Bibliography

AbuMweis, S, S Jew, R Tayyem, and L Agraib. 2018. "Eicosapentaenoic acid and docosahexaenoic acid containing supplements modulate risk factors for cardiovascular disease: a meta-analysis of randomised placebo-control human clinical trials." *Journal of Human Nutrition and Dietetics* no. 31 (1):67-84.

Acehan, Devrim, Ashim Malhotra, Yang Xu, Mindong Ren, David L Stokes, and Michael Schlame. 2011. "Cardiolipin affects the supramolecular organization of ATP synthase in mitochondria." *Biophysical journal* no. 100 (9):2184-2192.

Adibhatla, Rao Muralikrishna, and James F Hatcher. 2007. "Role of lipids in brain injury and diseases." *Future lipidology* no. 2 (4):403-422.

Adkins, Yuriko, and Darshan S Kelley. 2010. "Mechanisms underlying the cardioprotective effects of omega-3 polyunsaturated fatty acids." *The Journal of nutritional biochemistry* no. 21 (9):781-792.

Agrawal, Rahul, Ethika Tyagi, Laurent Vergnes, Karen Reue, and Fernando Gomez-Pinilla. 2014. "Coupling energy homeostasis with a mechanism to support plasticity in brain trauma." *Biochimica et Biophysica Acta (BBA)-Molecular Basis of Disease* no. 1842 (4):535-546.

Aguirre, Adan, and Vittorio Gallo. 2004. "Postnatal neurogenesis and gliogenesis in the olfactory bulb from NG2-expressing progenitors of the subventricular zone." *Journal of Neuroscience* no. 24 (46):10530-10541.

Akhlaghi, M, S Ghobadi, M Mohammad Hosseini, Z Gholami, and F Mohammadian. 2018. "Flavanols are potential anti-obesity agents, a systematic review and meta-analysis of controlled clinical trials." *Nutrition, Metabolism and Cardiovascular Diseases*.

Al-Fayez, Mohammad, Hong Cai, Richard Tunstall, William P Steward, and Andreas J Gescher. 2006. "Differential modulation of cyclooxygenase-mediated prostaglandin production by the putative cancer chemopreventive flavonoids tricin, apigenin and quercetin." *Cancer chemotherapy and pharmacology* no. 58 (6):816-825.

Alfaddagh, Abdulhamied, Tarec K Elajami, Mohamad Saleh, Mohamad Elajami, Bruce R Bistrian, and Francine K Welty. 2018. "The effect of eicosapentaenoic and docosahexaenoic acids on physical function, exercise, and joint replacement in patients with coronary artery disease: A secondary analysis of a randomized clinical trial." *Journal of clinical lipidology*.

Allaire, Janie, Cécile Vors, André J Tremblay, Johanne Marin, Amélie Charest, André Tchernof, Patrick Couture, and Benoît Lamarche. 2018. "High-dose DHA has more profound effects on LDL-related features than high-dose EPA: The ComparED study." *The Journal of Clinical Endocrinology & Metabolism*.

Allan, Stuart M, and Nancy J Rothwell. 2001. "Cytokines and acute neurodegeneration." *Nature Reviews Neuroscience* no. 2 (10):734.

Allan, Stuart M, and Nancy J Rothwell. 2003a. "Inflammation in central nervous system injury." *Philosophical Transactions of the Royal Society B: Biological Sciences* no. 358 (1438):1669-1677.

Allan, Stuart M, and Nancy J Rothwell. 2003b. "Inflammation in central nervous system injury." *Philosophical Transactions of the Royal Society of London B: Biological Sciences* no. 358 (1438):1669-1677.

Alugoju, P, VK Swamy, and L Periyasamy. 2018. "Effect of short term quercetin, caloric restriction and combined treatment on oxidative stress parameters, acetylcholinesterase and ATPases enzyme activities in the cerebral cortex of aged rat brain." *CNS & neurological disorders drug targets*.

Amir, Ruthie E, Ignatia B Van den Veyver, Mimi Wan, Charles Q Tran, Uta Francke, and Huda Y Zoghbi. 1999. "Rett syndrome is caused by mutations in X-linked MECP2, encoding methyl-CpG-binding protein 2." *Nature genetics* no. 23 (2):185-188.

Anderson, Breanne M, and David WL Ma. 2009. "Are all n-3 polyunsaturated fatty acids created equal?" *Lipids in Health and Disease* no. 8 (1):33.

Angeloni, Cristina, and Silvana Hrelia. 2012. "Quercetin reduces inflammatory responses in LPS-stimulated cardiomyoblasts." *Oxidative medicine and cellular longevity* no. 2012.

Aoun, Manar, Christine Feillet-Coudray, Gilles Fouret, Béatrice Chabi, David Crouzier, Carla Ferreri, Chryssostomos Chatgilialoglu, Chantal Wrutniak-Cabello, Jean Paul Cristol, and Marie-Annette Carbonneau. 2012. "Rat liver mitochondrial membrane characteristics and mitochondrial functions are more profoundly altered by dietary lipid quantity than by dietary lipid quality: effect of different nutritional lipid patterns." *British Journal of Nutrition* no. 107 (5):647-659.

Araki, Eiichi, Colleen Forster, Janet M Dubinsky, M Elizabeth Ross, and Costantino Iadecola. 2001. "Cyclooxygenase-2 inhibitor ns-398 protects neuronal cultures from lipopolysaccharide-induced neurotoxicity." *Stroke* no. 32 (10):2370-2375.

Azevedo, Frederico AC, Ludmila RB Carvalho, Lea T Grinberg, José Marcelo Farfel, Renata EL Ferretti, Renata EP Leite, Roberto Lent, and Suzana Herculano-Houzel. 2009. "Equal numbers of neuronal and nonneuronal cells make the human brain an isometrically scaled-up primate brain." *Journal of Comparative Neurology* no. 513 (5):532-541.

Bailey, Mary S, and Michael T Shipley. 1993. "Astrocyte subtypes in the rat olfactory bulb: morphological heterogeneity and differential laminar distribution." *Journal of Comparative Neurology* no. 328 (4):501-526.

Balanza-Martinez, Vicent, Gabriel R Fries, Gabriela D Colpo, Patricia P Silveira, André K Portella, Rafael Tabares-Seisdedos, Flávio Kapczinski, Bowden, Soreca, and Kleinman. 2011. "Therapeutic use of omega-3 fatty acids in bipolar disorder." *Expert review of neurotherapeutics* no. 11 (7):1029-1047.

Ballas, Nurit, Daniel T Lioy, Christopher Grunseich, and Gail Mandel. 2009. "Non–cell autonomous influence of MeCP2-deficient glia on neuronal dendritic morphology." *Nature neuroscience* no. 12 (3):311.

Baracca, Alessandra, Gianluca Sgarbi, Giancarlo Solaini, and Giorgio Lenaz. 2003. "Rhodamine 123 as a probe of mitochondrial membrane potential: evaluation of proton flux through F0 during ATP synthesis." *Biochimica et Biophysica Acta (BBA)-Bioenergetics* no. 1606 (1-3):137-146.

Barcelo-Coblijn, Gwendolyn, Endre Hőgyes, Klára Kitajka, László G Puskás, Ágnes Zvara, László Hackler, Csaba Nyakas, Zsuzsa Penke, and Tibor Farkas. 2003. "Modification by docosahexaenoic acid of age-induced alterations in gene expression and molecular composition of rat brain phospholipids." *Proceedings of the National Academy of Sciences* no. 100 (20):11321-11326.

Bayraktar, Omer Ali, Luis C Fuentealba, Arturo Alvarez-Buylla, and David H Rowitch. 2015. "Astrocyte development and heterogeneity." *Cold Spring Harbor perspectives in biology* no. 7 (1):a020362.

Bebensee, Dörthe F, Karolina Can, and Michael Müller. 2017. "Increased Mitochondrial Mass and Cytosolic Redox Imbalance in Hippocampal Astrocytes of a Mouse Model of Rett Syndrome: Subcellular Changes Revealed by Ratiometric Imaging of JC-1 and roGFP1 Fluorescence." *Oxidative medicine and cellular longevity* no. 2017.

Begum, Gulnaz, Douglas Kintner, Yan Liu, Samuel W Cramer, and Dandan Sun. 2012. "DHA inhibits ER Ca2+ release and ER stress in astrocytes following in vitro ischemia." *Journal of neurochemistry* no. 120 (4):622-630.

Bellini, Elisa, Giulio Pavesi, Isabella Barbiero, Anna Bergo, Chetan Chandola, Mohammad S Nawaz, Laura Rusconi, Gilda Stefanelli, Marta Strollo, and Maria M Valente. 2014. "MeCP2 post-translational modifications: a mechanism to control its involvement in synaptic plasticity and homeostasis?" *Frontiers in cellular neuroscience* no. 8:236.

Bellini, Maria J, Claudia B Hereñú, Rodolfo G Goya, and Luis M Garcia-Segura. 2011. "Insulin-like growth factor-I gene delivery to astrocytes reduces their inflammatory response to lipopolysaccharide." *Journal of neuroinflammation* no. 8 (1):21.

Ben-Shachar, Shay, Maria Chahrour, Christina Thaller, Chad A Shaw, and Huda Y Zoghbi. 2009. "Mouse models of MeCP2 disorders share gene expression changes in the cerebellum and hypothalamus." *Human molecular genetics* no. 18 (13):2431-2442.

Benda, Philippe, James Lightbody, Gordon Sato, Lawrence Levine, and William Sweet. 1968. "Differentiated rat glial cell strain in tissue culture." *Science* no. 161 (3839):370-371.

Berger, Alvin, ME Gershwin, and J Bruce German. 1992. "Effects of various dietary fats on cardiolipin acyl composition during ontogeny of mice." *Lipids* no. 27 (8):605-612.

Bhaskar, Shobha, V Shalini, and A Helen. 2011. "Quercetin regulates oxidized LDL induced inflammatory changes in human PBMCs by modulating the TLR-NF-κB signaling pathway." *Immunobiology* no. 216 (3):367-373.

Blomstrand, F, ND Åberg, PS Eriksson, E Hansson, and L Rönnbäck. 1999. "Extent of intercellular calcium wave propagation is related to gap junction permeability and level of connexin-43 expression in astrocytes in primary cultures from four brain regions." *Neuroscience* no. 92 (1):255-265.

Blondeau, N, C Widmann, M Lazdunski, and C Heurteaux. 2002. "Polyunsaturated fatty acids induce ischemic and epileptic tolerance." *Neuroscience* no. 109 (2):231-241.

Bolton, Sally, Kirsty Greenwood, Nicola Hamilton, and Arthur M Butt. 2006. "Regulation of the astrocyte resting membrane potential by cyclic AMP and protein kinase A." *Glia* no. 54 (4):316-328.

Bondonno, Nicola P, Catherine P Bondonno, Lauren C Blekkenhorst, Michael J Considine, Ghassan Maghzal, Roland Stocker, Richard J Woodman, Natalie C Ward, Jonathan M Hodgson, and Kevin D Croft. 2018. "Flavonoid-Rich Apple Improves Endothelial Function in Individuals at Risk for Cardiovascular Disease: A Randomized Controlled Clinical Trial." *Molecular nutrition & food research* no. 62 (3):1700674.

Borghi, Sergio M, Felipe A Pinho-Ribeiro, Victor Fattori, Allan JC Bussmann, Josiane A Vignoli, Doumit Camilios-Neto, Rubia Casagrande, and Waldiceu A Verri Jr. 2016. "Quercetin inhibits peripheral and spinal cord nociceptive mechanisms to reduce intense acute swimming-induced muscle pain in mice." *PloS one* no. 11 (9):e0162267.

Bournival, Julie, Marilyn Plouffe, Justine Renaud, Cindy Provencher, and Maria-Grazia Martinoli. 2012. "Quercetin and Sesamin Protect Dopaminergic Cells from MPP< sup." *Oxidative medicine and cellular longevity* no. 2012.

Bowler, Matthew W, Martin G Montgomery, Andrew GW Leslie, and John E Walker. 2006. "How azide inhibits ATP hydrolysis by the F-ATPases." *Proceedings of the National Academy of Sciences* no. 103 (23):8646-8649.

Bowman, Christal C, Amy Rasley, Susanne L Tranguch, and Ian Marriott. 2003. "Cultured astrocytes express toll-like receptors for bacterial products." *Glia* no. 43 (3):281-291.

Brookes, Paul S, Yisang Yoon, James L Robotham, MW Anders, and Shey-Shing Sheu. 2004. "Calcium, ATP, and ROS: a mitochondrial love-hate triangle." *American Journal of Physiology-Cell Physiology* no. 287 (4):C817-C833.

Bryner, Randall W, Myra E Woodworth-Hobbs, David L Williamson, and Stephen E Alway. 2012. "Docosahexaenoic acid protects muscle cells from palmitate-induced atrophy." *ISRN obesity* no. 2012.

Buchanan, Madison M, Mark Hutchinson, Linda R Watkins, and Hang Yin. 2010. "Toll-like receptor 4 in CNS pathologies." *Journal of neurochemistry* no. 114 (1):13-27.

Buchthal, Bettina, David Lau, Ursula Weiss, Jan-Marek Weislogel, and Hilmar Bading. 2012. "Nuclear calcium signaling controls methyl-CpG-binding protein 2 (MeCP2) phosphorylation on serine 421 following synaptic activity." *Journal of Biological Chemistry* no. 287 (37):30967-30974.

Burdge, Graham C. 2018. "Polyunsaturated Fatty Acid Biosynthesis and Metabolism in Adult Mammals." In *Polyunsaturated Fatty Acid Metabolism*, 15-30. Elsevier.

Bureau, Genevieve, Fanny Longpré, and M-G Martinoli. 2008. "Resveratrol and quercetin, two natural polyphenols, reduce apoptotic neuronal cell death induced by neuroinflammation." *Journal of neuroscience research* no. 86 (2):403-410.

Burns, Kevin A, Brian Murphy, Steve C Danzer, and Chia-Yi Kuan. 2009. "Developmental and post-injury cortical gliogenesis: A Genetic fate-mapping study with Nestin-CreER mice." *Glia* no. 57 (10):1115-1129.

Bushong, Eric A, Maryann E Martone, Ying Z Jones, and Mark H Ellisman. 2002. "Protoplasmic astrocytes in CA1 stratum radiatum occupy separate anatomical domains." *Journal of Neuroscience* no. 22 (1):183-192.

Cacabelos, Ramón, and Clara Torrellas. 2015. "Epigenetics of aging and Alzheimer's disease: Implications for pharmacogenomics and drug response." *International journal of molecular sciences* no. 16 (12):30483-30543.

Cai, Jeff, Ying Chen, Wen-Hui Cai, Edward C Hurlock, Heng Wu, Steven G Kernie, Luis F Parada, and Q Richard Lu. 2007. "A crucial role for Olig2 in white matter astrocyte development." *Development* no. 134 (10):1887-1899.

Caiazzo, Massimiliano, Serena Giannelli, Pierluigi Valente, Gabriele Lignani, Annamaria Carissimo, Alessandro Sessa, Gaia Colasante, Rosa Bartolomeo, Luca Massimino, and Stefano Ferroni. 2015. "Direct conversion of fibroblasts into functional astrocytes by defined transcription factors." *Stem cell reports* no. 4 (1):25-36.

Calder, Philip C. 2008. "Polyunsaturated fatty acids, inflammatory processes and inflammatory bowel diseases." *Molecular nutrition & food research* no. 52 (8):885-897.

Calder, Philip C. 2009. "Polyunsaturated fatty acids and inflammatory processes: new twists in an old tale." *Biochimie* no. 91 (6):791-795.

Calderon, Frances, and Hee-Yong Kim. 2004. "Docosahexaenoic acid promotes neurite growth in hippocampal neurons." *Journal of neurochemistry* no. 90 (4):979-988.

Calon, Frédéric, Giselle P Lim, Fusheng Yang, Takashi Morihara, Bruce Teter, Oliver Ubeda, Phillippe Rostaing, Antoine Triller, Norman Salem Jr, and Karen H Ashe. 2004. "Docosahexaenoic acid protects from dendritic pathology in an Alzheimer's disease mouse model." *Neuron* no. 43 (5):633-645.

Candelario-Jalil, Eduardo, and Bernd L Fiebich. 2008. "Cyclooxygenase inhibition in ischemic brain injury." *Current pharmaceutical design* no. 14 (14):1401-1418.

Candelario-Jalil, Eduardo, Armando González-Falcón, Michel García-Cabrera, Olga Sonia León, and Bernd L Fiebich. 2007. "Post-ischaemic treatment with the cyclooxygenase-2 inhibitor nimesulide reduces blood–brain barrier disruption and leukocyte infiltration following transient focal cerebral ischaemia in rats." *Journal of neurochemistry* no. 100 (4):1108-1120.

Cao, Xiao-Guang, Xiao-Xin Li, Yong-Zhen Bao, Nian-Zeng Xing, and Yi Chen. 2007. "Responses of human lens epithelial cells to quercetin and DMSO." *Investigative ophthalmology & visual science* no. 48 (8):3714-3718.

Carpentier, Pamela A, Wendy Smith Begolka, Julie K Olson, Adam Elhofy, William J Karpus, and Stephen D Miller. 2005. "Differential activation of astrocytes by innate and adaptive immune stimuli." *Glia* no. 49 (3):360-374.

Carrasco-Pozo, Catalina, María Luisa Mizgier, Hernán Speisky, and Martin Gotteland. 2012. "Differential protective effects of quercetin, resveratrol, rutin and epigallocatechin gallate against mitochondrial dysfunction induced by indomethacin in Caco-2 cells." *Chemico-biological interactions* no. 195 (3):199-205.

Carvalho, Fabiano B, Jessié M Gutierres, Diego Beckmann, Rosmarini P Santos, Gustavo R Thomé, Jucimara Baldissarelli, Naiara Stefanello, Amanda Andrades, Graciane Aiello, and Angel Ripplinger. 2018. "Quercetin treatment regulates the Na+, K+-ATPase activity, peripheral cholinergic enzymes, and oxidative stress in a rat model of demyelination." *Nutrition Research* no. 55:45-56.

Celsi, Fulvio, Paola Pizzo, Marisa Brini, Sara Leo, Carmen Fotino, Paolo Pinton, and Rosario Rizzuto. 2009. "Mitochondria, calcium and cell death: a deadly triad in neurodegeneration." *Biochimica et Biophysica Acta (BBA)-Bioenergetics* no. 1787 (5):335-344.

Cervellati, Carlo, Claudia Sticozzi, Arianna Romani, Giuseppe Belmonte, Domenico De Rasmo, Anna Signorile, Franco Cervellati, Chiara Milanese, Pier Giorgio Mastroberardino, and Alessandra Pecorelli. 2015. "Impaired enzymatic defensive activity, mitochondrial dysfunction and proteasome activation are involved in RTT cell oxidative damage." *Biochimica et Biophysica Acta (BBA)-Molecular Basis of Disease* no. 1852 (10):2066-2074.

Çevik, Özge, Mehmet Erşahin, T Emre Şener, İlker Tinay, Tufan Tarcan, Şule Çetinel, Azize Şener, Hale Z Toklu, and Göksel Şener. 2013. "Beneficial effects of quercetin on rat urinary bladder after spinal cord injury." *journal of surgical research* no. 183 (2):695-703.

Chahrour, Maria, Sung Yun Jung, Chad Shaw, Xiaobo Zhou, Stephen TC Wong, Jun Qin, and Huda Y Zoghbi. 2008. "MeCP2, a key contributor to neurological disease, activates and represses transcription." *Science* no. 320 (5880):1224-1229.

Chakraborty, Somsuta, Sami Stalin, Nirmalendu Das, Somsubhra Thakur Choudhury, Swarupa Ghosh, and Snehasikta Swarnakar. 2012. "The use of nano-quercetin to arrest mitochondrial damage and MMP-9 upregulation during prevention of gastric inflammation induced by ethanol in rat." *Biomaterials* no. 33 (10):2991-3001.

Champeil-Potokar, Gaelle, Catherine Chaumontet, Philippe Guesnet, Monique Lavialle, and Isabelle Denis. 2006. "Docosahexaenoic acid (22: 6n-3) enrichment of membrane phospholipids increases gap junction coupling capacity in cultured astrocytes." *European Journal of Neuroscience* no. 24 (11):3084-3090.

Chandrasekar, Bysani, and Gabriel Fernandes. 1994. "Decreased proinflammatory cytokines and increased antioxidant enzyme gene expression by ω-3 lipids in murine lupus nephritis." *Biochemical and Biophysical Research Communications* no. 200 (2):893-898.

Chang, Jane Pei-Chen, Kuan-Pin Su, Valeria Mondelli, and Carmine M Pariante. 2018. "Omega-3 Polyunsaturated Fatty Acids in Youths with Attention Deficit Hyperactivity Disorder: a Systematic Review and Meta-Analysis of Clinical Trials and Biological Studies." *Neuropsychopharmacology* no. 43 (3):534.

Chapkin, Robert S, Wooki Kim, Joanne R Lupton, and David N McMurray. 2009. "Dietary docosahexaenoic and eicosapentaenoic acid: emerging mediators of inflammation." *Prostaglandins, Leukotrienes and Essential Fatty Acids* no. 81 (2-3):187-191.

Chauhan, Abha, Feng Gu, and Ved Chauhan. 2012. "Mitochondrial respiratory chain defects in autism and other neurodevelopmental disorders." *Journal of Pediatric Biochemistry* no. 2 (4):213-223.

Chen, Hong-Guang, Ke-Liang Xie, Huan-Zhi Han, Wei-Na Wang, Da-Quan Liu, Guo-Lin Wang, and Yong-Hao Yu. 2013. "Heme oxygenase-1 mediates the anti-inflammatory effect of

molecular hydrogen in LPS-stimulated RAW 264.7 macrophages." *International Journal of Surgery* no. 11 (10):1060-1066.

Chen, Jui-Ching, Feng-Ming Ho, Pei-Dawn Lee Chao, Chih-Ping Chen, Kee-Ching G Jeng, Hsiu-Bao Hsu, Sho-Tone Lee, Wen Tung Wu, and Wan-Wan Lin. 2005. "Inhibition of iNOS gene expression by quercetin is mediated by the inhibition of IκB kinase, nuclear factor-kappa B and STAT1, and depends on heme oxygenase-1 induction in mouse BV-2 microglia." *European journal of pharmacology* no. 521 (1):9-20.

Chen, Qun, and Edward J Lesnefsky. 2006. "Depletion of cardiolipin and cytochrome c during ischemia increases hydrogen peroxide production from the electron transport chain." *Free Radical Biology and Medicine* no. 40 (6):976-982.

Chen, Ying, Veerakumar Balasubramaniyan, Jie Peng, Edward C Hurlock, Michelle Tallquist, Jianrong Li, and Q Richard Lu. 2007. "Isolation and culture of rat and mouse oligodendrocyte precursor cells." *Nature protocols* no. 2 (5):1044-1051.

Chicco, Adam J, and Genevieve C Sparagna. 2007. "Role of cardiolipin alterations in mitochondrial dysfunction and disease." *American Journal of Physiology-Cell Physiology* no. 292 (1):C33-C44.

Chitnis, Tanuja, and Howard L Weiner. 2017. "CNS inflammation and neurodegeneration." *The Journal of clinical investigation* no. 127 (10):3577-3587.

Chittajallu, R, A Aguirre, and V Gallo. 2004. "NG2-positive cells in the mouse white and grey matter display distinct physiological properties." *The Journal of physiology* no. 561 (1):109-122.

Cho, Sung-Yeon, Sang-Joon Park, Myung-Ja Kwon, Tae-Sook Jeong, Song-Hae Bok, Woo-Young Choi, Won-Il Jeong, Si-Yun Ryu, Sun-Hee Do, and Cha-Soo Lee. 2003. "Quercetin suppresses proinflammatory cytokines production through MAP kinases and NF-κB pathway in lipopolysaccharide-stimulated macrophage." *Molecular and cellular biochemistry* no. 243 (1):153-160.

Choi, Eun-Yong, Hansongyi Lee, Jong Shin Woo, Hyun Hee Jang, Seung Joon Hwang, Hyun Soo Kim, Woo-Sik Kim, Young-Seol Kim, Ryowon Choue, and Yong-Jun Cha. 2015. "Effect of onion peel extract on endothelial function and endothelial progenitor cells in overweight and obese individuals." *Nutrition* no. 31 (9):1131-1135.

Chu, Arthur J, Melissa A Walton, Jai K Prasad, and Anne Seto. 1999. "Blockade by polyunsaturated n-3 fatty acids of endotoxin-induced monocytic tissue factor activation is mediated by the depressed receptor expression in THP-1 cells." *Journal of Surgical Research* no. 87 (2):217-224.

Ciccoli, Lucia, Claudio De Felice, Eugenio Paccagnini, Silvia Leoncini, Alessandra Pecorelli, Cinzia Signorini, Giuseppe Belmonte, Giuseppe Valacchi, Marcello Rossi, and Joussef Hayek. 2012. "Morphological changes and oxidative damage in Rett Syndrome erythrocytes." *Biochimica et Biophysica Acta (BBA)-General Subjects* no. 1820 (4):511-520.

Clapham, David E. 2007. "Calcium signaling." *Cell* no. 131 (6):1047-1058.

Colombo, Emanuela, and Cinthia Farina. 2016. "Astrocytes: key regulators of neuroinflammation." *Trends in immunology* no. 37 (9):608-620.

Contreras, Laura, Ilaria Drago, Enrico Zampese, and Tullio Pozzan. 2010. "Mitochondria: the calcium connection." *Biochimica et Biophysica Acta (BBA)-Bioenergetics* no. 1797 (6-7):607-618.

Costa, Lucio G, Jacqueline M Garrick, Pamela J Roquè, and Claudia Pellacani. 2016. "Mechanisms of neuroprotection by quercetin: counteracting oxidative stress and more." *Oxidative Medicine and Cellular Longevity* no. 2016.

Cotter, Dawn, Purnima Guda, Eoin Fahy, and Shankar Subramaniam. 2004. "MitoProteome: mitochondrial protein sequence database and annotation system." *Nucleic acids research* no. 32 (suppl_1):D463-D467.

Dai, Yining, Chan Zhao, Xiaofang Liang, Rongping Dai, and Fangtian Dong. 2015. "Protectin DX, a double lipoxygenase product from DHA, inhibits the production of both inflammatory cytokines and reactive oxygen species in human retinal pigment epithelium cells." *European journal of lipid science and technology* no. 117 (8):1138-1145.

Danthi, Sanjay J, Judith A Enyeart, and John J Enyeart. 2005. "Modulation of native T-type calcium channels by ω-3 fatty acids." *Biochemical and biophysical research communications* no. 327 (2):485-493.

de Boer, Vincent CJ, Ashwin A Dihal, Hester van der Woude, Ilja CW Arts, Siegfried Wolffram, Gerrit M Alink, Ivonne MCM Rietjens, Jaap Keijer, and Peter CH Hollman. 2005. "Tissue distribution of quercetin in rats and pigs." *The Journal of nutrition* no. 135 (7):1718-1725.

De Caterina, Raffaele, Myron I Cybulsky, Steven K Clinton, Michael A Gimbrone, and Peter Libby. 1994. "The omega-3 fatty acid docosahexaenoate reduces cytokine-induced expression of proatherogenic and proinflammatory proteins in human endothelial cells." *Arteriosclerosis, Thrombosis, and Vascular Biology* no. 14 (11):1829-1836.

De Felice, Claudio, Lucia Ciccoli, Silvia Leoncini, Cinzia Signorini, Marcello Rossi, Laura Vannuccini, Gianni Guazzi, Giuseppe Latini, Mario Comporti, and Giuseppe Valacchi. 2009. "Systemic oxidative stress in classic Rett syndrome." *Free Radical Biology and Medicine* no. 47 (4):440-448.

De Felice, Claudio, Floriana Della Ragione, Cinzia Signorini, Silvia Leoncini, Alessandra Pecorelli, Lucia Ciccoli, Francesco Scalabrì, Federico Marracino, Michele Madonna, and Giuseppe Belmonte. 2014. "Oxidative brain damage in Mecp2-mutant murine models of Rett syndrome." *Neurobiology of Disease* no. 68:66-77.

De Felice, Claudio, Cinzia Signorini, Thierry Durand, Lucia Ciccoli, Silvia Leoncini, Maurizio D'Esposito, Stefania Filosa, Camille Oger, Alexandre Guy, and Valérie Bultel-Poncé. 2012. "Partial rescue of Rett syndrome by ω-3 polyunsaturated fatty acids (PUFAs) oil." *Genes & nutrition* no. 7 (3):447.

De Filippis, Bianca, Daniela Valenti, Lidia de Bari, Domenico De Rasmo, Mattia Musto, Alessia Fabbri, Laura Ricceri, Carla Fiorentini, Giovanni Laviola, and Rosa Anna Vacca. 2015. "Mitochondrial free radical overproduction due to respiratory chain impairment in the brain of a mouse model of Rett syndrome: protective effect of CNF1." *Free Radical Biology and Medicine* no. 83:167-177.

de Urquiza, Alexander Mata, Suya Liu, Maria Sjöberg, Rolf H Zetterström, William Griffiths, Jan Sjövall, and Thomas Perlmann. 2000. "Docosahexaenoic acid, a ligand for the retinoid X receptor in mouse brain." *Science* no. 290 (5499):2140-2144.

Derecki, Noël C, James C Cronk, Zhenjie Lu, Eric Xu, Stephen BG Abbott, Patrice G Guyenet, and Jonathan Kipnis. 2012. "Wild-type microglia arrest pathology in a mouse model of Rett syndrome." *Nature* no. 484 (7392):105.

Dhar, Shilpa S, Sakkapol Ongwijitwat, and Margaret TT Wong-Riley. 2008. "Nuclear respiratory factor 1 regulates all ten nuclear-encoded subunits of cytochrome c oxidase in neurons." *Journal of Biological Chemistry* no. 283 (6):3120-3129.

Di Nunzio, Mattia, Veronica Valli, and Alessandra Bordoni. 2016. "PUFA and oxidative stress. Differential modulation of the cell response by DHA." *International journal of food sciences and nutrition* no. 67 (7):834-843.

Dihal, Ashwin A, Ruud A Woutersen, Ben Van Ommen, Ivonne MCM Rietjens, and Rob H Stierum. 2006. "Modulatory effects of quercetin on proliferation and differentiation of the human colorectal cell line Caco-2." *Cancer letters* no. 238 (2):248-259.

Ding, Youming, Xiaoyan Chen, Bin Wang, Bin Yu, Jianhui Ge, and Xiaokang Shi. 2018. "Quercetin suppresses the chymotrypsin-like activity of proteasome via inhibition of MEK1/ERK1/2 signaling pathway in hepatocellular carcinoma HepG2 cells." *Canadian journal of physiology and pharmacology* no. 96 (5):521-526.

Dinkova-Kostova, Albena T, and Andrey Y Abramov. 2015. "The emerging role of Nrf2 in mitochondrial function." *Free Radical Biology and Medicine* no. 88:179-188.

Dong, Qiping, Qing Liu, Ronghui Li, Anxin Wang, Qian Bu, Kuan Hong Wang, and Qiang Chang. 2018. "Mechanism and consequence of abnormal calcium homeostasis in Rett syndrome astrocytes." *eLife* no. 7:e33417.

Dong, Yuanshu, and Etty N Benveniste. 2001. "Immune function of astrocytes." *Glia* no. 36 (2):180-190.

Doyle, Joseph P, Joseph D Dougherty, Myriam Heiman, Eric F Schmidt, Tanya R Stevens, Guojun Ma, Sujata Bupp, Prerana Shrestha, Rajiv D Shah, and Martin L Doughty. 2008. "Application of a translational profiling approach for the comparative analysis of CNS cell types." *Cell* no. 135 (4):749-762.

Duplus, Eric, Martine Glorian, and Claude Forest. 2000. "Fatty acid regulation of gene transcription." *Journal of Biological Chemistry* no. 275 (40):30749-30752.

Dyall, Simon C. 2015. "Long-chain omega-3 fatty acids and the brain: a review of the independent and shared effects of EPA, DPA and DHA." *Frontiers in aging neuroscience* no. 7:52.

Edwards, Randi L, Tiffany Lyon, Sheldon E Litwin, Alexander Rabovsky, J David Symons, and Thunder Jalili. 2007. "Quercetin reduces blood pressure in hypertensive subjects." *The Journal of nutrition* no. 137 (11):2405-2411.

Ermak, Gennady, and Kelvin JA Davies. 2002. "Calcium and oxidative stress: from cell signaling to cell death." *Molecular immunology* no. 38 (10):713-721.

Fang, Mao-sheng, Xing Li, Hong Qian, Kuan Zeng, Meng Ye, Yong-jie Zhou, Hui Li, Xiao-chuan Wang, and Yi Li. 2017. "ω-3PUFAs prevent MK-801-induced cognitive impairment in schizophrenic rats via the CREB/BDNF/TrkB pathway." *Journal of Huazhong University of Science and Technology [Medical Sciences]* no. 37 (4):491-495.

Faria, Ana, Diogo Pestana, Diana Teixeira, Joana Azevedo, Victor Freitas, Nuno Mateus, and Conceição Calhau. 2010. "Flavonoid transport across RBE4 cells: a blood-brain barrier model." *Cellular & molecular biology letters* no. 15 (2):234.

Farina, Cinthia, Francesca Aloisi, and Edgar Meinl. 2007. "Astrocytes are active players in cerebral innate immunity." *Trends in immunology* no. 28 (3):138-145.

Fereidounni, Soheil, and Davindar Kumar Dhawan. 2018. "Understanding the role of quercetin during neurotoxicity induced by Chlorpyrifos."

Ferry, David R, Anna Smith, Joy Malkhandi, David W Fyfe, D Anderson, J Baker, and David J Kerr. 1996. "Phase I clinical trial of the flavonoid quercetin: pharmacokinetics and evidence for in vivo tyrosine kinase inhibition." *Clinical cancer research* no. 2 (4):659-668.

Flachs, P, O Horakova, P Brauner, M Rossmeisl, P Pecina, N Franssen-van Hal, J Ruzickova, J Sponarova, Z Drahota, and C Vlcek. 2005. "Polyunsaturated fatty acids of marine origin upregulate mitochondrial biogenesis and induce β-oxidation in white fat." *Diabetologia* no. 48 (11):2365-2375.

Font-Nieves, Miriam, M Glòria Sans-Fons, Roser Gorina, Ester Bonfill-Teixidor, Angélica Salas-Pérdomo, Leonardo Márquez-Kisinousky, Tomàs Santalucia, and Anna M Planas. 2012. "Induction of COX-2 enzyme and down-regulation of COX-1 expression by lipopolysaccharide (LPS) control prostaglandin E2 production in astrocytes." *Journal of Biological Chemistry* no. 287 (9):6454-6468.

Forlani, Greta, Elisa Giarda, Ugo Ala, Ferdinando Di Cunto, Monica Salani, Rossella Tupler, Charlotte Kilstrup-Nielsen, and Nicoletta Landsberger. 2010. "The MeCP2/YY1 interaction regulates ANT1 expression at 4q35: novel hints for Rett syndrome pathogenesis." *Human molecular genetics* no. 19 (16):3114-3123.

Formichi, Patrizia, Carla Battisti, Maria Teresa Dotti, Giuseppe Hayek, Michele Zappella, and Antonio Federico. 1998. "Vitamin E serum levels in Rett syndrome." *Journal of the neurological sciences* no. 156 (2):227-230.

Friedman, Jonathan R, and Jodi Nunnari. 2014. "Mitochondrial form and function." *Nature* no. 505 (7483):335.

Fuchikami, Manabu, Shigeru Morinobu, Akiko Kurata, Shigeto Yamamoto, and Shigeto Yamawaki. "Single immobilization stress differentially alters the expression profile of transcripts of the brain-derived neurotrophic factor (BDNF) gene and histone acetylation at its promoters in the rat hippocampus." *International Journal of Neuropsychopharmacology* 12, no. 1 (2009): 73-82.

Gadient, Reto A, and Uwe H Otten. 1997. "Interleukin-6 (IL-6)—a molecule with both beneficial and destructive potentials." *Progress in neurobiology* no. 52 (5):379-390.

Galluzzo, Paola, Chiara Martini, Pamela Bulzomi, Stefano Leone, Alessandro Bolli, Valentina Pallottini, and Maria Marino. 2009. "Quercetin-induced apoptotic cascade in cancer cells: Antioxidant versus estrogen receptor α-dependent mechanisms." *Molecular nutrition & food research* no. 53 (6):699-708.

Ganat, Yosif M, John Silbereis, Clinton Cave, Hai Ngu, George M Anderson, Yasushi Ohkubo, Laura R Ment, and Flora M Vaccarino. 2006. "Early postnatal astroglial cells produce multilineage precursors and neural stem cells in vivo." *Journal of Neuroscience* no. 26 (33):8609-8621.

Gárate, Iciar, Borja García-Bueno, José LM Madrigal, Lidia Bravo, Esther Berrocoso, Javier R. Caso, Juan A. Micó, and Juan C. Leza. "Origin and consequences of brain Toll-like receptor 4 pathway stimulation in an experimental model of depression." *Journal of neuroinflammation* 8, no. 1 (2011): 151.

Gargouri, Brahim, Johanna Carstensen, Harsharan S Bhatia, Michael Huell, Gunnar PH Dietz, and Bernd L Fiebich. 2018. "Anti-neuroinflammatory effects of Ginkgo biloba extract EGb761 in LPS-activated primary microglial cells." *Phytomedicine* no. 44:45-55.

Ge, W-P, and J-M Jia. 2016. "Local production of astrocytes in the cerebral cortex." *Neuroscience* no. 323:3-9.

Georgel, Philippe T, Rachel A Horowitz-Scherer, Nick Adkins, Christopher L Woodcock, Paul A Wade, and Jeffrey C Hansen. 2003. "Chromatin compaction by human MeCP2 assembly of novel secondary chromatin structures in the absence of DNA methylation." *Journal of Biological Chemistry* no. 278 (34):32181-32188.

Gibson, Joanne H, Barry Slobedman, KN Harikrishnan, Sarah L Williamson, Dimitri Minchenko, Assam El-Osta, Joshua L Stern, and John Christodoulou. 2010. "Downstream targets of methyl CpG binding protein 2 and their abnormal expression in the frontal cortex of the human Rett syndrome brain." *BMC neuroscience* no. 11 (1):53.

Gleyzer, Natalie, Kristel Vercauteren, and Richard C Scarpulla. 2005. "Control of mitochondrial transcription specificity factors (TFB1M and TFB2M) by nuclear respiratory factors (NRF-1 and NRF-2) and PGC-1 family coactivators." *Molecular and cellular biology* no. 25 (4):1354-1366.

Gold, WA, SL Williamson, S Kaur, IP Hargreaves, JM Land, GJ Pelka, PPL Tam, and J Christodoulou. 2014. "Mitochondrial dysfunction in the skeletal muscle of a mouse model of Rett syndrome (RTT): implications for the disease phenotype." *Mitochondrion* no. 15:10-17.

Gomez-Pinilla, Fernando, Shoshanna Vaynman, and Zhe Ying. 2008. "Brain-derived neurotrophic factor functions as a metabotrophin to mediate the effects of exercise on cognition." *European Journal of Neuroscience* no. 28 (11):2278-2287.

Gorina, Roser, Miriam Font-Nieves, Leonardo Márquez-Kisinousky, Tomàs Santalucia, and Anna M Planas. 2011. "Astrocyte TLR4 activation induces a proinflammatory environment

through the interplay between MyD88-dependent NFκB signaling, MAPK, and Jak1/Stat1 pathways." *Glia* no. 59 (2):242-255.

Gorjão, Renata, Anna Karenina Azevedo-Martins, Hosana Gomes Rodrigues, Fernando Abdulkader, Manoel Arcisio-Miranda, Joaquim Procopio, and Rui Curi. 2009. "Comparative effects of DHA and EPA on cell function." *Pharmacology & therapeutics* no. 122 (1):56-64.

Görlach, Agnes, Katharina Bertram, Sona Hudecova, and Olga Krizanova. 2015. "Calcium and ROS: a mutual interplay." *Redox biology* no. 6:260-271.

Gorshkov, Kirill, Francis Aguisanda, Natasha Thorne, and Wei Zheng. 2018. "Astrocytes as targets for drug discovery." *Drug discovery today*.

Granado-Serrano, Ana Belén, María Angeles Martín, Laura Bravo, Luis Goya, and Sonia Ramos. 2012. "Quercetin modulates Nrf2 and glutathione-related defenses in HepG2 cells: involvement of p38." *Chemico-biological interactions* no. 195 (2):154-164.

Green, Douglas R, and John C Reed. 1998. "Mitochondria and apoptosis." *science*:1309-1312.

Green, P, and E Yavin. 1998. "Mechanisms of docosahexaenoic acid accretion in the fetal brain." *Journal of neuroscience research* no. 52 (2):129-136.

Griffin, W Sue T, and Robert E Mrak. 2002. "Interleukin-1 in the genesis and progression of and risk for development of neuronal degeneration in Alzheimer's disease." *Journal of leukocyte biology* no. 72 (2):233-238.

Griffiths, Elinor J, and Guy A Rutter. 2009. "Mitochondrial calcium as a key regulator of mitochondrial ATP production in mammalian cells." *Biochimica et Biophysica Acta (BBA)-Bioenergetics* no. 1787 (11):1324-1333.

Großer, Emanuel, Ursula Hirt, Oliwia A Janc, Christiane Menzfeld, Marc Fischer, Belinda Kempkes, Steffen Vogelgesang, Till U Manzke, Lennart Opitz, and Gabriela Salinas-Riester. 2012. "Oxidative burden and mitochondrial dysfunction in a mouse model of Rett syndrome." *Neurobiology of disease* no. 48 (1):102-114.

Gruol, DL, and TE Nelson. 1997. "Physiological and pathological roles of interleukin-6 in the central nervous system." *Molecular neurobiology* no. 15 (3):307-339.

Guatteo, Ezia, Kathe Ann Stanness, and Damir Janigro. 1996. "Hyperpolarization-activated ion currents in cultured rat cortical and spinal cord astrocytes." *Glia* no. 16 (3):196-209.

Gupta, Richa, Rajendra K Shukla, Ankita Pandey, Tanuj Sharma, Yogesh K Dhuriya, Pranay Srivastava, Manjul P Singh, Mohammad Imran Siddiqi, Aditya B Pant, and Vinay K Khanna. 2018. "Involvement of PKA/DARPP-32/PP1α and β-arrestin/Akt/GSK-3β Signaling in Cadmium-Induced DA-D2 Receptor-Mediated Motor Dysfunctions: Protective Role of Quercetin." *Scientific reports* no. 8 (1):2528.

Gupta, Sunita, Alecia G Knight, Shruti Gupta, Jeffrey N Keller, and Annadora J Bruce-Keller. 2012. "Saturated long-chain fatty acids activate inflammatory signaling in astrocytes." *Journal of neurochemistry* no. 120 (6):1060-1071.

Hagberg, Bengt, Jean Aicardi, Karin Dias, and Ovidio Ramos. 1983. "A progressive syndrome of autism, dementia, ataxia, and loss of purposeful hand use in girls: Rett's syndrome: report of 35 cases." *Annals of neurology* no. 14 (4):471-479.

Halestrap, Andrew P. 2010. "A pore way to die: the role of mitochondria in reperfusion injury and cardioprotection." *Biochemical Society Transactions* no. 38 (4):841-860.

Hämäläinen, Mari, Riina Nieminen, Pia Vuorela, Marina Heinonen, and Eeva Moilanen. 2007. "Anti-inflammatory effects of flavonoids: genistein, kaempferol, quercetin, and daidzein inhibit STAT-1 and NF-κB activations, whereas flavone, isorhamnetin, naringenin, and pelargonidin inhibit only NF-κB activation along with their inhibitory effect on iNOS expression and NO production in activated macrophages." *Mediators of inflammation* no. 2007.

Hamdy, AA, and MA Ibrahem. 2010. "Management of aphthous ulceration with topical quercetin: a randomized clinical trial." *J Contemp Dent Pract* no. 11 (4):E009-16.

Hansson, Elisabeth, Tony Werner, Ulrika Björklund, and Eva Skiöldebrand. 2016. "Therapeutic innovation: inflammatory-reactive astrocytes as targets of inflammation." *IBRO Reports* no. 1:1-9.

Harikrishnan, KN, Richard Bayles, Giuseppe D Ciccotosto, Scott Maxwell, Roberto Cappai, Gregory J Pelka, Patrick PL Tam, John Christodoulou, and Assam El-Osta. 2010. "Alleviating transcriptional inhibition of the norepinephrine slc6a2 transporter gene in depolarized neurons." *Journal of Neuroscience* no. 30 (4):1494-1501.

Harry, G Jean. "Neuroinflammation and Autism." *Developmental Neurotoxicology Research: Principles, Models, Techniques, Strategies, and Mechanisms*:501-520.

Hashimoto, Michio, Md Shahdat Hossain, Hiroshi Yamasaki, Kazunaga Yazawa, and Sumio Masumura. 1999. "Effects of eicosapentaenoic acid and docosahexaenoic acid on plasma membrane fluidity of aortic endothelial cells." *Lipids* no. 34 (12):1297-1304.

Hashimoto, Michio, Shahdat Hossain, Toshio Shimada, Kozo Sugioka, Hiroshi Yamasaki, Yoshimi Fujii, Yutaka Ishibashi, Jun-Ichiro Oka, and Osamu Shido. 2002. "Docosahexaenoic acid provides protection from impairment of learning ability in Alzheimer's disease model rats." *Journal of neurochemistry* no. 81 (5):1084-1091.

Hassan, Jubran K, Adheed Khalid Sharrad, and Falah Hassan Sheri. 2018. "Effect of Quercetin Supplement on Some Bone Mineralization Biomarkers in Diabetic Type 2 Patients." *ADVANCES IN PHARMACOLOGY AND PHARMACY* no. 6 (2):43-49.

Hatefi, Youssef. 1994. "ATP synthesis in mitochondria." In *Ejb Reviews 1993*, 201-209. Springer.

Hatten, Mary E, Ronald KH Liem, Michael L Shelanski, and Corol A Mason. 1991. "Astroglia in CNS injury." *Glia* no. 4 (2):233-243.

Hayakawa, Kazuhide, Elga Esposito, Xiaohua Wang, Yasukazu Terasaki, Yi Liu, Changhong Xing, Xunming Ji, and Eng H Lo. 2016. "Transfer of mitochondria from astrocytes to neurons after stroke." *Nature* no. 535 (7613):551.

Henagan, TM, WT Cefalu, DM Ribnicky, RC Noland, K Dunville, WW Campbell, LK Stewart, LA Forney, TW Gettys, and JS Chang. 2015. "In vivo effects of dietary quercetin and quercetin-rich red onion extract on skeletal muscle mitochondria, metabolism, and insulin sensitivity." *Genes & nutrition* no. 10 (1):2.

Henneberger, Christian, and Christian Steinhäuser. 2016. "Astrocytic TLR4 at the crossroads of inflammation and seizure susceptibility." *J Cell Biol* no. 215 (5):607-609.

Hirase, Hajime, and Schuichi Koizumi. 2018. Astrocytes as therapeutic targets in brain diseases. Elsevier.

Hochstim, Christian, Benjamin Deneen, Agnès Lukaszewicz, Qiao Zhou, and David J Anderson. 2008. "Identification of positionally distinct astrocyte subtypes whose identities are specified by a homeodomain code." *Cell* no. 133 (3):510-522.

Hohlfeld, Reinhard, Martin Kerschensteiner, and Edgar Meinl. 2007. "Dual role of inflammation in CNS disease." *Neurology* no. 68 (22 suppl 3):S58-S63.

Holmström, Kira M, Rumen V Kostov, and Albena T Dinkova-Kostova. 2016. "The multifaceted role of Nrf2 in mitochondrial function." *Current opinion in toxicology* no. 1:80-91.

Horrocks, Lloyd A, and Akhlaq A Farooqui. 2004. "Docosahexaenoic acid in the diet: its importance in maintenance and restoration of neural membrane function." *Prostaglandins, Leukotrienes and Essential Fatty Acids* no. 70 (4):361-372.

Hou, Yan, Marwa A Aboukhatwa, De-Liang Lei, Kebreten Manaye, Ikhlas Khan, and Yuan Luo. 2010. "Anti-depressant natural flavonols modulate BDNF and beta amyloid in neurons and hippocampus of double TgAD mice." *Neuropharmacology* no. 58 (6):911-920.

Hsieh, Hsi-Lung, and Chuen-Mao Yang. 2016. "Astrocyte as the modulator in brain inflammation and neurodegenerative disorders." *Ann Neurodegener Disord* no. 1:1008.

Hsu, Yuan-Man, and Mei-Chin Yin. 2016. "EPA or DHA enhanced oxidative stress and aging protein expression in brain of d-galactose treated mice." *Biomedicine* no. 6 (3).

Hsueh, Tun-Yun, Jamie I Baum, and Yan Huang. 2018. "effect of eicosapentaenoic acid and Docosahexaenoic acid on Myogenesis and Mitochondrial Biosynthesis during Murine skeletal Muscle cell Differentiation." *Frontiers in nutrition* no. 5:15.

Hughes, Laura AE, Ilja CW Arts, Ton Ambergen, Henny AM Brants, Pieter C Dagnelie, R Alexandra Goldbohm, Piet A van den Brandt, and Matty P Weijenberg. 2008. "Higher dietary flavone, flavonol, and catechin intakes are associated with less of an increase in BMI over time in women: a longitudinal analysis from the Netherlands Cohort Study–." *The American journal of clinical nutrition* no. 88 (5):1341-1352.

Iadecola, Costantino, Koreaki Sugimoto, Kiyoshi Niwa, Ken Kazama, and M Elizabeth Ross. 2001. "Increased susceptibility to ischemic brain injury in cyclooxygenase-1–deficient mice." *Journal of Cerebral Blood Flow & Metabolism* no. 21 (12):1436-1441.

Ibarguren, Maitane, David J López, and Pablo V Escribá. 2014. "The effect of natural and synthetic fatty acids on membrane structure, microdomain organization, cellular functions and human health." *Biochimica et Biophysica Acta (BBA)-Biomembranes* no. 1838 (6):1518-1528.

Ishisaka, Akari, Satomi Ichikawa, Hiroyuki Sakakibara, Mariusz K Piskula, Toshiyuki Nakamura, Yoji Kato, Mikiko Ito, Ken-ichi Miyamoto, Akira Tsuji, and Yoshichika Kawai. 2011. "Accumulation of orally administered quercetin in brain tissue and its antioxidative effects in rats." *Free Radical Biology and Medicine* no. 51 (7):1329-1336.

Jabir, Nasimudeen R, Fayaz Rahman Khan, and Shams Tabrez. 2018. "Cholinesterase targeting by polyphenols: A therapeutic approach for the treatment of Alzheimer's disease." *CNS neuroscience & therapeutics*.

Jackson, JK, T Higo, WL Hunter, and HM Burt. 2006. "The antioxidants curcumin and quercetin inhibit inflammatory processes associated with arthritis." *Inflammation Research* no. 55 (4):168-175.

Janc, Oliwia Alicja, and Michael Müller. 2014. "The free radical scavenger Trolox dampens neuronal hyperexcitability, reinstates synaptic plasticity, and improves hypoxia tolerance in a mouse model of Rett syndrome." *Frontiers in cellular neuroscience* no. 8:56.

Jazwa, Agnieszka, and Antonio Cuadrado. 2010. "Targeting heme oxygenase-1 for neuroprotection and neuroinflammation in neurodegenerative diseases." *Current drug targets* no. 11 (12):1517-1531.

Jeyakumar, M, R Thomas, E Elliot-Smith, DA Smith, AC Van Der Spoel, A d'Azzo, V Hugh Perry, TD Butters, RA Dwek, and FM Platt. 2003. "Central nervous system inflammation is a hallmark of pathogenesis in mouse models of GM1 and GM2 gangliosidosis." *Brain* no. 126 (4):974-987.

Jha, Mithilesh Kumar, Jong-Heon Kim, Gyun Jee Song, Won-Ha Lee, In-Kyu Lee, Ho-Won Lee, Seong Soo A An, SangYun Kim, and Kyoungho Suk. 2017. "Functional dissection of astrocyte-secreted proteins: Implications in brain health and diseases." *Progress in neurobiology*.

Jin, Lee-Way, Makoto Horiuchi, Heike Wulff, Xiao-Bo Liu, Gino A Cortopassi, Jeffrey D Erickson, and Izumi Maezawa. 2015. "Dysregulation of glutamine transporter SNAT1 in Rett syndrome microglia: a mechanism for mitochondrial dysfunction and neurotoxicity." *Journal of Neuroscience* no. 35 (6):2516-2529.

Jump, Donald B. 2002a. "The biochemistry of n-3 polyunsaturated fatty acids." *Journal of Biological Chemistry* no. 277 (11):8755-8758.

Jump, Donald B. 2002b. "Dietary polyunsaturated fatty acids and regulation of gene transcription." *Current opinion in lipidology* no. 13 (2):155-164.

Kang, Jung-Woo, Hyo-Sun Choi, and Sun-Mee Lee. 2018. "Resolvin D1 attenuates liver ischemia/reperfusion injury through modulating thioredoxin 2-mediated mitochondrial quality control." *British journal of pharmacology*.

Kao, Tsung-Kuei, Yen-Chuan Ou, Shue-Ling Raung, Ching-Yi Lai, Su-Lan Liao, and Chun-Jung Chen. 2010. "Inhibition of nitric oxide production by quercetin in endotoxin/cytokine-stimulated microglia." *Life sciences* no. 86 (9-10):315-321.

Kawakita, E, M Hashimoto, and O Shido. 2006. "Docosahexaenoic acid promotes neurogenesis in vitro and in vivo." *Neuroscience* no. 139 (3):991-997.

Keane, PC, M Kurzawa, PG Blain, and CM Morris. 2011. "Mitochondrial dysfunction in Parkinson's disease." *Parkinson's Disease* no. 2011.

Kelley, Darshan S, David Siegel, Dawn M Fedor, Yuriko Adkins, and Bruce E Mackey. 2009. "DHA supplementation decreases serum C-reactive protein and other markers of inflammation in hypertriglyceridemic men." *The Journal of nutrition* no. 139 (3):495-501.

Khairallah, Ramzi J, Genevieve C Sparagna, Nishanth Khanna, Karen M O'Shea, Peter A Hecker, Tibor Kristian, Gary Fiskum, Christine Des Rosiers, Brian M Polster, and William C Stanley. 2010. "Dietary supplementation with docosahexaenoic acid, but not eicosapentaenoic acid, dramatically alters cardiac mitochondrial phospholipid fatty acid composition and prevents permeability transition." *Biochimica et Biophysica Acta (BBA)-Bioenergetics* no. 1797 (8):1555-1562.

Khalfoun, B, F Thibault, H Watier, P Bardos, and Y Lebranchu. 1997. "Docosahexaenoic and eicosapentaenoic acids inhibit in vitro human endothelial cell production of interleukin-6." *Advances in experimental medicine and biology* no. 400:589-597.

Khanapure, Subhash P, David S Garvey, David R Janero, and L Gordon Letts. 2007. "Eicosanoids in inflammation: biosynthesis, pharmacology, and therapeutic frontiers." *Current topics in medicinal chemistry* no. 7 (3):311-340.

Kielian, Tammy. 2006. "Toll-like receptors in central nervous system glial inflammation and homeostasis." *Journal of neuroscience research* no. 83 (5):711-730.

Kimelberg, Harold K. 2004. "The problem of astrocyte identity." *Neurochemistry international* no. 45 (2-3):191-202.

Kimelberg, Harold K, and Maiken Nedergaard. 2010. "Functions of astrocytes and their potential as therapeutic targets." *Neurotherapeutics* no. 7 (4):338-353.

Kitajka, Klára, László G Puskás, Ágnes Zvara, László Hackler, Gwendolyn Barcelo-Coblijn, Young K Yeo, and Tibor Farkas. 2002. "The role of n-3 polyunsaturated fatty acids in brain: modulation of rat brain gene expression by dietary n-3 fatty acids." *Proceedings of the National Academy of Sciences* no. 99 (5):2619-2624.

Kitajka, Klára, Andrew J Sinclair, Richard S Weisinger, Harrison S Weisinger, Michael Mathai, Anura P Jayasooriya, John E Halver, and Lászlo G Puskás. 2004. "Effects of dietary omega-3 polyunsaturated fatty acids on brain gene expression." *Proceedings of the National Academy of Sciences of the United States of America* no. 101 (30):10931-10936.

Kitson, Alex P, Adam H Metherel, Chuck T Chen, Anthony F Domenichiello, Marc-Olivier Trepanier, Alvin Berger, and Richard P Bazinet. 2016. "Effect of dietary docosahexaenoic acid (DHA) in phospholipids or triglycerides on brain DHA uptake and accretion." *The Journal of nutritional biochemistry* no. 33:91-102.

Kokura, Kenji, Sunil C Kaul, Renu Wadhwa, Teruaki Nomura, Md Matiullah Khan, Toshie Shinagawa, Takashi Yasukawa, Clemencia Colmenares, and Shunsuke Ishii. 2001. "The Ski protein family is required for MeCP2-mediated transcriptional repression." *Journal of Biological Chemistry* no. 276 (36):34115-34121.

Kolomiytseva, IK, LN Markevich, DA Ignat'ev, and OV Bykova. 2010. "Lipids of nuclear fractions from neurons and glia of rat neocortex under conditions of artificial hypobiosis." *Biochemistry (Moscow)* no. 75 (9):1132-1138.

Kotani, Susumu, Eiko Sakaguchi, Shogo Warashina, Noriyuki Matsukawa, Yoshiyuki Ishikura, Yoshinobu Kiso, Manabu Sakakibara, Tanihiro Yoshimoto, Jianzhong Guo, and Tetsumori Yamashima. 2006. "Dietary supplementation of arachidonic and docosahexaenoic acids improves cognitive dysfunction." *Neuroscience research* no. 56 (2):159-164.

Krasowska-Zoladek, Alicja, Monika Banaszewska, Michal Kraszpulski, and Gregory W Konat. 2007. "Kinetics of inflammatory response of astrocytes induced by TLR 3 and TLR4 ligation." *Journal of neuroscience research* no. 85 (1):205-212.

Kriaucionis, Skirmantas, Andrew Paterson, John Curtis, Jacky Guy, Nikki MacLeod, and Adrian Bird. 2006. "Gene expression analysis exposes mitochondrial abnormalities in a mouse model of Rett syndrome." *Molecular and cellular biology* no. 26 (13):5033-5042.

Kroon, Paul A, Michael N Clifford, Alan Crozier, Andrea J Day, Jennifer L Donovan, Claudine Manach, and Gary Williamson. 2004. "How should we assess the effects of exposure to dietary polyphenols in vitro?" *The American journal of clinical nutrition* no. 80 (1):15-21.

Kühlbrandt, Werner. 2015. "Structure and function of mitochondrial membrane protein complexes." *BMC biology* no. 13 (1):89.

Kusunoki, Chisato, Liu Yang, Takeshi Yoshizaki, Fumiyuki Nakagawa, Atsushi Ishikado, Motoyuki Kondo, Katsutaro Morino, Osamu Sekine, Satoshi Ugi, and Yoshihiko Nishio. 2013. "Omega-3 polyunsaturated fatty acid has an anti-oxidant effect via the Nrf-2/HO-1 pathway in 3T3-L1 adipocytes." *Biochemical and biophysical research communications* no. 430 (1):225-230.

Lanza, Ian R, Agnieszka Blachnio-Zabielska, Matthew L Johnson, Jill M Schimke, Daniel R Jakaitis, Nathan K Lebrasseur, Michael D Jensen, K Sreekumaran Nair, and Piotr Zabielski. 2013. "Influence of fish oil on skeletal muscle mitochondrial energetics and lipid metabolites during high-fat diet." *American Journal of Physiology-Endocrinology and Metabolism* no. 304 (12):E1391-E1403.

Lauritzen, Inger, Nicolas Blondeau, Catherine Heurteaux, Catherine Widmann, Georges Romey, and Michel Lazdunski. 2000. "Polyunsaturated fatty acids are potent neuroprotectors." *The EMBO journal* no. 19 (8):1784-1793.

Le Guen, Marie, Valérie Chaté, Isabelle Hininger-Favier, Brigitte Laillet, Béatrice Morio, Gérard Pieroni, Uwe Schlattner, Christophe Pison, and Hervé Dubouchaud. 2015. "A 9-wk docosahexaenoic acid-enriched supplementation improves endurance exercise capacity and skeletal muscle mitochondrial function in adult rats." *American Journal of Physiology-Endocrinology and Metabolism* no. 310 (3):E213-E224.

Lee, Mak-Soon, Yoonjin Shin, Sohee Moon, Seunghae Kim, and Yangha Kim. 2016. "Effects of Eicosapentaenoic Acid and Docosahexaenoic Acid on Mitochondrial DNA Replication and PGC-1α Gene Expression in C2C12 Muscle Cells." *Preventive nutrition and food science* no. 21 (4):317.

Lee, Sung H, Warren T Kim, Ann H Cornell-Bell, and Harald Sontheimer. 1994. "Astrocytes exhibit regional specificity in gap-junction coupling." *Glia* no. 11 (4):315-325.

Leoncini, Silvia, Claudio De Felice, Cinzia Signorini, Alessandra Pecorelli, Thierry Durand, Giuseppe Valacchi, Lucia Ciccoli, and Joussef Hayek. 2011. "Oxidative stress in Rett syndrome: natural history, genotype, and variants." *Redox Report* no. 16 (4):145-153.

Levison, Steven W, and James E Goldman. 1993. "Both oligodendrocytes and astrocytes develop from progenitors in the subventricular zone of postnatal rat forebrain." *Neuron* no. 10 (2):201-212.

Levison, Steven W, and James E Goldman. 1997. "Multipotential and lineage restricted precursors coexist in the mammalian perinatal subventricular zone." *Journal of neuroscience research* no. 48 (2):83-94.

Li, Chuanyu, Rui Zhao, Kai Gao, Zheng Wei, Michael Yaoyao Yin, Lok Ting Lau, Dehua Chui, and Albert Cheung Hoi Yu. 2011. "Astrocytes: implications for neuroinflammatory pathogenesis of Alzheimer's disease." *Current Alzheimer Research* no. 8 (1):67-80.

Li, Jia, Caroline Romestaing, Xianlin Han, Yuan Li, Xinbao Hao, Yinyuan Wu, Chao Sun, Xiaolei Liu, Leonard S Jefferson, and Jingwei Xiong. 2010. "Cardiolipin remodeling by ALCAT1 links oxidative stress and mitochondrial dysfunction to obesity." *Cell metabolism* no. 12 (2):154-165.

Li, Xiang, Handong Wang, Guodao Wen, Liwen Li, Yongyue Gao, Zong Zhuang, Mengliang Zhou, Lei Mao, and Youwu Fan. 2018. "Neuroprotection by quercetin via mitochondrial function adaptation in traumatic brain injury: PGC-1α pathway as a potential mechanism." *Journal of cellular and molecular medicine* no. 22 (2):883-891.

Li, Yun, Haoyi Wang, Julien Muffat, Albert W Cheng, David A Orlando, Jakob Lovén, Showming Kwok, Danielle A Feldman, Helen S Bateup, and Qing Gao. 2013. "Global transcriptional and translational repression in human-embryonic-stem-cell-derived Rett syndrome neurons." *Cell stem cell* no. 13 (4):446-458.

Liddelow, Shane A, and Ben A Barres. 2017. "Reactive astrocytes: production, function, and therapeutic potential." *Immunity* no. 46 (6):957-967.

Lim, Giselle P, Frédéric Calon, Takashi Morihara, Fusheng Yang, Bruce Teter, Oliver Ubeda, Norman Salem, Sally A Frautschy, and Greg M Cole. 2005. "A diet enriched with the omega-3 fatty acid docosahexaenoic acid reduces amyloid burden in an aged Alzheimer mouse model." *Journal of Neuroscience* no. 25 (12):3032-3040.

Lin, Shao Xia, Lucia Lisi, Cinzia Dello Russo, Paul E Polak, Anthony Sharp, Guy Weinberg, Sergey Kalinin, and Douglas L Feinstein. 2011. "The anti-inflammatory effects of dimethyl fumarate in astrocytes involve glutathione and haem oxygenase-1." *ASN neuro* no. 3 (2):AN20100033.

Lioy, Daniel T, Saurabh K Garg, Caitlin E Monaghan, Jacob Raber, Kevin D Foust, Brian K Kaspar, Petra G Hirrlinger, Frank Kirchhoff, John M Bissonnette, and Nurit Ballas. 2011. "A role for glia in the progression of Rett's syndrome." *Nature* no. 475 (7357):497.

Lipi, Buch, Langhnoja Jaldeep, and Pillai Prakash. 2018. "Role of astrocytic MeCP2 in regulation of CNS myelination by affecting oligodendrocyte and neuronal physiology and axo–glial interactions." *Experimental brain research*:1-13.

Liu, Peng, Dan Zou, Long Yi, Mingliang Chen, Yanxiang Gao, Rui Zhou, Qianyong Zhang, Yong Zhou, Jundong Zhu, and Ka Chen. 2015. "Quercetin ameliorates hypobaric hypoxia-induced memory impairment through mitochondrial and neuron function adaptation via the PGC-1α pathway." *Restorative neurology and neuroscience* no. 33 (2):143-157.

Liu, Xiaoming, Zhijun Zhang, Zhuqiang Cheng, Jie Zhang, Shuangshuang Xu, Hongjun Liu, Hongbin Jia, and Yi Jin. 2016. "Spinal heme oxygenase-1 (HO-1) exerts antinociceptive effects against neuropathic pain in a mouse model of L5 spinal nerve ligation." *Pain medicine* no. 17 (2):220-229.

Livak, Kenneth J, and Thomas D Schmittgen. 2001. "Analysis of relative gene expression data using real-time quantitative PCR and the $2^{-\Delta\Delta CT}$ method." *methods* no. 25 (4):402-408.

Lu, Xiaofeng, Lili Ma, Lingfei Ruan, Yan Kong, Haiwei Mou, Zhijie Zhang, Zhijun Wang, Ji Ming Wang, and Yingying Le. 2010. "Resveratrol differentially modulates inflammatory responses of microglia and astrocytes." *Journal of neuroinflammation* no. 7 (1):46.

Lucas, Sian-Marie, Nancy J Rothwell, and Rosemary M Gibson. 2006. "The role of inflammation in CNS injury and disease." *British journal of pharmacology* no. 147 (S1).

Maezawa, Izumi, and Lee-Way Jin. 2010. "Rett syndrome microglia damage dendrites and synapses by the elevated release of glutamate." *Journal of Neuroscience* no. 30 (15):5346-5356.

Maezawa, Izumi, Susan Swanberg, Danielle Harvey, Janine M LaSalle, and Lee-Way Jin. 2009. "Rett syndrome astrocytes are abnormal and spread MeCP2 deficiency through gap junctions." *Journal of Neuroscience* no. 29 (16):5051-5061.

Malatesta, Paolo, Michael A Hack, Eva Hartfuss, Helmut Kettenmann, Wolfgang Klinkert, Frank Kirchhoff, and Magdalena Götz. 2003. "Neuronal or glial progeny: regional differences in radial glia fate." *Neuron* no. 37 (5):751-764.

Malatesta, Paolo, Eva Hartfuss, and M Gotz. 2000. "Isolation of radial glial cells by fluorescent-activated cell sorting reveals a neuronal lineage." *Development* no. 127 (24):5253-5263.

Malmeström, C, BA Andersson, S Haghighi, and J Lycke. 2006. "IL-6 and CCL2 levels in CSF are associated with the clinical course of MS: implications for their possible immunopathogenic roles." *Journal of neuroimmunology* no. 175 (1):176-182.

Mann, John Douglas, Keturah R Faurot, Beth MacIntosh, Olafur S Palsson, Chirayath M Suchindran, Susan Ann Gaylord, Chanee Lynch, Angela Johnston, Kristen Maiden, and David A Barrow. 2018. "A sixteen-week three-armed, randomized, controlled trial investigating clinical and biochemical effects of targeted alterations in dietary linoleic acid and n-3 EPA+ DHA in adults with episodic migraine: Study protocol." *Prostaglandins, Leukotrienes and Essential Fatty Acids (PLEFA)* no. 128:41-52.

Maragakis, Nicholas J, and Jeffrey D Rothstein. 2006a. "Mechanisms of disease: astrocytes in neurodegenerative disease." *Nature clinical practice Neurology* no. 2 (12):679-689.

Maragakis, Nicholas J, and Jeffrey D Rothstein. 2006b. "Mechanisms of disease: astrocytes in neurodegenerative disease." *Nature Reviews Neurology* no. 2 (12):679.

Marchetto, Maria CN, Cassiano Carromeu, Allan Acab, Diana Yu, Gene W Yeo, Yangling Mu, Gong Chen, Fred H Gage, and Alysson R Muotri. 2010. "A model for neural development and treatment of Rett syndrome using human induced pluripotent stem cells." *Cell* no. 143 (4):527-539.

Marinelli, Carla, Rosa Di Liddo, Laura Facci, Thomas Bertalot, Maria Teresa Conconi, Morena Zusso, Stephen D Skaper, and Pietro Giusti. 2015. "Ligand engagement of Toll-like receptors regulates their expression in cortical microglia and astrocytes." *Journal of neuroinflammation* no. 12 (1):244.

Matthias, Katja, Frank Kirchhoff, Gerald Seifert, Kerstin Hüttmann, Marina Matyash, Helmut Kettenmann, and Christian Steinhäuser. 2003. "Segregated expression of AMPA-type glutamate receptors and glutamate transporters defines distinct astrocyte populations in the mouse hippocampus." *Journal of Neuroscience* no. 23 (5):1750-1758.

McGahon, BM, DSD Martin, DF Horrobin, and MA Lynch. 1999. "Age-related changes in synaptic function: analysis of the effect of dietary supplementation with ω-3 fatty acids." *Neuroscience* no. 94 (1):305-314.

McKhann, Guy M, Raimondo D'Ambrosio, and Damir Janigro. 1997. "Heterogeneity of astrocyte resting membrane potentials and intercellular coupling revealed by whole-cell and gramicidin-perforated patch recordings from cultured neocortical and hippocampal slice astrocytes." *Journal of Neuroscience* no. 17 (18):6850-6863.

Mehta, Vineet, Arun Parashar, and Malairaman Udayabanu. 2017. "Quercetin prevents chronic unpredictable stress induced behavioral dysfunction in mice by alleviating hippocampal oxidative and inflammatory stress." *Physiology & behavior* no. 171:69-78.

Merrill, JE, and IS Chen. 1991. "HIV-1, macrophages, glial cells, and cytokines in AIDS nervous system disease." *The FASEB journal* no. 5 (10):2391-2397.

Miller, ROBERT H, and MARTIN C Raff. 1984. "Fibrous and protoplasmic astrocytes are biochemically and developmentally distinct." *Journal of Neuroscience* no. 4 (2):585-592.

Mironov, SL, E Skorova, N Hartelt, LA Mironova, Mazahir T Hasan, and Sebastian Kügler. 2009. "Remodelling of the respiratory network in a mouse model of Rett syndrome depends on brain-derived neurotrophic factor regulated slow calcium buffering." *The Journal of physiology* no. 587 (11):2473-2485.

Miyamoto, Naoya, Hiroto Izumi, Rie Miyamoto, Hiroyuki Kondo, Akihiko Tawara, Yasuyuki Sasaguri, and Kimitoshi Kohno. 2011. "Quercetin induces the expression of peroxiredoxins 3 and 5 via the Nrf2/NRF1 transcription pathway." *Investigative ophthalmology & visual science* no. 52 (2):1055-1063.

Mnatsakanyan, Nelli, Gisela Beutner, George A Porter, Kambiz N Alavian, and Elizabeth A Jonas. 2017. "Physiological roles of the mitochondrial permeability transition pore." *Journal of bioenergetics and biomembranes* no. 49 (1):13-25.

Molofsky, Anna V, Robert Krenick, Erik Ullian, Hui-hsin Tsai, Benjamin Deneen, William D Richardson, Ben A Barres, and David H Rowitch. 2012. "Astrocytes and disease: a neurodevelopmental perspective." *Genes & development* no. 26 (9):891-907.

Moloudizargari, Milad, Esmaeil Mortaz, Mohammad Hossein Asghari, Ian M Adcock, Frank A Redegeld, and Johan Garssen. 2018. "Effects of the polyunsaturated fatty acids, EPA and DHA, on hematological malignancies: a systematic review." *Oncotarget* no. 9 (14):11858.

Moon, Jiyoung, Hyun-Ju Do, Oh Yoen Kim, and Min-Jeong Shin. 2013. "Antiobesity effects of quercetin-rich onion peel extract on the differentiation of 3T3-L1 preadipocytes and the adipogenesis in high fat-fed rats." *Food and chemical toxicology* no. 58:347-354.

Mori, Trevor A, Richard J Woodman, Valerie Burke, Ian B Puddey, Kevin D Croft, and Lawrence J Beilin. 2003. "Effect of eicosapentaenoic acid and docosahexaenoic acid on oxidative stress and inflammatory markers in treated-hypertensive type 2 diabetic subjects." *Free radical biology and medicine* no. 35 (7):772-781.

Mozaffarian, Dariush, and Jason HY Wu. 2012. "(n-3) Fatty Acids and Cardiovascular Health: Are Effects of EPA and DHA Shared or Complementary?–3." *The Journal of nutrition* no. 142 (3):614S-625S.

Mrvová, Nataša, Martin Škandík, Marcela Kuniaková, and Lucia Račková. 2015. "Modulation of BV-2 microglia functions by novel quercetin pivaloyl ester." *Neurochemistry international* no. 90:246-254.

Mukherjee, Pranab K, Victor L Marcheselli, Charles N Serhan, and Nicolas G Bazan. 2004. "Neuroprotectin D1: a docosahexaenoic acid-derived docosatriene protects human retinal pigment epithelial cells from oxidative stress." *Proceedings of the National Academy of Sciences of the United States of America* no. 101 (22):8491-8496.

Muroyama, Yuko, Yuko Fujiwara, Stuart H Orkin, and David H Rowitch. 2005. "Specification of astrocytes by bHLH protein SCL in a restricted region of the neural tube." *Nature* no. 438 (7066):360.

Myers, Robert R, W Marie Campana, and Veronica I Shubayev. 2006. "The role of neuroinflammation in neuropathic pain: mechanisms and therapeutic targets." *Drug discovery today* no. 11 (1-2):8-20.

Naeimi, Reza, Saeideh Baradaran, Manouchehr Ashrafpour, Ali Akbar Moghadamnia, and Maryam Ghasemi-Kasman. 2018. "Querectin improves myelin repair of optic chiasm in lyolecithin-induced focal demyelination model." *Biomedicine & Pharmacotherapy* no. 101:485-493.

Nagayama, Masao, Kiyoshi Niwa, Tomiko Nagayama, M Elizabeth Ross, and Costantino Iadecola. 1999. "The cyclooxygenase-2 inhibitor NS-398 ameliorates ischemic brain injury in wild-type mice but not in mice with deletion of the inducible nitric oxide synthase gene." *Journal of Cerebral Blood Flow & Metabolism* no. 19 (11):1213-1219.

Nakano, Yousuke, Eriko Furube, Shoko Morita, Akio Wanaka, Toshihiro Nakashima, and Seiji Miyata. 2015. "Astrocytic TLR4 expression and LPS-induced nuclear translocation of STAT3 in the sensory circumventricular organs of adult mouse brain." *Journal of neuroimmunology* no. 278:144-158.

Nan, Xinsheng, Huck-Hui Ng, Colin A Johnson, Carol D Laherty, Bryan M Turner, Robert N Eisenman, and Adrian Bird. 1998. "Transcriptional repression by the methyl-CpG-binding protein MeCP2 involves a histone deacetylase complex." *Nature* no. 393 (6683):386-389.

Narayanan, Bhagavathi A, Narayanan K Narayanan, and Bandaru S Reddy. 2001. "Docosahexaenoic acid regulated genes and transcription factors inducing apoptosis in human colon cancer cells." *International journal of oncology* no. 19 (6):1255-1262.

Nguyen, Minh Vu Chuong, Christy A Felice, Fang Du, Matthew V Covey, John K Robinson, Gail Mandel, and Nurit Ballas. 2013. "Oligodendrocyte lineage cells contribute unique features to Rett syndrome neuropathology." *Journal of Neuroscience* no. 33 (48):18764-18774.

Nicholls, David G. 2005. "Mitochondria and calcium signaling." *Cell calcium* no. 38 (3-4):311-317.

Nicholls, David G. 2006. "Simultaneous monitoring of ionophore-and inhibitor-mediated plasma and mitochondrial membrane potential changes in cultured neurons." *Journal of Biological Chemistry* no. 281 (21):14864-14874.

Noctor, Stephen C, Alexander C Flint, Tamily A Weissman, Ryan S Dammerman, and Arnold R Kriegstein. 2001. "Neurons derived from radial glial cells establish radial units in neocortex." *Nature* no. 409 (6821):714.

Noctor, Stephen C, Verónica Martínez-Cerdeño, Lidija Ivic, and Arnold R Kriegstein. 2004. "Cortical neurons arise in symmetric and asymmetric division zones and migrate through specific phases." *Nature neuroscience* no. 7 (2):136.

O'Shea, Karen M, Ramzi J Khairallah, Genevieve C Sparagna, Wenhong Xu, Peter A Hecker, Isabelle Robillard-Frayne, Christine Des Rosiers, Tibor Kristian, Robert C Murphy, and Gary Fiskum. 2009. "Dietary ω-3 fatty acids alter cardiac mitochondrial phospholipid composition and delay Ca2+-induced permeability transition." *Journal of molecular and cellular cardiology* no. 47 (6):819-827.

Ouyang, Yi-Bing, Ludmila A Voloboueva, Li-Jun Xu, and Rona G Giffard. 2007. "Selective dysfunction of hippocampal CA1 astrocytes contributes to delayed neuronal damage after transient forebrain ischemia." *Journal of Neuroscience* no. 27 (16):4253-4260.

Paradies, Giuseppe, Giuseppe Petrosillo, Valeria Paradies, and Francesca M Ruggiero. 2011. "Mitochondrial dysfunction in brain aging: role of oxidative stress and cardiolipin." *Neurochemistry international* no. 58 (4):447-457.

Pardo, Carlos A, Diana L Vargas, and Andrew W Zimmerman. 2005. "Immunity, neuroglia and neuroinflammation in autism." *International review of psychiatry* no. 17 (6):485-495.

Parikh, Zalak S, Ashutosh Tripathi, and Prakash P Pillai. 2017. "Differential Regulation of MeCP2 Phosphorylation by Laminin in Oligodendrocytes." *Journal of Molecular Neuroscience* no. 62 (3-4):309-317.

Pecorelli, Alessandra, Carlo Cervellati, Alessio Cortelazzo, Franco Cervellati, Claudia Sticozzi, Cristiana Mirasole, Roberto Guerranti, Alessandro Trentini, Lello Zolla, and Vinno Savelli. 2016. "Proteomic analysis of 4-hydroxynonenal and nitrotyrosine modified proteins in RTT fibroblasts." *The international journal of biochemistry & cell biology* no. 81:236-245.

Pecorelli, Alessandra, Guido Leoni, Franco Cervellati, Raffaella Canali, Cinzia Signorini, Silvia Leoncini, Alessio Cortelazzo, Claudio De Felice, Lucia Ciccoli, and Joussef Hayek. 2013. "Genes related to mitochondrial functions, protein degradation, and chromatin folding are differentially expressed in lymphomonocytes of Rett syndrome patients." *Mediators of inflammation* no. 2013.

Penalva, Rebeca, Carlos J González-Navarro, Carlos Gamazo, Irene Esparza, and Juan M Irache. 2017. "Zein nanoparticles for oral delivery of quercetin: Pharmacokinetic studies and preventive anti-inflammatory effects in a mouse model of endotoxemia." *Nanomedicine: Nanotechnology, Biology and Medicine* no. 13 (1):103-110.

Penkowa, Milena, Torben Moos, Javier Carrasco, Hanne Hadberg, Amalia Molinero, Horst Bluethmann, and Juan Hidalgo. 1999. "Strongly compromised inflammatory response to brain injury in interleukin-6-deficient mice." *Glia* no. 25 (4):343-357.

Perry, Seth W, John P Norman, Justin Barbieri, Edward B Brown, and Harris A Gelbard. 2011. "Mitochondrial membrane potential probes and the proton gradient: a practical usage guide." *Biotechniques* no. 50 (2):98.

Peyta, Laure, Kathleen Jarnouen, Michelle Pinault, Cyrille Guimaraes, Jean-Paul Pais de Barros, Stephan Chevalier, Jean-François Dumas, François Maillot, Grant M Hatch, and Pascal Loyer. 2016. "Reduced cardiolipin content decreases respiratory chain capacities and

increases ATP synthesis yield in the human HepaRG cells." *Biochimica et Biophysica Acta (BBA)-Bioenergetics* no. 1857 (4):443-453.

Pfeiffer, Kathy, Vishal Gohil, Rosemary A Stuart, Carola Hunte, Ulrich Brandt, Miriam L Greenberg, and Hermann Schägger. 2003. "Cardiolipin stabilizes respiratory chain supercomplexes." *Journal of biological chemistry* no. 278 (52):52873-52880.

Pfeuffer, M, A Auinger, U Bley, I Kraus-Stojanowic, C Laue, P Winkler, CE Rüfer, J Frank, C Bösch-Saadatmandi, and G Rimbach. 2013. "Effect of quercetin on traits of the metabolic syndrome, endothelial function and inflammation in men with different APOE isoforms." *Nutrition, Metabolism and Cardiovascular Diseases* no. 23 (5):403-409.

Pieczenik, Steve R, and John Neustadt. 2007. "Mitochondrial dysfunction and molecular pathways of disease." *Experimental and molecular pathology* no. 83 (1):84-92.

Pirttimaki, Tiina M, and H Rheinallt Parri. 2013. "Astrocyte plasticity: implications for synaptic and neuronal activity." *The Neuroscientist* no. 19 (6):604-615.

Pointer, Caitlin B, and Andis Klegeris. 2017. "Cardiolipin in central nervous system physiology and pathology." *Cellular and molecular neurobiology* no. 37 (7):1161-1172.

Privat, A, and P Rataboul. 2007. "Astrocytes Development, morphology, and regional specialization of astrocytes."

Qiu, Linan, Yuju Luo, and Xiaojuan Chen. 2018. "Quercetin attenuates mitochondrial dysfunction and biogenesis via upregulated AMPK/SIRT1 signaling pathway in OA rats." *Biomedicine & Pharmacotherapy* no. 103:1585-1591.

Raff, MC, ER Abney, Jim Cohen, Ronald Lindsay, and Mark Noble. 1983. "Two types of astrocytes in cultures of developing rat white matter: differences in morphology, surface gangliosides, and growth characteristics." *Journal of Neuroscience* no. 3 (6):1289-1300.

Rakic, Pasko. 2003. "Developmental and evolutionary adaptations of cortical radial glia." *Cerebral cortex* no. 13 (6):541-549.

Reichenbach, Andreas, Amin Derouiche, and Frank Kirchhoff. 2010. "Morphology and dynamics of perisynaptic glia." *Brain research reviews* no. 63 (1-2):11-25.

Renier, Genevieve, Emil Skamene, Juan DeSanctis, and Danuta Radzioch. 1993. "Dietary n-3 polyunsaturated fatty acids prevent the development of atherosclerotic lesions in mice. Modulation of macrophage secretory activities." *Arteriosclerosis, Thrombosis, and Vascular Biology* no. 13 (10):1515-1524.

Rezvan, Neda, Ashraf Moini, Leila Janani, Kazem Mohammad, Ahmad Saedisomeolia, Mona Nourbakhsh, Sattar Gorgani-Firuzjaee, Maryam Mazaherioun, and Mohammad J Hosseinzadeh-Attar. 2017. "Effects of quercetin on adiponectin-mediated insulin sensitivity in polycystic ovary syndrome: a randomized placebo-controlled double-blind clinical trial." *Hormone and Metabolic Research* no. 49 (02):115-121.

Ricchelli, Fernanda, Justina Šileikytė, and Paolo Bernardi. 2011. "Shedding light on the mitochondrial permeability transition." *Biochimica et Biophysica Acta (BBA)-Bioenergetics* no. 1807 (5):482-490.

Rinwa, P, and A Kumar. 2013. "Quercetin suppress microglial neuroinflammatory response and induce antidepressent-like effect in olfactory bulbectomized rats." *Neuroscience* no. 255:86-98.

Rivest, Serge. 2009. "Regulation of innate immune responses in the brain." *Nature Reviews Immunology* no. 9 (6):429-439.

Robinson, DR. 1989. "Eicosanoids, inflammation, and anti-inflammatory drugs." *Clinical and experimental rheumatology* no. 7:S155-61.

Robinson, Dwight R, Masaharu Urakaze, Riyun Huang, Hirofumi Taki, Eiji Sugiyama, Christopher T Knoell, LiLian Xu, Edward TH Yeh, and Philip E Auron. 1996. "Dietary marine lipids suppress continuous expression of interleukin-1β gene transcription1." *Lipids* no. 31 (1):S23-S31.

Rossi, Daniela. 2015. "Astrocyte physiopathology: at the crossroads of intercellular networking, inflammation and cell death." *Progress in neurobiology* no. 130:86-120.

Rothwell, Nancy J, and Giamal N Luheshi. 2000. "Interleukin 1 in the brain: biology, pathology and therapeutic target." *Trends in neurosciences* no. 23 (12):618-625.

Ruiz, Pedro A, Annett Braune, Gabriele Hölzlwimmer, Leticia Quintanilla-Fend, and Dirk Haller. 2007. "Quercetin inhibits TNF-induced NF-κB transcription factor recruitment to proinflammatory gene promoters in murine intestinal epithelial cells." *The Journal of nutrition* no. 137 (5):1208-1215.

Russell, Fraser D, and Corinna S Bürgin-Maunder. 2012. "Distinguishing health benefits of eicosapentaenoic and docosahexaenoic acids." *Marine drugs* no. 10 (11):2535-2559.

S Ambegaokar, Surendra, and Dennis L Kolson. 2014. "Heme oxygenase-1 dysregulation in the brain: implications for HIVassociated neurocognitive disorders." *Current HIV research* no. 12 (3):174-188.

Salem, Norman, Burton Litman, Hee-Yong Kim, and Klaus Gawrisch. 2001. "Mechanisms of action of docosahexaenoic acid in the nervous system." *Lipids* no. 36 (9):945-959.

Sandhir, Rajat, and Arpit Mehrotra. 2013. "Quercetin supplementation is effective in improving mitochondrial dysfunctions induced by 3-nitropropionic acid: implications in Huntington's disease." *Biochimica et Biophysica Acta (BBA)-Molecular Basis of Disease* no. 1832 (3):421-430.

Santos-Galindo, María, Estefanía Acaz-Fonseca, María J Bellini, and Luis M Garcia-Segura. 2011. "Sex differences in the inflammatory response of primary astrocytes to lipopolysaccharide." *Biology of sex differences* no. 2 (1):7.

Sarchielli, Erica, Annamaria Morelli, Giulia Guarnieri, Maria Iorizzi, and Eleonora Sgambati. 2018. "Neuroprotective effects of quercetin 4'-O-β-d-diglucoside on human striatal precursor cells in nutrient deprivation condition." *Acta histochemica*.

Saywell, Véronique, Angele Viola, Sylviane Confort-Gouny, Yann Le Fur, Laurent Villard, and Patrick J Cozzone. 2006. "Brain magnetic resonance study of Mecp2 deletion effects on anatomy and metabolism." *Biochemical and biophysical research communications* no. 340 (3):776-783.

Scarpulla, Richard C. 2006. "Nuclear control of respiratory gene expression in mammalian cells." *Journal of cellular biochemistry* no. 97 (4):673-683.

Scarpulla, Richard C. 2008. "Nuclear control of respiratory chain expression by nuclear respiratory factors and PGC-1-related coactivator." *Annals of the New York Academy of Sciences* no. 1147 (1):321-334.

Scheffler, Immo E. 2002. "Metabolic pathways inside mitochondria." *Mitochondria*:246-272.

Schildge, Sebastian, Christian Bohrer, Kristina Beck, and Christian Schachtrup. 2013. "Isolation and culture of mouse cortical astrocytes." *Journal of visualized experiments: JoVE* (71).

Schitine, Clarissa, Luciana Nogaroli, Marcos R Costa, and Cecilia Hedin-Pereira. 2015. "Astrocyte heterogeneity in the brain: from development to disease." *Frontiers in cellular neuroscience* no. 9:76.

Schmechel, Donald E, and Pasko Rakic. 1979. "A Golgi study of radial glial cells in developing monkey telencephalon: morphogenesis and transformation into astrocytes." *Anatomy and embryology* no. 156 (2):115-152.

Schmidt, Oliver I, Manfred Infanger, Christoph E Heyde, Wolfgang Ertel, and Philip F Stahel. 2004. "The role of neuroinflammation in traumatic brain injury." *European Journal of Trauma* no. 30 (3):135-149.

Schültke, E, H Kamencic, VM Skihar, R Griebel, and B Juurlink. 2010. "Quercetin in an animal model of spinal cord compression injury: correlation of treatment duration with recovery of motor function." *Spinal cord* no. 48 (2):112-117.

Selmaj, Krzysztof W. 1992. The role of cytokines in inflammatory conditions of the central nervous system. Paper read at Seminars in Neuroscience.

Selmaj, KW, M Farooq, WT Norton, CS Raine, and CF Brosnan. 1990. "Proliferation of astrocytes in vitro in response to cytokines. A primary role for tumor necrosis factor." *The Journal of Immunology* no. 144 (1):129-135.

Seo, Jeongmin, Rola Barhoumi, Arthur E Johnson, Joanne R Lupton, and Robert S Chapkin. 2006. "Docosahexaenoic acid selectively inhibits plasma membrane targeting of lipidated proteins." *The FASEB journal* no. 20 (6):770-772.

Seo, Yun-Soo, Ok-Hwa Kang, Sung-Bae Kim, Su-Hyun Mun, Da-Hye Kang, Da-Wun Yang, Jang-Gi Choi, Young-Mi Lee, Dae-Kil Kang, and Ho-Seog Lee. 2015. "Quercetin prevents adipogenesis by regulation of transcriptional factors and lipases in OP9 cells." *International journal of molecular medicine* no. 35 (6):1779-1785.

Sergeeva, Marina, Mikhail Strokin, and Georg Reiser. 2005. "Regulation of intracellular calcium levels by polyunsaturated fatty acids, arachidonic acid and docosahexaenoic acid, in astrocytes: possible involvement of phospholipase A2." *Reproduction Nutrition Development* no. 45 (5):633-646.

Shaikh, Saame Raza, and David A Brown. 2013. "Models of plasma membrane organization can be applied to mitochondrial membranes to target human health and disease with polyunsaturated fatty acids." *Prostaglandins, Leukotrienes and Essential Fatty Acids* no. 88 (1):21-25.

Sharma, Kedarlal, Juhi Singh, Emma E Frost, and Prakash P Pillai. 2018. "MeCP2 overexpression inhibits proliferation, migration and invasion of C6 glioma by modulating ERK signaling and gene expression." *Neuroscience letters* no. 674:42-48.

Sharma, Kedarlal, Juhi Singh, Prakash P Pillai, and Emma E Frost. 2015. "Involvement of MeCP2 in regulation of myelin-related gene expression in cultured rat oligodendrocytes." *Journal of Molecular Neuroscience* no. 57 (2):176-184.

Sharma, Rakhi, Marie-Therese Fischer, Jan Bauer, Paul A Felts, Kenneth J Smith, Tatsuro Misu, Kazuo Fujihara, Monika Bradl, and Hans Lassmann. 2010. "Inflammation induced by innate immunity in the central nervous system leads to primary astrocyte dysfunction followed by demyelination." *Acta neuropathologica* no. 120 (2):223-236.

Sharma, Vivek, Mamata Mishra, Soumya Ghosh, Richa Tewari, Anirban Basu, Pankaj Seth, and Ellora Sen. 2007. "Modulation of interleukin-1β mediated inflammatory response in human astrocytes by flavonoids: implications in neuroprotection." *Brain research bulletin* no. 73 (1):55-63.

Shen, Shing-Chuan, Woan-Ruoh Lee, Hui-Yi Lin, Ho-Chun Huang, Ching-Huai Ko, Ling-Ling Yang, and Yen-Chou Chen. 2002. "In vitro and in vivo inhibitory activities of rutin, wogonin, and quercetin on lipopolysaccharide-induced nitric oxide and prostaglandin E 2 production." *European journal of pharmacology* no. 446 (1):187-194.

Shrivastava, Ravi, and Gareth W John. 2006. "Treatment of aphthous stomatitis with topical Alchemilla vulgaris in glycerine." *Clinical drug investigation* no. 26 (10):567-573.

Shulyakova, Natalya, Ana C Andreazza, Linda R Mills, and James H Eubanks. 2017. "Mitochondrial dysfunction in the pathogenesis of Rett syndrome: implications for mitochondria-targeted therapies." *Frontiers in cellular neuroscience* no. 11:58.

Shulyakova, Natalya O. 2016. *Studies of Mitochondrial Dysfunction in Models of Rett Syndrome*, University of Toronto (Canada).

Sierra, Cristina, María Antonia Vilaseca, Nuria Brandi, Rafael Artuch, Aurea Mira, Manuel Nieto, and Mercè Pineda. 2001. "Oxidative stress in Rett syndrome." *Brain and Development* no. 23:S236-S239.

Signorini, Cinzia, Silvia Leoncini, Claudio De Felice, Alessandra Pecorelli, Ilaria Meloni, Francesca Ariani, Francesca Mari, Sonia Amabile, Eugenio Paccagnini, and Mariangela Gentile. 2014. "Redox imbalance and morphological changes in skin fibroblasts in typical Rett syndrome." *Oxidative medicine and cellular longevity* no. 2014.

Silva, Bruno, Paulo J Oliveira, Alberto Dias, and JOÃO O Malva. 2008. "Quercetin, kaempferol and biapigenin fromhypericum perforatum are neuroprotective against excitotoxic insults." *Neurotoxicity research* no. 13 (3-4):265-279.

Singh, Juhi, Kedarlal Sharma, and Prakash P Pillai. 2017. "PDGFR inhibition mediated intracellular signalling in C6 glioma growth and migration: role of ERK and ROCK pathway." *Cytotechnology*:1-13.

Sirey, Tamara M, and Chris P Ponting. 2016. "Insights into the post-transcriptional regulation of the mitochondrial electron transport chain." *Biochemical Society Transactions* no. 44 (5):1491-1498.

Skoff, Robert P, and Pamela E Knapp. 1991. "Division of astroblasts and oligodendroblasts in postnatal rodent brain: evidence for separate astrocyte and oligodendrocyte lineages." *Glia* no. 4 (2):165-174.

Smith, Deidre J, Jerome Sarris, Nathan Dowling, Manjula O'Connor, and Chee H Ng. 2018. "Adjunctive low-dose docosahexaenoic acid (DHA) for major depression: An open-label pilot trial." *Nutritional neuroscience* no. 21 (3):224-228.

Sofroniew, Michael V. 2015. "Astrocyte barriers to neurotoxic inflammation." *Nature Reviews Neuroscience* no. 16 (5):249.

Sofroniew, Michael V, and Harry V Vinters. 2010. "Astrocytes: biology and pathology." *Acta neuropathologica* no. 119 (1):7-35.

Song, Yongxing, Juan Liu, Feng Zhang, Jianqiao Zhang, Tongkun Shi, and Zhongyou Zeng. 2013. "Antioxidant effect of quercetin against acute spinal cord injury in rats and its correlation with the p38MAPK/iNOS signaling pathway." *Life sciences* no. 92 (24):1215-1221.

Spencer, Jeremy PE, Catherine Rice-Evans, and Robert J Williams. 2003. "Modulation of pro-survival Akt/protein kinase B and ERK1/2 signaling cascades by quercetin and its in vivo metabolites underlie their action on neuronal viability." *Journal of Biological Chemistry* no. 278 (37):34783-34793.

Spinazzi, Marco, Alberto Casarin, Vanessa Pertegato, Leonardo Salviati, and Corrado Angelini. 2012. "Assessment of mitochondrial respiratory chain enzymatic activities on tissues and cultured cells." *Nature protocols* no. 7 (6):1235.

Stanley, William C, Ramzi J Khairallah, and Erinne R Dabkowski. 2012. "Update on lipids and mitochondrial function: impact of dietary n-3 polyunsaturated fatty acids." *Current opinion in clinical nutrition and metabolic care* no. 15 (2):122.

Steinhäser, Christian, Ronald Jabs, and Helmut Kettenmann. 1994. "Properties of GABA and glutamate responses in identified glial cells of the mouse hippocampal slice." *Hippocampus* no. 4 (1):19-35.

Stillwell, William, Laura J Jenski, F Thomas Crump, and William Ehringer. 1997. "Effect of docosahexaenoic acid on mouse mitochondrial membrane properties." *Lipids* no. 32 (5):497-506.

Streck, Emilio L, Cinara L Gonçalves, Camila B Furlanetto, Giselli Scaini, Felipe Dal-Pizzol, and João Quevedo. 2014. "Mitochondria and the central nervous system: searching for a pathophysiological basis of psychiatric disorders." *Revista Brasileira de Psiquiatria* no. 36 (2):156-167.

Suganthy, Natarajan, Kasi Pandima Devi, Seyed Fazel Nabavi, Nady Braidy, and Seyed Mohammad Nabavi. 2016. "Bioactive effects of quercetin in the central nervous system: Focusing on the mechanisms of actions." *Biomedicine & Pharmacotherapy* no. 84:892-908.

Sullivan, E Madison, Edward Ross Pennington, Genevieve C Sparagna, Maria J Torres, P Darrell Neufer, Mitchel Harris, James Washington, Ethan J Anderson, Tonya N Zeczycki, and David A Brown. 2018. "Docosahexaenoic acid lowers cardiac mitochondrial enzyme

activity by replacing linoleic acid in the phospholipidome." *Journal of Biological Chemistry* no. 293 (2):466-483.

Sun, Grace Y, Zihong Chen, Kimberly J Jasmer, Dennis Y Chuang, Zezong Gu, Mark Hannink, and Agnes Simonyi. 2015. "Quercetin attenuates inflammatory responses in BV-2 microglial cells: role of MAPKs on the Nrf2 pathway and induction of heme oxygenase-1." *PloS one* no. 10 (10):e0141509.

Swiss, Victoria A., Tung Nguyen, Jason Dugas, Adiljan Ibrahim, Ben Barres, Ioannis P. Androulakis, and Patrizia Casaccia. "Identification of a gene regulatory network necessary for the initiation of oligodendrocyte differentiation." *PloS one* 6, no. 4 (2011): e18088.

Taanman, Jan-Willem. 1999. "The mitochondrial genome: structure, transcription, translation and replication." *Biochimica et Biophysica Acta (BBA)-Bioenergetics* no. 1410 (2):103-123.

Takashima, Koji, Miyoko Matsushima, Katsunori Hashimoto, Haruka Nose, Mitsuo Sato, Naozumi Hashimoto, Yoshinori Hasegawa, and Tsutomu Kawabe. 2014. "Protective effects of intratracheally administered quercetin on lipopolysaccharide-induced acute lung injury." *Respiratory research* no. 15 (1):150.

Tang, Tso-Hao, Chiung-Tan Chang, Hsiu-Jen Wang, Joshua D Erickson, Rhett A Reichard, Alexis G Martin, Erica K Shannon, Adam L Martin, Yue-Wern Huang, and Robert S Aronstam. 2013. "Oxidative stress disruption of receptor-mediated calcium signaling mechanisms." *Journal of biomedical science* no. 20 (1):48.

Tansey, Malú G, and Tony Wyss-Coray. 2008. "Cytokines in CNS inflammation and disease." In *Central nervous system diseases and inflammation*, 59-106. Springer.

Tarassishin, Leonid, Hyeon-Sook Suh, and Sunhee C Lee. 2014. "LPS and IL-1 differentially activate mouse and human astrocytes: Role of CD14." *Glia* no. 62 (6):999-1013.

Teng, Kim-Tiu, Chee-Yan Chang, Lin Faun Chang, and Kalanithi Nesaretnam. 2014. "Modulation of obesity-induced inflammation by dietary fats: mechanisms and clinical evidence." *Nutrition journal* no. 13 (1):12.

Testa, Gabriella, Paola Gamba, Ulya Badilli, Simona Gargiulo, Marco Maina, Tina Guina, Simone Calfapietra, Fiorella Biasi, Roberta Cavalli, and Giuseppe Poli. 2014. "Loading into nanoparticles improves quercetin's efficacy in preventing neuroinflammation induced by oxysterols." *PLoS One* no. 9 (5):e96795.

Ting, Hsiu-Chi, Yu-Jen Chao, and Yuan-Hao Howard Hsu. 2015. "Polyunsaturated fatty acids incorporation into cardiolipin in H9c2 cardiac myoblast." *The Journal of nutritional biochemistry* no. 26 (7):769-775.

Torquato, Pierangelo, Danilo Giusepponi, Anna Alisi, Roberta Galarini, Desirée Bartolini, Marta Piroddi, Anna Crudele, Gabriele Cruciani, Valerio Nobili, and Francesco Galli. 2018. "Arachidonic acid to docosahexaenoic acid ratio (AA/DHA): a strong clinical outcome predictor in DHA-based nutritional therapy of pediatric NASH." *Free Radical Biology and Medicine* no. 120:S122.

Trentin, AG, and M Alvarez-Silva. 1998. "Thyroid hormone regulates protein expression in C6 glioma cells." *Brazilian journal of medical and biological research* no. 31 (10):1281-1284.

Vaidyanathan, VV, KV Raja Rao, and PS Sastry. 1994. "Regulation of diacylglycerol kinase in rat brain membranes by docosahexaenoic acid." *Neuroscience letters* no. 179 (1-2):171-174.

Valenti, Daniela, Lidia de Bari, Daniele Vigli, Enza Lacivita, Marcello Leopoldo, Giovanni Laviola, Rosa Anna Vacca, and Bianca De Filippis. 2017. "Stimulation of the brain serotonin receptor 7 rescues mitochondrial dysfunction in female mice from two models of Rett syndrome." *Neuropharmacology* no. 121:79-88.

Van Everbroeck, B, E Dewulf, Ph Pals, U Lübke, J-J Martin, and P Cras. 2002. "The role of cytokines, astrocytes, microglia and apoptosis in Creutzfeldt-Jakob disease." *Neurobiology of aging* no. 23 (1):59-64.

Van Wagoner, Nicholas J, and Etty N Benveniste. 1999. "Interleukin-6 expression and regulation in astrocytes." *Journal of neuroimmunology* no. 100 (1):124-139.

Van Woensel, Matthias, Nathalie Wauthoz, Rémi Rosière, Karim Amighi, Véronique Mathieu, Florence Lefranc, Stefaan W Van Gool, and Steven De Vleeschouwer. 2013. "Formulations for intranasal delivery of pharmacological agents to combat brain disease: a new opportunity to tackle GBM?" *Cancers* no. 5 (3):1020-1048.

Vargas-Restrepo, Felipe, Angélica María Sabogal-Guáqueta, and Gloria Patricia Cardona-Gómez. 2018a. "La quercetina disminuye la inflamación en la region CA1 del hipocampo en un modelo triple transgénico para la enfermedad de Alzheimer." *Biomédica* no. 38.

Vargas-Restrepo, Felipe, Angélica María Sabogal-Guáqueta, and Gloria Patricia Cardona-Gómez. 2018b. "Quercetin ameliorates inflammation in CA1 hippocampal region in aged triple transgenic Alzheimers disease mice model." *Biomédica Instituto Nacional de Salud* no. 38:69-76.

Vaughan, Roger A, Randi Garcia-Smith, Marco Bisoffi, Carole A Conn, and Kristina A Trujillo. 2012. "Conjugated linoleic acid or omega 3 fatty acids increase mitochondrial biosynthesis and metabolism in skeletal muscle cells." *Lipids in health and disease* no. 11 (1):142.

Verkhratsky, Alexei, José J Rodríguez, and Vladimir Parpura. 2012. "Calcium signalling in astroglia." *Molecular and cellular endocrinology* no. 353 (1-2):45-56.

Verlengia, Rozangela, Renata Gorjão, Carla Cristine Kanunfre, Silvana Bordin, Thais Martins De Lima, Edgair Fernandes Martins, and Rui Curi. 2004. "Comparative effects of eicosapentaenoic acid and docosahexaenoic acid on proliferation, cytokine production, and pleiotropic gene expression in Jurkat cells." *The Journal of nutritional biochemistry* no. 15 (11):657-665.

Verlengia, Rozangela, Renata Gorjão, Carla Cristine Kanunfre, Silvana Bordin, Thais Martins de Lima, Edgair Fernandes Martins, Philip Newsholme, and Rui Curi. 2004. "Effects of EPA and DHA on proliferation, cytokine production, and gene expression in Raji cells." *Lipids* no. 39 (9):857-864.

Vora, Parvez, Raena Mina, Michael Namaka, and Emma E Frost. 2010. "A novel transcriptional regulator of myelin gene expression: implications for neurodevelopmental disorders." *Neuroreport* no. 21 (14):917-921.

Vreugdenhil, M, C Bruehl, RA Voskuyl, JX Kang, A Leaf, and WJ Wadman. 1996. "Polyunsaturated fatty acids modulate sodium and calcium currents in CA1 neurons." *Proceedings of the National Academy of Sciences* no. 93 (22):12559-12563.

Wallraff, Anke, Benjamin Odermatt, Klaus Willecke, and Christian Steinhäuser. 2004. "Distinct types of astroglial cells in the hippocampus differ in gap junction coupling." *Glia* no. 48 (1):36-43.

Wang, Dongmei, Jianlong Zhao, Sanqiang Li, Guomin Shen, and Shu Hu. 2018. "Quercetin attenuates domoic acid-induced cognitive deficits in mice." *Nutritional neuroscience* no. 21 (2):123-131.

Wang, Doris D, and Angélique Bordey. 2008. "The astrocyte odyssey." *Progress in neurobiology* no. 86 (4):342-367.

Wang, Hong, and James A Joseph. 1999. "Quantifying cellular oxidative stress by dichlorofluorescein assay using microplate reader1." *Free Radical Biology and Medicine* no. 27 (5-6):612-616.

Wang, X-Q, R-Q Yao, X Liu, J-J Huang, D-S Qi, and L-H Yang. 2011. "Quercetin protects oligodendrocyte precursor cells from oxygen/glucose deprivation injury in vitro via the activation of the PI3K/Akt signaling pathway." *Brain research bulletin* no. 86 (3):277-284.

Wang, Yeyang, Wenjun Li, Mingsen Wang, Chuangxin Lin, Guitao Li, Xiaozhong Zhou, Junnan Luo, and Dadi Jin. 2018. "Quercetin reduces neural tissue damage and promotes astrocyte activation after spinal cord injury in rats." *Journal of cellular biochemistry* no. 119 (2):2298-2306.

Watkins, Steven M, Lynne C Carter, and J Bruce German. 1998. "Docosahexaenoic acid accumulates in cardiolipin and enhances HT-29 cell oxidant production." *Journal of lipid research* no. 39 (8):1583-1588.

Wellhauser, Leigh, and Denise D Belsham. 2014. "Activation of the omega-3 fatty acid receptor GPR120 mediates anti-inflammatory actions in immortalized hypothalamic neurons." *Journal of neuroinflammation* no. 11 (1):60.

Williams, Robert J, Jeremy PE Spencer, and Catherine Rice-Evans. 2004. "Flavonoids: antioxidants or signalling molecules?" *Free radical biology and medicine* no. 36 (7):838-849.

Wu, Aiguo, Zhe Ying, and Fernando Gomez-Pinilla. 2004. "Dietary omega-3 fatty acids normalize BDNF levels, reduce oxidative damage, and counteract learning disability after traumatic brain injury in rats." *Journal of neurotrauma* no. 21 (10):1457-1467.

Wu, Aiguo, Zhe Ying, and Fernando Gomez-Pinilla. 2008. "Docosahexaenoic acid dietary supplementation enhances the effects of exercise on synaptic plasticity and cognition." *Neuroscience* no. 155 (3):751-759.

Wu, Aiguo, Zhe Ying, and Fernando Gomez-Pinilla. 2011. "The salutary effects of DHA dietary supplementation on cognition, neuroplasticity, and membrane homeostasis after brain trauma." *Journal of neurotrauma* no. 28 (10):2113-2122.

Wu, Sheng-Nan, Hung-Ting Chiang, Ai-Yu Shen, and Yuk-Keung Lo. 2003. "Differential effects of quercetin, a natural polyphenolic flavonoid, on L-Type calcium current in pituitary tumor (GH3) cells and neuronal NG108-15 cells." *Journal of cellular physiology* no. 195 (2):298-308.

Wu, Xiuxiang, Xuebin Qu, Qiang Zhang, Fuxing Dong, Hongli Yu, Chen Yan, Dashi Qi, Meng Wang, Xuan Liu, and Ruiqin Yao. 2014. "Quercetin promotes proliferation and differentiation of oligodendrocyte precursor cells after oxygen/glucose deprivation-induced injury." *Cellular and molecular neurobiology* no. 34 (3):463-471.

Xu, Wenyi, Fengzhong Wang, Zhongsheng Yu, and Fengjiao Xin. 2016. "Epigenetics and cellular metabolism." *Genetics & epigenetics* no. 8:GEG. S32160.

Yabe, Takeshi, Tomomi Sanagi, Joan P. Schwartz, and Haruki Yamada. "Pigment epithelium-derived factor induces pro-inflammatory genes in neonatal astrocytes through activation of NF-κB and CREB." *Glia* 50, no. 3 (2005): 223-234.

Yamanaka, M, A Tsuchida, T Nakagawa, T Nonomura, M Ono-Kishino, E Sugaru, H Noguchi, and M Taiji. 2007. "Brain-derived neurotrophic factor enhances glucose utilization in peripheral tissues of diabetic mice." *Diabetes, Obesity and Metabolism* no. 9 (1):59-64.

Yang, Jihyeon, Chu-Sook Kim, Thai Hien Tu, Min-Seon Kim, Tsuyoshi Goto, Teruo Kawada, Myung-Sook Choi, Taesun Park, Mi-Kyung Sung, and Jong Won Yun. 2017. "Quercetin Protects Obesity-Induced Hypothalamic Inflammation by Reducing Microglia-Mediated Inflammatory Responses via HO-1 Induction." *Nutrients* no. 9 (7):650.

Yang, Yi, Xiaokang Liu, Ting Wu, Wenping Zhang, Jianhong Shu, Yulong He, and Shao-Jun Tang. 2018. "Quercetin attenuates AZT-induced neuroinflammation in the CNS." *Scientific reports* no. 8 (1):6194.

Yasui, Dag H, Sailaja Peddada, Mark C Bieda, Roxanne O Vallero, Amber Hogart, Raman P Nagarajan, Karen N Thatcher, Peggy J Farnham, and Janine M LaSalle. 2007. "Integrated epigenomic analyses of neuronal MeCP2 reveal a role for long-range interaction with active genes." *Proceedings of the National Academy of Sciences* no. 104 (49):19416-19421.

Yasui, Dag H, Huichun Xu, Keith W Dunaway, Janine M LaSalle, Lee-Way Jin, and Izumi Maezawa. 2013. "MeCP2 modulates gene expression pathways in astrocytes." *Molecular autism* no. 4 (1):3.

Yeganeh, Pantea Rahmani, Jade Leahy, Schohraya Spahis, Natalie Patey, Yves Desjardins, Denis Roy, Edgard Delvin, Carole Garofalo, Jean-Philippe Leduc-Gaudet, and David St-Pierre.

2018. "Apple peel polyphenols reduce mitochondrial dysfunction in mice with DSS-induced ulcerative colitis." *The Journal of nutritional biochemistry* no. 57:56-66.

Yeh, Tu-Hsueh, Da Yong Lee, Scott M Gianino, and David H Gutmann. 2009. "Microarray analyses reveal regional astrocyte heterogeneity with implications for neurofibromatosis type 1 (NF1)-regulated glial proliferation." *Glia* no. 57 (11):1239-1249.

Yin, Wei, Ahmed E. Badr, George Mychaskiw, and John H. Zhang. "Down regulation of COX-2 is involved in hyperbaric oxygen treatment in a rat transient focal cerebral ischemia model." *Brain research* 926, no. 1-2 (2002): 165-171.

Yong, VW, FP Yong, Andre Olivier, Yves Robitaille, and JP Antel. 1990. "Morphologic heterogeneity of human adult astrocytes in culture: Correlation with HLA-DR expression." *Journal of neuroscience research* no. 27 (4):678-688.

Youdim, Kuresh A, M Zeeshan Qaiser, David J Begley, Catherine A Rice-Evans, and N Joan Abbott. 2004. "Flavonoid permeability across an in situ model of the blood–brain barrier." *Free Radical Biology and Medicine* no. 36 (5):592-604.

Young, Juan I, Eugene P Hong, John C Castle, Juan Crespo-Barreto, Aaron B Bowman, Matthew F Rose, Dongcheul Kang, Ron Richman, Jason M Johnson, and Susan Berget. 2005. "Regulation of RNA splicing by the methylation-dependent transcriptional repressor methyl-CpG binding protein 2." *Proceedings of the National Academy of Sciences of the United States of America* no. 102 (49):17551-17558.

Yousef, Mokhtar I, Sahar AM Omar, Marwa I El-Guendi, and Laila A Abdelmegid. 2010. "Potential protective effects of quercetin and curcumin on paracetamol-induced histological changes, oxidative stress, impaired liver and kidney functions and haematotoxicity in rat." *Food and Chemical Toxicology* no. 48 (11):3246-3261.

Zhang, Lanqiu, Zhuoran Zhu, Zhoubin Tan, Hongyan Luo, Xinwu Hu, and Yan Li. 2017. "Docosahexaenoic acid induces glial cell-line derived neurotrophic factor release in C6 glioma cells: Implications of antidepressant effects for docosahexaenoic acid." *Biochemical and biophysical research communications* no. 491 (4):1112-1117.

Zhang, Ye, and Ben A Barres. 2010. "Astrocyte heterogeneity: an underappreciated topic in neurobiology." *Current opinion in neurobiology* no. 20 (5):588-594.

Zhang, Zai Jun, Lorita Chi Veng Cheang, Mei Wei Wang, and Simon Ming-Yuen Lee. 2011. "Quercetin exerts a neuroprotective effect through inhibition of the iNOS/NO system and pro-inflammation gene expression in PC12 cells and in zebrafish." *International journal of molecular medicine* no. 27 (2):195-203.

Zhao, Guixiang, Terry D Etherton, Keith R Martin, John P Vanden Heuvel, Peter J Gillies, Sheila G West, and Penny M Kris-Etherton. 2005. "Anti-inflammatory effects of polyunsaturated fatty acids in THP-1 cells." *Biochemical and biophysical research communications* no. 336 (3):909-917.

Zhivotovsky, Boris, and Sten Orrenius. 2011. "Calcium and cell death mechanisms: a perspective from the cell death community." *Cell calcium* no. 50 (3):211-221.