylation of tau proteins to a state like that in Alzheimer's brain is catalyzed by a calcium/calmodulin-dependent kinase and modulated by phospholipids. *J. Biol. Chem.* 262, 17577–17583.
- Borse, B., Rao, L., 2015. Nutraceuticals and fundamental foods – chemistry and health promoting properties of tea polyphenols for life supporting systems. Eolss Publishers/UNESCO, Singapore.
- Braicu, C., Ladomery, M.R., Chedea, V.S., Irimie, A., Berindan-Neagoe, I., 2013. The relationship between the structure and biological actions of green tea catechins. *Food Chem.* doi:10.1016/j.foodchem.2013.05.122
- Bürger née Buch, K., Padberg, F., Nolde, T., Teipel, S.J., Stübner, S., Haslinger, A., Schwarz, M.J., Sunderland, T., Arai, H., Rapoport, S.I., Möller, H.-J., Hampel, H., 1999. Cerebrospinal fluid tau protein shows a better discrimination in young old (<70 years) than in old old patients with Alzheimer's disease compared with controls. *Neurosci. Lett.* 277, 21–24. doi:10.1016/S0304-3940(99)00845-9
- Calafate, S., Buist, A., Miskiewicz, K., Vijayan, V., Daneels, G., de Strooper, B., de Wit, J., Verstreken, P., Moechars, D., 2015. Synaptic Contacts Enhance Cell-to-Cell Tau Pathology Propagation. *Cell Rep.* 11, 1176–1183. doi:10.1016/j.celrep.2015.04.043
- Calcul, L., Zhang, B., Jinwal, U.K., Dickey, C. a, Baker, B.J., 2012. Natural products as a rich source of tau-targeting drugs for Alzheimer's disease. *Future Med. Chem.* 4, 1751–1761. doi:10.4155/fmc.12.124
- Charan, J., Kantharia, N.D., 2013. How to calculate sample size in animal studies? *J. Pharmacol. Pharmacother.* 4, 303–6. doi:10.4103/0976-500X.119726
- Chen, Y., Deng, Y., Zhang, B., Gong, C.X., 2014. Deregulation of brain insulin signaling in Alzheimer's disease. *Neurosci. Bull.* 30, 282–294. doi:10.1007/s12264-013-1408-x
- Chêne, G., Beiser, A., Au, R., Preis, S.R., Wolf, P.A., Dufouil, C., Seshadri, S., 2015. Gender and incidence of dementia in the Framingham Heart Study

- from mid-adult life. *Alzheimer's Dement.* 11, 310–320. doi:10.1016/j.jalz.2013.10.005
- Cheung, Z.H., Ip, N.Y., 2011. From understanding synaptic plasticity to the development of cognitive enhancers. *Int. J. Neuropsychopharmacol.* 14, 1247–1256. doi:10.1017/S1461145710001537
- Chintamaneni, M., Bhaskar, M., 2012. Biomarkers in Alzheimer's Disease: A Review. *ISRN Pharmacol.* 2012, 1–6. doi:10.5402/2012/984786
- Depkes RI, 2013. Info Datin Lansia [WWW Document]. URL <http://www.depkes.go.id/resources/download/pusdatin/infodatin/infodatin-lansia.pdf> (diakses 9.1.15).
- Di, J., Cohen, L.S., Corbo, C.P., Phillips, G.R., El Idrissi, A., Alonso, A.D., 2016. Abnormal tau induces cognitive impairment through two different mechanisms: synaptic dysfunction and neuronal loss. *Sci. Rep.* 6, 20833. doi:10.1038/srep20833
- Dong, S., Duan, Y., Hu, Y., Zhao, Z., 2012. Advances in the pathogenesis of Alzheimer's disease: a re-evaluation of amyloid cascade hypothesis. *Transl. Neurodegener.* 1, 18. doi:10.1186/2047-9158-1-18
- Dujardin, S., Lecomte, K., Caillierez, R., Begard, S., Zommer, N., Lachaud, C., Carrier, S., Dufour, N., Auregan, G., Winderickx, J., Hantraye, P., Deglon, N., Colin, M., Buee, L., 2014. Neuron-to-neuron wild-type Tau protein transfer through a trans-synaptic mechanism: relevance to sporadic tauopathies. *Acta Neuropathol Commun* 2, 14. doi:10.1186/2051-5960-2-14
- Elahi, M., Hasan, Z., Motoi, Y., Matsumoto, S.E., Ishiguro, K., Hattori, N., 2016. Region-specific vulnerability to oxidative stress, neuroinflammation, and tau hyperphosphorylation in experimental diabetes mellitus mice. *J. Alzheimer's Dis.* 51, 1209–1224.
- Faria, A., Mateus, N., Ao Calhau, C., 2012. Flavonoid transport across blood-brain barrier: Implication for their direct neuroprotective actions. *Nutr. Aging* 1, 89–97. doi:10.3233/NUA-2012-0005
- Federer, W.T., 1966. Randomization and Sample Size in Experimentation. *Food Drug Adm. Stat. Semin.* 1–14.
- Galasko, D., Golde, T.E., 2013. Biomarkers for Alzheimer's disease in plasma, serum and blood - conceptual and practical problems. *Alzheimers. Res. Ther.* 5, 10. doi:10.1186/alzrt164
- Gemma, C., Vila, J., Bachstetter, A., Bickford, P.C., 2007. Oxidative Stress and the Aging Brain: From Theory to Prevention, in: Riddle, D. (Ed.), *Brain Aging: Models, Methods, and Mechanisms*. Boca Raton (FL): CRC Press/Taylor & Francis, hal. 1–17.
- George, R.C., Lew, J., Graves, D.J., 2013. Interaction of cinnamaldehyde and epicatechin with tau: implications of beneficial effects in modulating Alzheimer's disease pathogenesis. *J. Alzheimer's Dis.* 36, 21–40. doi:10.3233/JAD-122113
- Grossman, S., Porth, C., 2014. Pathophysiology.
- Growdon, J.H., 1999. Biomarkers of Alzheimer disease. *Arch. Neurol.* 56, 281–3. doi:10.1001/archneur.56.3.281

- Gundimedda, U., McNeill, T.H., Fan, T.K., Deng, R., Rayudu, D., Chen, Z., Cadenas, E., Gopalakrishna, R., 2014. Green tea catechins potentiate the neurotrophic action of brain-derived neurotrophic factor: role of 67-kDa laminin receptor and hydrogen peroxide. *Biochem. Biophys. Res. Commun.* 445, 218–24. doi:10.1016/j.bbrc.2014.01.166
- Guyton, A.C., Hall, J.E., 2006. *Textbook of Medical Physiology*, 11th ed, Physiology. Elsevier Inc., Philadelphia. doi:10.1136/pgmj.51.599.683-c
- Hempel, H., Blennow, K., Shaw, L., Hoessler, Y., Zetterberg, H., Trojanowski, J., 2010. Total and phosphorylated tau protein as biological marker of Alzheimer's disease. *Exp Gerontol* 1–21.
- Hebert, L.E., Weuve, J., Scherr, P.A., Evans, D.A., 2013. Alzheimer disease in the United States (2010 – 2050) estimated using the 2010 census. *Neurology* 158, 1778–1783.
- Henderson, V.W., 2008. Cognitive Changes After Menopause: Influence of Estrogen. *Clin Obs. Gynecol.* 51, 618–626. doi:10.1097/GRF.0b013e318180ba10
- Heneman, K., Zidenberg-Cherr, S., 2008. Nutrition and health info-sheet: some facts about catechins. *Eur. Heart J.* doi:10.1017/S1368980009005291
- Herbert, L., Weuve, J., Scherr, P., Evans, D., 2013. Alzheimer's disease in the United States (2010-2050) estimated using the 2010 census. *Neurology* 80, 1778–1783.
- Hu, Y.Y., He, S.S., Wang, X., Duan, Q.H., Grundke-Iqbal, I., Iqbal, K., Wang, J., 2002. Levels of Nonphosphorylated and Phosphorylated Tau in Cerebrospinal Fluid of Alzheimer's Disease Patients. *Am. J. Pathol.* 160, 1269–1278. doi:10.1016/S0002-9440(10)62554-0
- Humpel, C., 2011. Identifying and validating biomarkers for Alzheimer's disease. *Trends Biotechnol* 29, 26–32. doi:10.1016/Ltibtech.2010.09.007
- IARC, 2012. BETEL QUID AND ARECA NUT., in: Lyon, F. (Ed.), *Personal Habits and Indoor Combustions*. International Agency for Research on Cancer.
- Iqbal, K., Liu, F., Gong, C.X., del Alonso, A.C., Grundke-Iqbal, I., 2009. Mechanisms of tau-induced neurodegeneration. *Acta Neuropathol.* 118, 53–69. doi:10.1007/s00401-009-0486-3
- Jeong, W.-S., Kong, A.-N.T., 2004. Biological Properties of Monomeric and Polymeric Catechins: Green Tea Catechins and Procyanidins. *Pharm. Biol.* 42, 84–93. doi:10.3109/13880200490893500
- Kailaku, S.I., Mulyawanti, I., Alamsyah, A.N., 2014. Formulation of Nanoencapsulated Catechin with Chitosan as Encapsulation Material. *Procedia Chem.* 9, 235–241. doi:10.1016/j.proche.2014.05.028
- Katergaris, N., Dufficy, L., Roach, P.D., Naumovski, N., 2015. Green Tea Catechins as Neuroprotective Agents : Systematic Review of the Literature in Animal Pre-Clinical Trials. *Adv Food Technol Nutr Sci Open J* 1, 48–57. doi:10.17140/AFTNSOJ-1-108
- Kemkes RI, 2012. *Pedoman Pelayanan Gizi Lansia [WWW Document]. Pedoman Pelayanan Gizi Lansia.*

- Kinnavane, L., Albasser, M.M., Aggleton, J.P., 2015. Advances in the behavioural testing and network imaging of rodent recognition memory. *Behav. Brain Res.* 285, 67–78. doi:10.1016/j.bbr.2014.07.049
- Knierim, J., 2016. Chapter 5: Cerebellum [WWW Document]. *Neurosci.* online. URL <http://neuroscience.uth.tmc.edu/s3/chapter05.html> (diakses 6.20.03).
- Kolarova, M., García-Sierra, F., Bartos, A., Ricny, J., Ripova, D., 2012. Structure and pathology of tau protein in Alzheimer disease. *Int. J. Alzheimers. Dis.*
- Lai, D.Y., Woo, Y.-T., 1986. *Tetrahydropyridine Derivatives, Tannins, Flavonoids, and Various Structural Types of Industrially-Used Lipid Chemicals and Other Substances of Plant Origin: Carcinogenicity and Structure Activity Relationships: Other Biological Properties: Metabolism: Env. Science Appalication Internation Corporation, Virginia.*
- Lasagna-Reeves, C.A., Castillo-Carranza, D.L., Guerrero-Munoz, M.J., Sengupta, U., Kiritoshi, T., Neugebauer, V., Jackson, G.R., Kaye, R., 2012. Alzheimer brain-derived tau oligomers propagate pathology from endogenous tau. *Sci. Rep.* 2. doi:10.1038/srep00700
- Lee, C.-W., Shih, Y.-H., Wu, S.-Y., Yang, T., Lin, C., Kuo, Y.-M., 2013. Hypoglycemia Induces Tau Hyperphosphorylation. *Curr. Alzheimer Res.* 10, 298–308. doi:10.2174/1567205011310030009
- León, R., Garcia, A.G., Marco-Contelles, J., 2013. Recent advances in the multitarget-directed ligands approach for the treatment of Alzheimer's disease. *Med. Res. Rev.* 33, 139–189. doi:10.1002/med.20248
- Lim, T.K., 2012. *Edible Medicinal and Non-Medicinal Plants.* Springer Netherlands, Dordrecht. doi:10.1007/978-90-481-8661-7
- Lonskaya, I., Hebron, M., Chen, W., Schachter, J., Moussa, C., 2014. Tau deletion impairs intracellular beta-amyloid-42 clearance and leads to more extracellular plaque deposition in gene transfer models. *Mol. Neurodegener.* 9, 46. doi:10.1186/1750-1326-9-46
- Luna-Muñoz, J., R., C., M., C., Flores-Rodríguez, P., Avila, J., R., S., la Cruz, F. De, Mena, R., A., M., Floran-Garduno, B., 2013. Phosphorylation of Tau Protein Associated as a Protective Mechanism in the Presence of Toxic, C-Terminally Truncated Tau in Alzheimer's Disease, in: Zerr, I. (Ed.), *Understanding Alzheimer's Disease.* InTech. doi:10.5772/54228
- Madeo, J., Elsayad, C., 2013. The Role of Oxidative Stress in Alzheimer Disease. *J Alzheimers Dis Park.* 3, 1–5. doi:10.4172/2161-0460.1000116
- Mansour, M.K., Ibrahim, E., El-Kholy, M.M., El-Madawy, S.A., 2008. Antioxidant and histopathological effect of catechin and neem leaves extract in acrylamide toxicity of rats. *Egypt. J. Comp. Path. Clin. Path* 21, 290–313.
- Maryadhi, N., Swastini, D., Leliqia, N., 2012. Pengaruh Dosis Minuman Gambir Terhadap Peningkatan Daya Ingat Mencit Galur Balb/c 55–58.
- Mayeux, R., Stern, Y., 2012. Epidemiology of Alzheimer disease. *Cold Spring Harb. Perspect. Med.* 2. doi:10.1101/cshperspect.a006239
- Medvidović-Kosanović, M., Šeruga, M., Jakobek, L., Novak, I., 2010. Electrochemical and antioxidant properties of rutin. *Croat. Chem. Acta* 83, 197–207. doi:10.1135/cccc2009548

- Mielke, M.M., Vemuri, P., Rocca, W.A., 2014. Clinical epidemiology of Alzheimer's disease: Assessing sex and gender differences. *Clin. Epidemiol.* 6, 37–48. doi:10.2147/CLEP.S37929
- Mietelska-Porowska, A., Wasik, U., Goras, M., Filipek, A., Niewiadomska, G., 2014. Tau Protein Modifications and Interactions: Their Role in Function and Dysfunction. *Int. J. Mol. Sci.* 15, 4671–4713. doi:10.3390/ijms15034671
- Minoshima, S., Frey, K.A., Koeppe, R.A., Foster, N.L., Kuhl, D.E., 1995. A diagnostic approach in Alzheimer's disease using three-dimensional stereotactic surface projections of fluorine-18-FDG PET. *J. Nucl. Med.* 36, 1238–48.
- Mohamed, A., Smith, K., de Chaves, E.P., 2015. The Mevalonate Pathway in Alzheimer's Disease — Cholesterol and Non-Sterol Isoprenoids, in: Zerr, P.I. (Ed.), *Alzheimer's Disease - Challenges for the Future*. InTech. doi:10.5772/59904
- Moser, M.-B., 2014. Grid Cells, Place Cells and Memory: Nobel Lecture, in: *The Nobel Prizes*. Trondheim, hal. 333–367.
- Mukaetova-Ladinska, E.B.B., Harrington, C.R.R., Roth, M., Wischik, C.M.M., 1996. Alterations in Tau Protein Metabolism during Normal Aging. *Dement. Geriatr. Cogn. Disord.* 7, 95–103. doi:10.1159/000106861
- Murray, M.E., Lowe, V.J., Graff-Radford, N.R., Liesinger, A.M., Cannon, A., Przybelski, S.A., Rawal, B., Parisi, J.E., Petersen, R.C., Kantarci, K., Ross, O.A., Duara, R., Knopman, D.S., Jack, C.R., Dickson, D.W., 2015. Clinicopathologic and 11 C-Pittsburgh compound B implications of Thal amyloid phase across the Alzheimer's disease spectrum. *Brain* 138, 1370–1381. doi:10.1093/brain/awv050
- Nadler, J.V., 2012. Plasticity of Glutamate Synaptic Mechanisms, in: Noebels, J.L., Avoli, M., Rogawski, M.A., Olsen, R.W., Delgado-Escueta, A. V (Ed.), *Jasper's Basic Mechanisms of the Epilepsies* [Internet]. National Center for Biotechnology Information, US.
- Naini, S.M.A., Soussi-Yanicostas, N., 2015. Tau Hyperphosphorylation and Oxidative Stress, a Critical Vicious Circle in Neurodegenerative Tauopathies? *Oxid. Med. Cell. Longev.* 2015. doi:10.1155/2015/151979
- Nakagawa, K., Miyazawa, T., 1997. Absorption and distribution of tea catechin, (-)-epigallocatechin-3-gallate, in the rat. *J. Nutr. Sci. Vitaminol. (Tokyo)*. 43, 679–84.
- NCI, 2012. Equivalent Surface Area Dosage Conversion Factors Representative Surface Area to Weight Ratios [km] for Various. *Frederick Natl. Lab Anim. Care Use Comm.* 50, ACUC 42.
- Onaolapo, O.J., Onaolapo, A.Y., Mosaku, T.J., Akanji, O.O., Abiodun, O.R., 2012. Elevated Plus Maze and Y-Maze Behavioral Effects of Subchronic, Oral Low Dose Monosodium Glutamate in Swiss Albino Mice. *IOSR J. Pharm. Biol. Sci.* 3, 21–27. doi:10.9790/3008-0342127
- Papke, R.L., Horenstein, N.A., Stokes, C., 2015. Nicotinic Activity of Arecoline, the Psychoactive Element of “Betel Nuts”, Suggests a Basis for Habitual Use and Anti-Inflammatory Activity. *PLoS One* 10, e0140907. doi:10.1371/journal.pone.0140907

- Patterson, K.R., Remmers, C., Fu, Y., Brooker, S., Kanaan, N.M., Vana, L., Ward, S., Reyes, J.F., Philibert, K., Glucksman, M.J., Binder, L.I., 2011. Characterization of prefibrillar tau oligomers in vitro and in Alzheimer disease. *J. Biol. Chem.* 286, 23063–23076. doi:10.1074/jbc.M111.237974
- Peng, D., Pan, X., Cui, J., Ren, Y., Zhang, J., 2013. Hyperphosphorylation of Tau Protein in Hippocampus of Central Insulin-Resistant Rats is Associated with Cognitive Impairment. *Cell. Physiol. Biochem.* 32, 1417–1425. doi:10.1159/000356579
- Pilly, P.K., Grossberg, S., 2012. How Do Spatial Learning and Memory Occur in the Brain? Coordinated Learning of Entorhinal Grid Cells and Hippocampal Place Cells. *J. Cogn. Neurosci.* 24, 1031–1054. doi:10.1162/jocn_a_00200
- Prince, M., Wimo, A., Guerchet, M., Gemma-Claire, A., Wu, Y.-T., Prina, M., 2015. World Alzheimer Report 2015: The Global Impact of Dementia - An analysis of prevalence, incidence, cost and trends. *Alzheimer's Dis. Int.* 84. doi:10.1111/j.0963-7214.2004.00293.x
- PubChem, 2015. Cianidanol.
- Purwanto, Y.A., Budiastira, I.W., Syamsu, K., 2013. Determination of catechin as main bioactive component of gambir (*Uncaria gambir* Roxb) by FT-NIR Spectroscopy 7, 3076–3083. doi:10.5897/JMPR2013.4487
- Pusdatin Kemenkes RI, 2013. Gambaran Kesehatan Lanjut Usia di Indonesia. Pus. Data dan Inf. Kementerian. Kesehat. RI 1–5. doi:10.1007/s13398-014-0173-7.2
- Puzzo, D., Gulisano, W., Palmeri, A., Arancio, O., 2015. Rodent models for Alzheimer's disease drug discovery. *Expert Opin. Drug Discov.* 10, 703–11. doi:10.1517/17460441.2015.1041913
- Rahmawati, N., Bakhtiar, A., Putra, P., 2012. Isolasi Katekin dari Gambir (*Uncaria gambir* (Hunter). Roxb) untuk Sediaan Farmasi dan Kosmetik. *J. Penelit. Farm. Indones.* 1, 6–10.
- Reitz, C., Brayne, C., Mayeux, R., 2011. REVIEWS Epidemiology of Alzheimer Disease. *Nat. Publ. Gr.* 7, 1–16. doi:10.1038/nrneurol.2011.2
- Revett, T.J., Baker, G.B., Jhamandas, J., Kar, S., 2013. Glutamate system, amyloid β peptides and tau protein: functional interrelationships and relevance to Alzheimer disease pathology. *J. Psychiatry Neurosci.* doi:10.1503/jpn.110190
- SBFNL, 2016. Y Maze Spontaneous Alternation Test [WWW Document]. *Learn. Mem. Tests.* URL <http://med.stanford.edu/sbfnl/services/bm/lm.html> (diakses 4.1.15).
- Scarabino, T., Salvolini, U., Di Salle, F.D., Duvernoy, H., Rabischong, P., Scarabino, T., Salvolini, U., Di Salle, F.D., Duvernoy, H., Rabischong, P., 2003. Atlas of morphology and functional anatomy of the brain. Idelson-Gnocchi, Naples.
- Schultz, C., Tredici, K. Del, Braak, H., 2004. Neuropathology of Alzheimer's Disease, in: Richter, R., Richter, B.Z. (Ed.), *Alzheimer's Disease A Physician's Guide to Practical Management.* Springer, hal. 21–31.
- Serrano-Pozo, A., Frosch, M.P., Masliah, E., Hyman, B.T., 2011. Neuropathological alterations in Alzheimer disease. *Cold Spring Harb.*

- Perspect. Med. 1, 1–24. doi:10.1101/cshperspect.a006189
- Shewale, S.J., Huebinger, R.M., Allen, M.S., Barber, R.C., 2013. The Potential Role of Epigenetics in Ocular Diseases. *Biol Syst* 2, 508–509. doi:10.4172/2329-6577.1000114
- Siddoway, B., Hou, H., Xia, H., 2011. *Glutamatergic Synapses: Molecular Organisation*. John Wiley & Sons Ltd, Chichester. doi:10.1002/9780470015902.a0000235.pub2
- Singh, N.A., Mandal, A.K.A., Khan, Z.A., 2016. Potential neuroprotective properties of epigallocatechin-3-gallate (EGCG). *Nutr. J.* 15, 60. doi:10.1186/s12937-016-0179-4
- Sjögren, M., Davidsson, P., Tullberg, M., Minthon, L., Wallin, a, Wikkelso, C., Granérus, a K., Vanderstichele, H., Vanmechelen, E., Blennow, K., 2001. Both total and phosphorylated tau are increased in Alzheimer's disease. *J Neurol Neurosurg Psychiatry* 70, 624–630. doi:10.1136/jnnp.70.5.624
- Spires-Jones, T.L., Hyman, B., 2014. The Intersection of Amyloid Beta and Tau at Synapses in Alzheimer's Disease. *Neuron*. doi:10.1016/j.neuron.2014.05.004
- Tantomi, A.I., Baabdullah, A.O., Sagita, A., Iwan, T.A., Omar, B.A., Andri, S., 2013. Tren Fenomena “PisiDi” (Pikun Usia Dini) sebagai Dugaan Awal Gejala Demensia di Kota Malang. PKM-P.
- Tejada-Vera, B., 2013. Mortality from Alzheimer's disease in the United States: data for 2000 and 2010. *NCHS Data Brief* 1–8.
- Toescu, E.C., 2005. Normal brain ageing : models and mechanisms. *Phil. Trans. R. Soc* 360, 2347–2354. doi:10.1098/rstb.2005.1771
- Turner, K.M., Burne, T.H.J., 2014. Comprehensive behavioural analysis of long Evans and Sprague-Dawley rats reveals differential effects of housing conditions on tests relevant to neuropsychiatric disorders. *PLoS One* 9. doi:10.1371/journal.pone.0093411
- Ueki, A., Shinjo, H., Shimode, H., Nakajima, T., Morita, Y., 2001. Factors associated with mortality in patients with early-onset Alzheimer's disease: a five-year longitudinal study. *Int J Geriatr Psychiatry*. 16, 810–5.
- Upadhyay, P., Panjwani, D., Yadav, A.K., 2014. Neuropathology staging and treatment strategies of Alzheimer's disease: An update. *Int. J. Nutr. Pharmacol. Neurol. Dis.* 4, 28. doi:10.4103/2231-0738.124612
- Uronen, R.-L., Huttunen, H.J., 2016. Genetic risk factors of Alzheimer's disease and cell-to-cell transmission of Tau. *J. Neurol. Neuromedicine* 1, 17–22.
- Vorhees, C. V., Williams, M.T., 2014. Assessing spatial learning and memory in rodents. *ILAR J.* 55, 310–32. doi:10.1093/ilar/ilu013
- Wang, C., Zhang, F., Jiang, S., Siedlak, S.L., Shen, L., Perry, G., Wang, X., Tang, B., Zhu, X., 2016. Estrogen receptor- α is localized to neurofibrillary tangles in Alzheimer's disease. *Sci. Rep.* 6, 20352. doi:10.1038/srep20352
- Wang, Y., Mandelkow, E., 2015. Tau in physiology and pathology. *Nat. Rev. Neurosci.* 17, 22–35. doi:10.1038/nrn.2015.1
- Wang, Y., Yang, R., Gu, J., Yin, X., Jin, N., Xie, S., Wang, Y., Chang, H., Qian, W., Shi, J., Iqbal, K., Gong, C.-X., Cheng, C., Liu, F., 2015. Cross talk

- between PI3K-AKT-GSK-3 β and PP2A pathways determines tau hyperphosphorylation. *Neurobiol. Aging* 36, 188–200. doi:10.1016/j.neurobiolaging.2014.07.035
- Wang, Y.X., Engelmann, T., Xu, Y.F., Schwarz, W., 2016. Catechins from green tea modulate neurotransmitter transporter activity in *Xenopus oocytes*. *Cogent Biol.* 2, 1–9. doi:10.1080/23312025.2016.1261577
- Weingarten, M.D., Lockwood, A.H., Hwo, S.-Y., Kirschner, M.W., 1975. A protein factor essential for microtubule assembly. *Proc. Natl. Acad. Sci. U. S. A.* 72, 1858–62. doi:10.1073/pnas.72.5.1858
- Wolf, A., Bauer, B., Abner, E.L., Ashkenazy-Frolinger, T., Hartz, A.M.S., 2016. A Comprehensive Behavioral Test Battery to Assess Learning and Memory in 129S6/Tg2576 Mice. *PLoS One* 11, e0147733. doi:10.1371/journal.pone.0147733
- World Health Organization, 2012. Dementia: a public health priority. *Dementia* 11(2). doi:10.1186/1745-0174-11-2
- Wu, B., Wei, Y., Wang, Y., Su, T., Zhou, L., Liu, Y., He, R., 2015. Gavage of D-Ribose induces Abeta-like deposits, Tau hyperphosphorylation as well as memory loss and anxiety-like behavior in mice. *Oncotarget* 6, 34128–34142. doi:10.18632/oncotarget.6021
- Wu, L., Zhang, Q.-L., Zhang, X.-Y., Lv, C., Li, J., Yuan, Y., Yin, F.-X., 2012. Pharmacokinetics and blood-brain barrier penetration of (+)-catechin and (-)-epicatechin in rats by microdialysis sampling coupled to high-performance liquid chromatography with chemiluminescence detection. *J. Agric. Food Chem.* 60, 9377–83. doi:10.1021/jf301787f
- Xiong, Y., Liu, F.-F., Liu, D., Wei, N., Tan, L., Chen, J., Gong, C., Lu, Y., Wang, J., Zhu, L., Huang, H.-Z., Wei, N., Tan, L., Chen, J., Man, H.-Y., Gong, C., Lu, Y., Wang, J., Zhu, L., 2015. Opposite effects of two estrogen receptors on tau phosphorylation through disparate effects on the miR-218/PTPA pathway. *Aging Cell* 14, 867–877. doi:10.1111/acer.12366
- Yan, J., Zhao, Y., Suo, S., Liu, Y., Zhao, B., 2012. Green tea catechins ameliorate adipose insulin resistance by improving oxidative stress. *Free Radic. Biol. Med.* 52, 1648–57. doi:10.1016/j.freeradbiomed.2012.01.033
- Yanagisawa, M., Planel, E., Ishiguro, K., Fujita, S.C., 1999. Starvation induces tau hyperphosphorylation in mouse brain: implications for Alzheimer's disease. *FEBS Lett.* 461, 329–333. doi:10.1016/S0014-5793(99)01480-5
- Yeni, G., Syamsu, K., Suparno, O., Mardiyati, E., Muchtar, H., 2014. Repeated Extraction Process of Raw Gambiers (*Uncaria gambier* Robx.) for the Catechin Production as an Antioxidant. *Int. J. Appl. Eng. Res.* 9, 24565–24578.
- Zamani, M., Rohampour, K., Zeraati, M., Hosseinmardi, N., Kazemian, M.M., 2015. Pre-training Catechin gavage prevents memory impairment induced by intracerebroventricular streptozotocin in rats. *Neurosciences* 20, 225–229. doi:10.17712/nsj.2015.3.20140440
- Zempel, H., Mandelkow, E., 2014. Lost after translation: Missorting of Tau protein and consequences for Alzheimer disease. *Trends Neurosci.*

- Zhu, M., Chen, Y., Li, R.C., 2000. Oral Absorption and Bioavailability of Tea Catechins. *Planta Med.* 66, 444–447. doi:10.1055/s-2000-8599
- Zinellu, A., Sotgia, S., Scanu, B., Forteschi, M., Giordo, R., Cossu, A., Posadino, A., Carru, C., Pintus, G., 2015. Human Serum Albumin Increases the Stability of Green Tea Catechins in Aqueous Physiological Conditions. *PLoS One* e0134690.
- Zlokovic, B. V., 2011. Neurovascular pathways to neurodegeneration in Alzheimer's disease and other disorders. *Nat. Rev. Neurosci.* 12, 723–738. doi:10.1038/nrn3114



