

BIBLIOGRAPHY

- Adams, C. W. M., Poston, R. N., & Buk, S. J. (1989). Pathology, histochemistry and immunocytochemistry of lesions in acute multiple sclerosis. *Journal of the neurological sciences*, 92(2), 291-306.
- Aggarwal, S., Yurlova, L., & Simons, M. (2011). Central nervous system myelin: structure, synthesis and assembly. *Trends in cell biology*, 21(10), 585-593.
- Allen, N. J., & Barres, B. A. (2009). Neuroscience: glia—more than just brain glue. *Nature*, 457(7230), 675-677.
- Altman, J., & Bayer, S. A. (1983). The development of the rat spinal cord. *Advances in Anatomy, Embryology, and Cell Biology*, 85, 1-164.
- Amir RE, Van den Veyver IB, Schultz R, Malicki DM, Tran CQ, Dahle EJ, Philippi A, Timar L, Percy AK, Motil KJ, et al.(2000). Influence of mutation type and X chromosome inactivation on Rett syndrome phenotypes. *Ann Neurol* 47:670–679.
- Andoh-Noda, T., Akamatsu, W., Miyake, K., Matsumoto, T., Yamaguchi, R., Sanosaka, T., ... & Kurosawa, H. (2015). Differentiation of multipotent neural stem cells derived from Rett syndrome patients is biased toward the astrocytic lineage. *Molecular brain*, 8(1), 1.
- Araque, A., & Navarrete, M. (2010). Glial cells in neuronal network function. *Philosophical Transactions of the Royal Society of London B: Biological Sciences*, 365(1551), 2375-2381.
- Armstrong, R. C., Harvath, L., & Dubois- Dalcq, M. E. (1990). Type 1 astrocytes and oligodendrocyte- type 2 astrocyte glial progenitors migrate toward distinct molecules. *Journal of neuroscience research*, 27(3), 400-407.
- Armstrong, R., Harvath, L., & DUBOIS- DALCQ, M. O. N. I. Q. U. E. (1991). Astrocytes and O- 2A Progenitors Migrate Toward Distinct Molecules in a Microchemotaxis Chamber. *Annals of the New York Academy of Sciences*, 633(1), 520-522.
- Asai, A., Miyagi, Y., Sugiyama, A., Gamanuma, M., Hong, S. I., Takamoto, S., ... & Kuchino, Y. (1994). Negative effects of wild-type p53 and s-Myc on cellular growth and tumorigenicity of glioma cells. *Journal of neuro-oncology*, 19(3), 259-268.
- Astrom, K. E., Mancall, E. L. and Richardson, E. P., Jr.(1958)Progressive multifocal leukoencephalopathy; a hitherto unrecognized complication of chronic lymphatic leukaemia and Hodgkin's disease.*Brain* 81,93-111.

- Ateeq, B., Unterberger, A., Szyf, M., & Rabbani, S. A. (2008). Pharmacological inhibition of DNA methylation induces proinvasive and prometastatic genes in vitro and in vivo. *Neoplasia*, 10(3), 266-278.
- Ausió, J., de Paz, A. M., & Esteller, M. (2014). MeCP2: the long trip from a chromatin protein to neurological disorders. *Trends in molecular medicine*, 20(9), 487-498.
- Bakhti, M., Aggarwal, S., & Simons, M. (2014). Myelin architecture: zippering membranes tightly together. *Cellular and molecular life sciences*, 71(7), 1265-1277.
- Ballas, N., Grunseich, C., Lu, D. D., Speh, J. C., & Mandel, G. (2005). REST and its corepressors mediate plasticity of neuronal gene chromatin throughout neurogenesis. *Cell*, 121(4), 645-57.
- Ballas, N., Lioy, D., Grunseich, C., & Mandel, G. (2009). Non-cell autonomous influence of MeCP2-deficient glia on neuronal dendritic morphology. *Nature Neuroscience*, 12(3), 311-317.
- Baron, W., & Shattil, S. J. (2002). The oligodendrocyte precursor mitogen PDGF stimulates proliferation by activation of $\alpha v \beta 3$ integrins. *The EMBO journal*, 21(8), 1957-1966.
- Baron, W., Metz, B., Bansal, R., Hoekstra, D., & de Vries, H. (2000). PDGF and FGF-2 signaling in oligodendrocyte progenitor cells: regulation of proliferation and differentiation by multiple intracellular signaling pathways. *Molecular and Cellular Neuroscience*, 15(3), 314-329.
- Barres, B. A. (2008). The mystery and magic of glia: a perspective on their roles in health and disease. *Neuron*, 60(3), 430-440.
- Barres, B. A., & Raff, M. C. (1993). Proliferation of oligodendrocyte precursor cells depends on electrical activity in axons. *Nature*, 361(6409), 258.
- Barres, B. A., & Raff, M. C. (1994). Control of oligodendrocyte number in the developing rat optic nerve. *Neuron*, 12(5), 935-942.
- Barres, B. A., Hart, I. K., Coles, H. S. R., Burne, J. F., Voyvodic, J. T., Richardson, W. D., & Raff, M. C. (1992). Cell death and control of cell survival in the oligodendrocyte lineage. *Cell*, 70(1), 31-46.
- Barres, B. A., Lazar, M. A., & Raff, M. C. (1994a). A novel role for thyroid hormone, glucocorticoids and retinoic acid in timing oligodendrocyte development. *Development*, 120(5), 1097-1108.

- Barres, B. A., Raff, M. C., Gaese, F., & Bartke, I. (1994b). A crucial role for neurotrophin-3 in oligodendrocyte development. *Nature*, 367(6461), 371.
- Barth, R. F., & Kaur, B. (2009). Rat brain tumor models in experimental neuro-oncology: the C6, 9L, T9, RG2, F98, BT4C, RT-2 and CNS-1 gliomas. *Journal of neuro-oncology*, 94(3), 299-312.
- Bauer, N. G., Richter- Landsberg, C., & Ffrench- Constant, C. (2009). Role of the oligodendroglial cytoskeleton in differentiation and myelination. *Glia*, 57(16), 1691-1705.
- Baumann, N., & Pham-Dinh, D. (2001). Biology of oligodendrocyte and myelin in the mammalian central nervous system. *Physiological Reviews*, 81(2), 871–927.
- Bedogni, F., Rossi, R. L., Galli, F., Cobolli Gigli, C., Gandaglia, A., Kilstrup-Nielsen, C., & Landsberger, N. (2014). Rett syndrome and the urge of novel approaches to study MeCP2 functions and mechanisms of action. *Neuroscience and Biobehavioral Reviews*, 1–15.
- Ben-Shachar, S., Chahrour, M., Thaller, C., Shaw, C. A., & Zoghbi, H. Y. (2009). Mouse models of MeCP2 disorders share gene expression changes in the cerebellum and hypothalamus. *Human Molecular Genetics*, 18(13), 2431–2442.
- Bercury, K. K., & Macklin, W. B. (2015). Dynamics and mechanisms of CNS myelination. *Developmental cell*, 32(4), 447-458.
- Berger, J. R., & Houff, S. (2009). Opportunistic infections and other risks with newer multiple sclerosis therapies. *Annals of neurology*, 65(4), 367-377.
- Berger, J. R., & Major, E. O. (1999). Progressive multifocal leukoencephalopathy. In *Seminars in neurology* (Vol. 19, No. 02, pp. 193-200). © 1999 by Thieme Medical Publishers, Inc..
- Bezman, L., Moser, A. B., Raymond, G. V., Rinaldo, P., Watkins, P. A., Smith, K. D., ... & Moser, H. W. (2001). Adrenoleukodystrophy: incidence, new mutation rate, and results of extended family screening. *Annals of neurology*, 49(4), 512-517.
- Bienvenu, T., & Chelly, J. (2006). Molecular genetics of Rett syndrome: when DNA methylation goes unrecognized. *Nature Reviews Genetics*, 7(6), 415-426.
- Birling, M. C., Roussel, G., Nussbaum, F., & Nussbaum, J. L. (1993). Biochemical and immunohistochemical studies with specific polyclonal antibodies directed against bovine myelin/oligodendrocyte glycoprotein. *Neurochemical research*, 18(8), 937-945.
- Bogdanović, O., & Veenstra, G. J. C. (2009). DNA methylation and methyl-CpG binding proteins: developmental requirements and function. *Chromosoma*, 118(5), 549-565.

- Boggs, J. M. (2006). Myelin basic protein: a multifunctional protein. *Cellular and Molecular Life Sciences CMLS*, 63(17), 1945-1961.
- Boison, D., & Stoffel, W. (1989). Myelin-deficient rat: a point mutation in exon III (A----C, Thr75----Pro) of the myelin proteolipid protein causes dysmyelination and oligodendrocyte death. *The EMBO journal*, 8(11), 3295.
- Bondurand, N., Girard, M., Pingault, V., Lemort, N., Dubourg, O., & Goossens, M. (2001). Human Connexin 32, a gap junction protein altered in the X-linked form of Charcot–Marie–Tooth disease, is directly regulated by the transcription factor SOX10. *Human molecular genetics*, 10(24), 2783-2795.
- Bongarzone, E. R., Jacobs, E., Schonmann, V., Kampf, K., Campagnoni, C. W., & Campagnoni, A. T. (2001). Differential sensitivity in the survival of oligodendrocyte cell lines to overexpression of myelin proteolipid protein gene products. *Journal of neuroscience research*, 65(6), 485-492.
- Bottenstein, J. E., & Sato, G. H. (1979). Growth of a rat neuroblastoma cell line in serum-free supplemented medium. *Proceedings of the National Academy of Sciences*, 76(1), 514-517.
- Bradl, M., & Lassmann, H. (2010). Oligodendrocytes: biology and pathology. *Acta neuropathologica*, 119(1), 37-53.
- Braunschweig, D., Simcox, T., Samaco, R. C., & LaSalle, J. M. (2004). X-Chromosome inactivation ratios affect wild-type MeCP2 expression within mosaic Rett syndrome and Mecp2^{-/+} mouse brain. *Human molecular genetics*, 13(12), 1275-1286.
- Brinkmann, B. G., Agarwal, A., Sereda, M. W., Garratt, A. N., Müller, T., Wende, H., ... & Radyushkin, K. (2008). Neuregulin-1/ErbB signaling serves distinct functions in myelination of the peripheral and central nervous system. *Neuron*, 59(4), 581-595.
- Brody, B. A., Kinney, H. C., Kloman, A. S., & Gilles, F. H. (1987). Sequence of central nervous system myelination in human infancy. I. An autopsy study of myelination. *Journal of Neuropathology & Experimental Neurology*, 46(3), 283-301.
- Bujalka, H., Koenning, M., Jackson, S., Perreau, V. M., Pope, B., Hay, C. M., ... & Srinivasan, R. (2013). MYRF is a membrane-associated transcription factor that autoproteolytically cleaves to directly activate myelin genes. *PLoS biology*, 11(8), e1001625.
- Burgess, R., Jenkins, R., & Zhang, Z. (2008). Epigenetic changes in gliomas. *Cancer biology & therapy*, 7(9), 1326-1334.

- Buser, A. M., Schmid, D., Kern, F., Erne, B., Lazzati, T., & Schaeren- Wiemers, N. (2009). The myelin protein MAL affects peripheral nerve myelination: a new player influencing p75 neurotrophin receptor expression. *European Journal of Neuroscience*, 29(12), 2276-2290.
- Cai J, Qi Y, Hu X, Tan M, Liu Z, Zhang J, Li Q, Sander M, Qiu M (2005) Generation of oligodendrocyte precursor cells from mouse dorsal spinal cord independent of Nkx6 regulation and Shh signaling. *Neuron* 45:41-53.
- Calver, A. R., Hall, A. C., Yu, W. P., Walsh, F. S., Heath, J. K., Betsholtz, C., & Richardson, W. D. (1998). Oligodendrocyte population dynamics and the role of PDGF in vivo. *Neuron*, 20(5), 869-882.
- Campagnoni, A. T., & Skoff, R. P. (2001). The pathobiology of myelin mutants reveal novel biological functions of the MBP and PLP genes. *Brain Pathology*, 11(1), 74-91.
- Carson, M. J., Behringer, R. R., Brinster, R. L., & McMorris, F. A. (1993). Insulin-like growth factor I increases brain growth and central nervous system myelination in tTransgenic mice. *Neuron*, 10(4), 729-740.
- Cartier, N., Lewis, C. A., Zhang, R., & Rossi, F. M. (2014). The role of microglia in human disease: therapeutic tool or target?. *Acta neuropathologica*, 128(3), 363-380.
- Casaccia- Bonnefil, P., & Liu, A. (2003). Relationship between cell cycle molecules and onset of oligodendrocyte differentiation. *Journal of neuroscience research*, 72(1), 1-11.
- Chahrour, M., Jung, S., Shaw, C., Zhou, X., Wong, S. T. C., Qin, J., & Zoghbi, H. Y. (2008). MeCP2, a key contributor to neurological disease, activates and represses transcription. *Science (New York, N.Y.)*, 320(5880), 1224–1229.
- Chang, Q., Khare, G., Dani, V., Nelson, S., & Jaenisch, R. (2006). The Disease Progression of Mecp2 Mutant Mice Is Affected by the Level of BDNF Expression. *Neuron*, 49(3), 341–348.
- Chapleau, C. A., Calfa, G. D., Lane, M. C., Albertson, A. J., Larimore, J. L., Kudo, S., ... & Pozzo-Miller, L. (2009). Dendritic spine pathologies in hippocampal pyramidal neurons from Rett syndrome brain and after expression of Rett-associated MECP2 mutations. *Neurobiology of disease*, 35(2), 219-233
- Chen, L., Chen, K., Lavery, L. A., Baker, S. A., Shaw, C. A., Li, W., & Zoghbi, H. Y. (2015). MeCP2 binds to non-CG methylated DNA as neurons mature, influencing transcription and

- the timing of onset for Rett syndrome. *Proceedings of the National Academy of Sciences*, 112(17), 5509-5514..
- Chen, W., Chang, Q., Lin, Y., Meissner, A., West, A. E., Griffith, E. C., ... Greenberg, M. E. (2003). Derepression of BDNF transcription involves calcium-dependent phosphorylation of MeCP2. *Science(New York,N.Y.)*, 302(5646), 885–889.
- Chen, Y., Balasubramanian, V., Peng, J., Hurlock, E. C., Tallquist, M., Li, J., & Lu, Q. R. (2007). Isolation and culture of rat and mouse oligodendrocyte precursor cells. *Nature Protocols*, 2(5), 1044–1051.
- Chen, Y., Wu, H., Wang, S., Koito, H., Li, J., Ye, F., ... & Trapp, B. D. (2009). The oligodendrocyte-specific G protein–coupled receptor GPR17 is a cell-intrinsic timer of myelination. *Nature neuroscience*, 12(11), 1398-1406.
- Cheng, P., Lin, Y., Chen, Y., Lee, Y., & Tai, C. (2011). Interplay between SIN3A and STAT3 mediates chromatin conformational changes and GFAP expression during cellular differentiation. *PloS One*, 6(7), 1–15.
- Chernoff, G. F. (1981). Shiverer: an autosomal recessive mutant mouse with myelin deficiency. *Journal of Heredity*, 72(2), 128-128.
- Chong, S. C., Rosenberg, S. S., Fancy, S. P., Zhao, C., Shen, Y. A. A., Hahn, A. T., ... & Rowitch, D. H. (2012). Neurite outgrowth inhibitor Nogo-A establishes spatial segregation and extent of oligodendrocyte myelination. *Proceedings of the National Academy of Sciences*, 109(4), 1299-1304.
- Chow, E., Mottahedeh, J., Prins, M., Ridder, W., Nusinowitz, S., & Bronstein, J. M. (2005). Disrupted compaction of CNS myelin in an OSP/Claudin-11 and PLP/DM20 double knockout mouse. *Molecular and Cellular Neuroscience*, 29(3), 405-413.
- Coffey, J. C., & McDermott, K. W. (1997). The regional distribution of myelin oligodendrocyte glycoprotein (MOG) in the developing rat CNS: an in vivo immunohistochemical study. *Journal of neurocytology*, 26(3), 149-161.
- Cohen, S., Gabel, H. W., Hemberg, M., Hutchinson, A. N., Sadacca, L. A., Ebert, D. H., ... & Greenberg, M. E. (2011). Genome-wide activity-dependent MeCP2 phosphorylation regulates nervous system development and function. *Neuron*, 72(1), 72-85.

- Colantuoni, C., Jeon, O., & Hyder, K. (2001). Gene expression profiling in postmortem Rett Syndrome brain: differential gene expression and patient classification. *Neurobiology of Disease*, 8(5), 847–865.
- Coman, I., Barbin, G., Charles, P., Zalc, B., & Lubetzki, C. (2005). Axonal signals in central nervous system myelination, demyelination and remyelination. *Journal of the neurological sciences*, 233(1), 67-71
- Cronk, J. C., Derecki, N. C., Ji, E., Xu, Y., Lampano, A. E., Smirnov, I., ... & Wolf, Y. (2015). Methyl-CpG binding protein 2 regulates microglia and macrophage gene expression in response to inflammatory stimuli. *Immunity*,42(4), 679-691.
- Dai, X., Lercher, L. D., Clinton, P. M., Du, Y., Livingston, D. L., Vieira, C., ... & Dreyfus, C. F. (2003). The trophic role of oligodendrocytes in the basal forebrain. *The Journal of neuroscience*, 23(13), 5846-5853.
- Dastidar, S. G., Bardai, F. H., Ma, C., Price, V., Rawat, V., Verma, P., ... Mello, S. R. D. (2012). Isoform-Specific Toxicity of Mecp2 in Postmitotic Neurons : Suppression of Neurotoxicity by FoxG1. *Journal of Neuroscience*, 32(8), 2846–2855.
- Davies, J. E., & Miller, R. H. (2001). Local sonic hedgehog signaling regulates oligodendrocyte precursor appearance in multiple ventricular zone domains in the chick metencephalon. *Developmental biology*, 233(2), 513-525.
- Dawson, M. R., Polito, A., Levine, J. M., & Reynolds, R. (2003). NG2-expressing glial progenitor cells: an abundant and widespread population of cycling cells in the adult rat CNS. *Molecular and Cellular Neuroscience*, 24(2), 476-488.
- De Aguiar, C. B. M., Garcez, R. C., Alvarez-Silva, M., & Trentin, A. G. (2002). Undersulfation of proteoglycans and proteins alter C6 glioma cells proliferation, adhesion and extracellular matrix organization. *International journal of developmental neuroscience*, 20(7), 563-571.
- De Bellard, M. E., Tang, S., Mukhopadhyay, G., Shen, Y. J., & Filbin, M. T. (1996). Myelin-associated glycoprotein inhibits axonal regeneration from a variety of neurons via interaction with a sialoglycoprotein. *Molecular and Cellular Neuroscience*, 7(2), 89-101.
- De Castro, F. (2003). Chemotropic molecules: guides for axonal path finding and cell migration during CNS development. *Physiology*, 18(3), 130-136.
- Delarasse, C., Daubas, P., Mars, L. T., Vizler, C., Litztenburger, T., Iglesias, A., ... & Dimitri, D. (2003). Myelin/oligodendrocyte glycoprotein–deficient (MOG-deficient) mice reveal lack

- of immune tolerance to MOG in wild-type mice. *The Journal of clinical investigation*, 112(4), 544-553.
- Delépine, C., Meziane, H., Nectoux, J., Opitz, M., Smith, A. B., Ballatore, C., ... & Dahan, M. (2016). Altered microtubule dynamics and vesicular transport in mouse and human MeCP2-deficient astrocytes. *Human molecular genetics*, 25(1), 146-157.
- Delépine, C., Nectoux, J., Letourneur, F., Baud, V., Chelly, J., Billuart, P., & Bienvenu, T. (2015). Astrocyte Transcriptome from the Mecp2308-Truncated Mouse Model of Rett Syndrome. *Neuromolecular medicine*, 17(4), 353-363.
- Demerens, C., Stankoff, B., Logak, M., Anglade, P., Allinquant, B., Couraud, F., ... & Lubetzki, C. (1996). Induction of myelination in the central nervous system by electrical activity. *Proceedings of the National Academy of Sciences*, 93(18), 9887-9892.
- Derecki, N. C., Cronk, J. C., Lu, Z., Xu, E., Abbott, S. B. G., Guyenet, P. G., & Kipnis, J. (2012). Wild type microglia arrest pathology in a mouse model of Rett syndrome. *Nature*, 484(7392), 105–109.
- DeWald, L. E., Rodriguez, J. P., & Levine, J. M. (2011). The RE1 binding protein REST regulates oligodendrocyte differentiation. *The Journal of Neuroscience*, 31(9), 3470-3483.
- Díaz de León- Guerrero, S., Pedraza- Alva, G., & Pérez- Martínez, L. (2011). In sickness and in health: the role of methyl- CpG binding protein 2 in the central nervous system. *European Journal of Neuroscience*, 33(9), 1563-1574.
- Dudley, D. T., Pang, L., Decker, S. J., Bridges, A. J., & Saltiel, A. R. (1995). A synthetic inhibitor of the mitogen-activated protein kinase cascade. *Proceedings of the National Academy of Sciences*, 92(17), 7686-7689.
- Durand, T., Felice, C. De, Signorini, C., Oger, C., Bultel-poncé, V., Guy, A., ... Hayek, J. (2013). Biochimie F 2 -Dihomo-isoprostanes and brain white matter damage in stage 1 Rett syndrome. *Biochimie*, 95(1), 86–90.
- Dyer, C. A. (2002). The structure and function of myelin: from inert membrane to perfusion pump. *Neurochemical research*, 27(11), 1279-1292.
- Ebert, D., Gabel, H., Robinson, N., Kastan, N., Hu, L., Cohen, S., ... Greenberg, M. (2013). Activity-dependent phosphorylation of MeCP2 threonine 308 regulates interaction with NCoR. *Nature*, 499(7458), 341–345.

- Ebner, S., Dunbar, M., & McKinnon, R. D. (2000). Distinct roles for PI3K in proliferation and survival of oligodendrocyte progenitor cells. *Journal of neuroscience research*, 62(3), 336-345.
- Eddleston, M., & Mucke, L. (1993). Molecular profile of reactive astrocytes implications for their role in neurologic disease. *Neuroscience*, 54(1), 15-36.
- Edgar, J. M., McLaughlin, M., Werner, H. B., McCulloch, M. C., Barrie, J. A., Brown, A., ... & Griffiths, I. R. (2009). Early ultrastructural defects of axons and axon–glia junctions in mice lacking expression of Cnp1. *Glia*, 57(16), 1815-1824.
- Egensperger, R., Maslim, J., Bisti, S., Holländer, H., & Stone, J. (1996). Fate of DNA from retinal cells dying during development: uptake by microglia and macroglia (Müller cells). *Developmental Brain Research*, 97(1), 1-8.
- Emery, B. (2010 a). Regulation of oligodendrocyte differentiation and myelination. *Science*, 330(6005), 779-782.
- Emery, B. (2010 b). Transcriptional and post-transcriptional control of CNS myelination. *Current opinion in neurobiology*, 20(5), 601-607.
- Emery, B., & Lu, Q. R. (2015). Transcriptional and epigenetic regulation of oligodendrocyte development and myelination in the central nervous system. *Cold Spring Harbor perspectives in biology*, 7(9), a020461.
- Emery, B., Agalliu, D., Cahoy, J. D., Watkins, T. A., Dugas, J. C., Mulinyawe, S. B., ... & Barres, B. A. (2009). Myelin gene regulatory factor is a critical transcriptional regulator required for CNS myelination. *Cell*, 138(1), 172-185.
- Esteller, M. (2008). Epigenetics in cancer. *New England Journal of Medicine*, 358(11), 1148-1159.
- Fancy, S. P., Chan, J. R., Baranzini, S. E., Franklin, R. J., & Rowitch, D. H. (2011). Myelin regeneration: a recapitulation of development?. *Annual review of neuroscience*, 34, 21-43.
- Favata, M. F., Horiuchi, K. Y., Manos, E. J., Daulerio, A. J., Stradley, D. A., Feeser, W. S., ... & Copeland, R. A. (1998). Identification of a novel inhibitor of mitogen-activated protein kinase kinase. *Journal of Biological Chemistry*, 273(29), 18623-18632.
- Ferreira, A. C., Pinto, V., Mesquita, S., Novais, A. D. C., Sousa, J. C., Neves, M. C., ... & Marques, F. (2013). Lipocalin-2 is involved in emotional behaviors and cognitive function.

- Ferrer, I., Bernet, E., Soriano, E., Del Rio, T., & Fonseca, M. (1990). Naturally occurring cell death in the cerebral cortex of the rat and removal of dead cells by transitory phagocytes. *Neuroscience*, 39(2), 451-458.
- Fields RD (2008) White matter in learning, cognition and psychiatric disorders. *Trends Neurosci* 31:361-370.
- Fogarty M, Richardson WD, Kessaris N (2005) A subset of oligodendrocytes generated from radial glia in the dorsal spinal cord. *Development* 132:1951-1959.
- Fonkem, E., Lun, M., & Wong, E. T. (2011). Rare phenomenon of extracranial metastasis of glioblastoma. *Journal of Clinical Oncology*, 29(34), 4594-4595.
- Forlani, G., Giarda, E., Ala, U., Di Cunto, F., Salani, M., Tupler, R., ... Landsberger, N. (2010). The MeCP2/YY1 interaction regulates ANT1 expression at 4q35: novel hints for Rett syndrome pathogenesis. *Human Molecular Genetics*, 19(16), 3114–3123.
- Fouse, S. D., & Costello, J. F. (2009). Epigenetics of neurological cancers. *Future oncology*, 5(10), 1615-1629.
- Friday, B. B., Anderson, S. K., Buckner, J., Yu, C., Giannini, C., Geoffroy, F., ... & Jaeckle, K. (2011). Phase II trial of vorinostat in combination with bortezomib in recurrent glioblastoma: a north central cancer treatment group study. *Neuro-oncology*, 19(1), 198.
- Frost, E. E., Nielsen, J. A., Le, T. Q., & Armstrong, R. C. (2003). PDGF and FGF2 regulate oligodendrocyte progenitor responses to demyelination. *Developmental Neurobiology*, 54(3), 457-472.
- Frost, E. E., Zhou, Z., Krasnesky, K., & Armstrong, R. C. (2009). Initiation of oligodendrocyte progenitor cell migration by a PDGF-A activated extracellular regulated kinase (ERK) signaling pathway. *Neurochemical research*, 34(1), 169-181.
- Frost, E., Kiernan, B. W., & Faissner, A. (1996). Regulation of oligodendrocyte precursor migration by extracellular matrix: evidence for substrate-specific inhibition of migration by tenascin-C. *Developmental neuroscience*, 18(4), 266-273.
- Fruttiger, M., Karlsson, L., Hall, A. C., Abramsson, A., Calver, A. R., Bostrom, H., ... & Richardson, W. D. (1999). Defective oligodendrocyte development and severe hypomyelination in PDGF-A knockout mice. *Development*, 126(3), 457-467.

- Fu, H., Qi, Y., Tan, M., Cai, J., Takebayashi, H., Nakafuku, M., ... & Qiu, M. (2002). Dual origin of spinal oligodendrocyte progenitors and evidence for the cooperative role of Olig2 and Nkx2. 2 in the control of oligodendrocyte differentiation. *Development*, 129(3), 681-693.
- Fuchikami, M., Morinobu, S., Kurata, A., Yamamoto, S., & Yamawaki, S. (2009). 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(1), 73-82.
- Fulton, D., Paez, P. M., & Campagnoni, A. T. (2009). The multiple roles of myelin protein genes during the development of the oligodendrocyte. *ASN neuro*, 2(1), AN20090051.
- Fünfschilling, U., Supplie, L. M., Mahad, D., Boretius, S., Saab, A. S., Edgar, J., ... & Diaz, F. (2012). Glycolytic oligodendrocytes maintain myelin and long-term axonal integrity. *Nature*, 485(7399), 517-521.
- Gabarra-Niecko, V., Schaller, M. D., & Dunty, J. M. (2003). FAK regulates biological processes important for the pathogenesis of cancer. *Cancer and Metastasis Reviews*, 22(4), 359-374.
- Galanis, E., Jaeckle, K. A., Maurer, M. J., Reid, J. M., Ames, M. M., Hardwick, J. S., ... & Richon, V. M. (2009). Phase II trial of vorinostat in recurrent glioblastoma multiforme: a north central cancer treatment group study. *Journal of Clinical Oncology*, 27(12), 2052-2058.
- Garbern, J.Y. (2007) Pelizaeus-Merzbacher disease: Genetic and cellular pathogenesis. *Cell Mol Life Sci* 64, 50-65.
- Gard, A. L., & Pfeiffer, S. E. (1993). Glial cell mitogens bFGF and PDGF differentially regulate development of O4+ GalC-oligodendrocyte progenitors. *Developmental biology*, 159(2), 618-630.
- Garg, S. K., Lioy, D. T., Knopp, S. J., & Bissonnette, J. M. (2015). Conditional depletion of methyl-CpG-binding protein 2 in astrocytes depresses the hypercapnic ventilatory response in mice. *Journal of Applied Physiology*, 119(6), 670-676.
- Gencic, S., Abuelo, D., Ambler, M., & Hudson, L. D. (1989). Pelizaeus-Merzbacher disease: an X-linked neurologic disorder of myelin metabolism with a novel mutation in the gene encoding proteolipid protein. *American journal of human genetics*, 45(3), 435.
- Georgel, P. T. (2011). MeCP2: structure and function. *Biochemistry and Cell Biology*, 89(1), 1-11.

- Georgel, P. T., Horowitz-Scherer, R. A., Adkins, N., Woodcock, C. L., Wade, P. A., & Hansen, J. C. (2003). Chromatin compaction by human MeCP2 assembly of novel secondary chromatin structures in the absence of DNA methylation. *Journal of Biological Chemistry*, 278(34), 32181-32188.
- Géranton, S. M., Morenilla-Palao, C., & Hunt, S. P. (2007). A role for transcriptional repressor methyl-CpG-binding protein 2 and plasticity-related gene serum- and glucocorticoid-inducible kinase 1 in the induction of inflammatory pain states. *The Journal of Neuroscience : The Official Journal of the Society for Neuroscience*, 27(23), 6163–73.
- Ghiani, C. A., Ying, Z., Vellis, J. D., & Gomez-Pinilla, F. (2007). Exercise decreases myelin-associated glycoprotein expression in the spinal cord and positively modulates neuronal growth. *Glia*, 55(9), 966-975.
- Giedd, J. N. (2004). Structural magnetic resonance imaging of the adolescent brain. *Annals of the New York Academy of Sciences*, 1021(1), 77-85.
- Gieselmann, V., Zlotogora, J., Harris, A., Wenger, D. A., & Morris, C. P. (1994). Molecular genetics of metachromatic leukodystrophy. *Human mutation*, 4(4), 233-242.
- Ginhoux, F., Greter, M., Leboeuf, M., Nandi, S., See, P., Gokhan, S., ... & Samokhvalov, I. M. (2010). Fate mapping analysis reveals that adult microglia derive from primitive macrophages. *Science*, 330(6005), 841-845.
- Goddard, D. R., Berry, M., & Butt, A. M. (1999). In vivo actions of fibroblast growth factor-2 and insulin-like growth factor-I on oligodendrocyte development and myelination in the central nervous system. *Journal of neuroscience research*, 57(1), 74-85.
- Golan, N., Adamsky, K., Kartvelishvily, E., Brockschneider, D., Möbius, W., Spiegel, I., ... & Peles, E. (2008). Identification of Tmem10/Opalin as an oligodendrocyte enriched gene using expression profiling combined with genetic cell ablation. *Glia*, 56(11), 1176-1186.
- Gonzalez-Scarano, F., & Baltuch, G. (1999). Microglia as mediators of inflammatory and degenerative diseases. *Annual review of neuroscience*, 22(1), 219-240.
- Gordon, H. B., Letsou, A., & Bonkowsky, J. L. (2014, July). The leukodystrophies. In *Seminars in neurology* (Vol. 34, No. 03, pp. 312-320). Thieme Medical Publishers.
- Gow, A., Davies, C., Southwood, C. M., Frolenkov, G., Chrustowski, M., Ng, L., ... & Kachar, B. (2004). Deafness in Claudin 11-null mice reveals the critical contribution of basal cell tight junctions to stria vascularis function. *Journal of Neuroscience*, 24(32), 7051-7062.

- Gow, A., Southwood, C. M., & Lazzarini, R. A. (1998). Disrupted proteolipid protein trafficking results in oligodendrocyte apoptosis in an animal model of Pelizaeus-Merzbacher disease. *The Journal of cell biology*, 140(4), 925-934.
- Gow, A., Southwood, C. M., Li, J. S., Pariali, M., Riordan, G. P., Brodie, S. E., ... & Lazzarini, R. A. (1999). CNS myelin and sertoli cell tight junction strands are absent in Osp/claudin-11 null mice. *Cell*, 99(6), 649-659.
- Gräff, J., Kim, D., Dobbin, M. M., & Tsai, L. H. (2011). Epigenetic regulation of gene expression in physiological and pathological brain processes. *Physiological reviews*, 91(2), 603-649.
- Gravel, M., Peterson, J., Yong, V. W., Kottis, V., Trapp, B., & Braun, P. E. (1996). Overexpression of 2', 3'-cyclic nucleotide 3'-phosphodiesterase in transgenic mice alters oligodendrocyte development and produces aberrant myelination. *Molecular and Cellular Neuroscience*, 7(6), 453-466.
- Greener, M. (2015). Don't underestimate glial cells. *Progress in Neurology and Psychiatry*, 19(1), 5-8.
- Griffiths, I., Klugmann, M., Anderson, T., Yool, D., Thomson, C., Schwab, M. H., ... & Nave, K. A. (1998). Axonal swellings and degeneration in mice lacking the major proteolipid of myelin. *Science*, 280(5369), 1610-1613.
- Grobbs, B., De Deyn, P., & Slegers, H. (2002). Rat C6 glioma as experimental model system for the study of glioblastoma growth and invasion. *Cell and tissue research*, 310(3), 257-270.
- Gudz, T. I., Komuro, H., & Macklin, W. B. (2006). Glutamate stimulates oligodendrocyte progenitor migration mediated via an α v integrin/myelin proteolipid protein complex. *Journal of Neuroscience*, 26(9), 2458-2466.
- Gudz, T. I., Schneider, T. E., Haas, T. A., & Macklin, W. B. (2002). Myelin proteolipid protein forms a complex with integrins and may participate in integrin receptor signaling in oligodendrocytes. *Journal of Neuroscience*, 22(17), 7398-7407.
- Guy, J., Cheval, H., Selfridge, J., & Bird, A. (2011). The role of MeCP2 in the brain. *Annual review of cell and developmental biology*, 27, 631-652.
- Hagberg, B. (1971). Clinical aspects of globoid cell and metachromatic leukodystrophies. *Birth defects original article series*, 7(1), 103-112.

- Hagberg, B., Aicardi, J., Dias, K., & Ramos, O. (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*, 14(4), 471-479.
- Hair, L. S., Nuovo, G., Powers, J. M., Sisti, M. B., Britton, C. B., & Miller, J. R. (1992). Progressive multifocal leukoencephalopathy in patients with human immunodeficiency virus. *Human pathology*, 23(6), 663-667.
- Hansen, J. C., Ghosh, R. P., & Woodcock, C. L. (2010). Binding of the Rett syndrome protein, MeCP2, to methylated and unmethylated DNA and chromatin. *IUBMB Life*, 62(10), 732–8.
- Harikrishnan, K. N., Chow, M. Z., Baker, E. K., Pal, S., Bassal, S., Brasacchio, D., ... & El-Osta, A. (2005). Brahma links the SWI/SNF chromatin-remodeling complex with MeCP2-dependent transcriptional silencing. *Nature genetics*, 37(3), 254-264.
- Hartline, D. K. (2008). What is myelin?. *Neuron glia biology*, 4(02), 153-163.
- Hauser, S. L., & Oksenberg, J. R. (2006). The neurobiology of multiple sclerosis: genes, inflammation, and neurodegeneration. *Neuron*, 52(1), 61-76.
- Hayakawa, K., Pham, L. D. D., Som, A. T., Lee, B. J., Guo, S., Lo, E. H., & Arai, K. (2011). Vascular endothelial growth factor regulates the migration of oligodendrocyte precursor cells. *Journal of Neuroscience*, 31(29), 10666-10670.
- He, L., & Lu, Q. R. (2013). Coordinated control of oligodendrocyte development by extrinsic and intrinsic signaling cues. *Neuroscience bulletin*, 29(2), 129-143.
- He, Y., Dupree, J., Wang, J., Sandoval, J., Li, J., Liu, H., ... & Casaccia-Bonnel, P. (2007). The transcription factor Yin Yang 1 is essential for oligodendrocyte progenitor differentiation. *Neuron*, 55(2), 217-230.
- Heckman, L. D., Chahrour, M. H., & Zoghbi, H. Y. (2014). Rett-causing mutations reveal two domains critical for MeCP2 function and for toxicity in MECP2 duplication syndrome mice. *eLife*, (3), e02676. doi:10.7554/eLife.02676
- Hildebrand C, Remahl S, Persson H, Bjartmar C. 1993. Myelinated nerve fibres in the CNS. *Prog Neurobiol* 40: 319–384.
- Horike, S. I., Cai, S., Miyano, M., Cheng, J. F., & Kohwi-Shigematsu, T. (2005). Loss of silent-chromatin looping and impaired imprinting of DLX5 in Rett syndrome. *Nature genetics*, 37(1), 31-40.

- Hornig, J., Fröb, F., Vogl, M. R., Hermans-Borgmeyer, I., Tamm, E. R., & Wegner, M. (2013). The transcription factors Sox10 and Myrf define an essential regulatory network module in differentiating oligodendrocytes. *PLoS Genet*, 9(10), e1003907.
- Howng, S. Y. B., Avila, R. L., Emery, B., Traka, M., Lin, W., Watkins, T., ... & Popko, B. (2010). ZFP191 is required by oligodendrocytes for CNS myelination. *Genes & development*, 24(3), 301-311.
- Huang, H., Zhao, X. F., Zheng, K., & Qiu, M. (2013). Regulation of the timing of oligodendrocyte differentiation: mechanisms and perspectives. *Neuroscience bulletin*, 29(2), 155-164.
- Hudson, L. D., Puckett, C., Berndt, J., Chan, J., & Gencic, S. (1989). Mutation of the proteolipid protein gene PLP in a human X chromosome-linked myelin disorder. *Proceedings of the National Academy of Sciences*, 86(20), 8128-8131.
- Ibarrola, N., & Rodríguez-Peña, A. (1997). Hypothyroidism coordinately and transiently affects myelin protein gene expression in most rat brain regions during postnatal development. *Brain research*, 752(1), 285-293.
- Itoh, M., Tahimic, C. G. T., Ide, S., Otsuki, A., Sasaoka, T., Noguchi, S., ... Kurimasa, A. (2012). Methyl CpG-binding protein isoform MeCP2_e2 is dispensable for Rett syndrome phenotypes but essential for embryo viability and placenta development. *The Journal of Biological Chemistry*, 287(17), 13859–67.
- Jagannathan, N. R., Tandon, N., Raghunathan, P., & Kochupillai, N. (1998). Reversal of abnormalities of myelination by thyroxine therapy in congenital hypothyroidism: localized in vivo proton magnetic resonance spectroscopy (MRS) study. *Developmental Brain Research*, 109(2), 179-186.
- Jensen, M. B., Gonzalez, B., Castellano, B., & Zimmer, J. (1994). Microglial and astroglial reactions to anterograde axonal degeneration: a histochemical and immunocytochemical study of the adult rat fascia dentata after entorhinal perforant path lesions. *Experimental brain research*, 98(2), 245-260.
- Jessen, K. R. (2004). Glial cells. *The international journal of biochemistry & cell biology*, 36(10), 1861-1867.
- Jin, L. W., Horiuchi, M., Wulff, H., Liu, X. B., Cortopassi, G. A., Erickson, J. D., & Maezawa, I. (2015). Dysregulation of glutamine transporter SNAT1 in Rett syndrome microglia: a

- mechanism for mitochondrial dysfunction and neurotoxicity. *The Journal of Neuroscience*, 35(6), 2516-2529.
- Johnson, P. W., Abramow-Newerly, W., Seilheimer, B., Sadoul, R., Tropak, M. B., Arquint, M., ... & Roder, J. C. (1989). Recombinant myelin-associated glycoprotein confers neural adhesion and neurite outgrowth function. *Neuron*, 3(3), 377-385.
- Johnson, S., Chen, H., & Lo, P. (2013). In vitro Tumorsphere Formation Assays. *Bio protocol*, 3(3), e325.
- Jordan, C., Li, H. H., Kwan, H. C., & Francke, U. (2007). Cerebellar gene expression profiles of mouse models for Rett syndrome reveal novel MeCP2 targets. *BMC medical genetics*, 8(1), 36.
- Jung, B. P., Jugloff, D. G. M., Zhang, G., Logan, R., Brown, S., & Eubanks, J. H. (2003). The Expression of Methyl CpG Binding Factor MeCP2 Correlates with Cellular Differentiation in the Developing Rat Brain and in Cultured Cells ABSTRACT : *Journal of Neurobiology*, 55(1), 86–96.
- Kaddoum, L., Panayotis, N., Mazarguil, H., Giglia-Mari, G., Roux, J. C., & Joly, E. (2013). Isoform-specific anti-MeCP2 antibodies confirm that expression of the e1 isoform strongly predominates in the brain. *F1000Research*, 2.
- Kajiwara, K., Orita, T., Nishizaki, T., Kamiryo, T., Nakayama, H., & Ito, H. (1992). Glial fibrillary acidic protein (GFAP) expression and nucleolar organizer regions (NORs) in human gliomas. *Brain research*, 572(1), 314-318.
- Kakuguchi, W., Kitamura, T., Kuroshima, T., Ishikawa, M., Kitagawa, Y., Totsuka, Y., ... & Higashino, F. (2010). HuR knockdown changes the oncogenic potential of oral cancer cells. *Molecular Cancer Research*, 8(4), 520-528.
- Kandel, E. R., Schwartz, J. H & Jessell, T. M. (2000). *Principles of neural science* (4th Ed.). New York: McGraw-Hill.
- Kaplan, M. R., Meyer-Franke, A., Lambert, S., Bennett, V., Duncan, I. D., Levinson, S. R., & Barres, B. A. (1997). Induction of sodium channel clustering by oligodendrocytes. *Nature*, 386(6626), 724.
- Kassmann, C. M., Lappe-Siefke, C., Baes, M., Brügger, B., Mildner, A., Werner, H. B., ... & Nave, K. A. (2007). Axonal loss and neuroinflammation caused by peroxisome-deficient oligodendrocytes. *Nature genetics*, 39(8), 969-976.

- Kerr, B., Soto, J., Saez, M., Abrams, A., Walz, K., & Young, J. I. (2012). Transgenic complementation of MeCP2 deficiency: phenotypic rescue of Mecp2-null mice by isoform-specific transgenes. *European Journal of Human Genetics*, 20(1), 69-76.
- Kessaris, N., Fogarty, M., Iannarelli, P., Grist, M., Wegner, M., & Richardson, W. D. (2006). Competing waves of oligodendrocytes in the forebrain and postnatal elimination of an embryonic lineage. *Nature neuroscience*, 9(2), 173-179.
- Kessaris, N., Pringle, N., & Richardson, W. D. (2008). Specification of CNS glia from neural stem cells in the embryonic neuroepithelium. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 363(1489), 71-85.
- Kettenmann, H. & Ransom, B. R. (2004) *Neuroglia*. Oxford, UK: Oxford University Press.
- Khorshid Ahmad, T., Acosta, C., Cortes, C., Lakowski, T. M., Gangadaran, S., & Namaka, M. (2015). Transcriptional Regulation of Brain-Derived Neurotrophic Factor (BDNF) by Methyl CpG Binding Protein 2 (MeCP2): a Novel Mechanism for Re-Myelination and/or Myelin Repair Involved in the Treatment of Multiple Sclerosis (MS). *Molecular neurobiology*, 1-16.
- Kiernan, B. W., Götz, B., & Faissner, A. (1996). Tenascin-C inhibits oligodendrocyte precursor cell migration by both adhesion-dependent and adhesion-independent mechanisms. *Molecular and Cellular Neuroscience*, 7(4), 322-335.
- Kim, B., Castro, L. M. R., Jawed, S., & Niles, L. P. (2008). Clinically relevant concentrations of valproic acid modulate melatonin MT 1 receptor, HDAC and MeCP2 mRNA expression in C6 glioma cells. *European journal of pharmacology*, 589(1), 45-48.
- Kinney, H. C., Brody, B. A., Kloban, A. S., & Gilles, F. H. (1988). Sequence of central nervous system myelination in human infancy. *Journal of Neuropathology & Experimental Neurology*, 47(3), 217-234.
- Kippert, A., Trajkovic, K., Fitzner, D., Opitz, L., & Simons, M. (2008). Identification of Tmem10/Opalin as a novel marker for oligodendrocytes using gene expression profiling. *BMC neuroscience*, 9(1), 40.
- Kishi, N., & Macklis, J. (2004). MECP2 is progressively expressed in post-migratory neurons and is involved in neuronal maturation rather than cell fate decisions. *Molecular and Cellular Neuroscience*, 27(3), 306–321.

- Kitajiri, S. I., Miyamoto, T., Mineharu, A., Sonoda, N., Furuse, K., Hata, M., ... & Furuse, M. (2004). Compartmentalization established by claudin-11-based tight junctions in stria vascularis is required for hearing through generation of endocochlear potential. *Journal of Cell Science*, 117(21), 5087-5096.
- Kitamura, M., Itoh, K., Matsumoto, A., Hayashi, Y., Sasaki, R., Imai, Y., & Itoh, H. (2001). Prenatal ionizing radiation-induced apoptosis of the developing murine brain with special references to the expression of some proteins. *Kobe Journal of Medical Sciences*, 47(2), 59-76.
- Klein, M. E., Lioy, D. T., Ma, L., Impey, S., Mandel, G., & Goodman, R. H. (2007). Homeostatic regulation of MeCP2 expression by a CREB-induced microRNA. *Nature neuroscience*, 10(12).
- Klose, R., Sarraf, S., Schmiedeberg, L., Mcdermott, S., Stancheva, I., & Bird, A. (2005). DNA binding selectivity of MeCP2 due to a requirement for A/T sequences adjacent to methyl-CpG. *Molecular Cell*, 19(5), 667–678.
- Knaap, M.S.v. d. and Valk, J. (1995) Magnetic resonance of myelin, myelination, and myelin disorders, 2nd ed, Springer ,Berlin; New York.
- Knapp, P. E., Skoff, R. P., & Redstone, D. W. (1986). Oligodendroglial cell death in jimpy mice: an explanation for the myelin deficit. *Journal of Neuroscience*, 6(10), 2813-2822.
- Koenning, M., Jackson, S., Hay, C. M., Faux, C., Kilpatrick, T. J., Willingham, M., & Emery, B. (2012). Myelin gene regulatory factor is required for maintenance of myelin and mature oligodendrocyte identity in the adult CNS. *Journal of Neuroscience*, 32(36), 12528-12542.
- Koeppen, A.H.(2005) A brief history of Pelizaeus-Merzbacher disease and proteolipid protein. *J Neurol Sci* 228,198-200.
- Kokura, K., Kaul, S. C., Wadhwa, R., Nomura, T., Khan, M. M., Shinagawa, T., ... Ishii, S. (2001). The Ski protein family is required for MeCP2-mediated transcriptional repression. *The Journal of Biological Chemistry*, 276(36), 34115–21.
- Kolodny, E. H., Raghavan, S., & Krivit, W. (1991). Late-onset Krabbe disease (globoid cell leukodystrophy): clinical and biochemical features of 15 cases. *Developmental neuroscience*, 13(4-5), 232-239.
- Kondo, Y., Katsushima, K., Ohka, F., Natsume, A., & Shinjo, K. (2014). Epigenetic dysregulation in glioma. *Cancer science*, 105(4), 363-369.

- Krupp, L. B., Lipton, R. B., Swerdlow, M. L., Leeds, N. E., & Llena, J. (1985). Progressive multifocal leukoencephalopathy: clinical and radiographic features. *Annals of neurology*, 17(4), 344-349.
- Kukley, M., Nishiyama, A., & Dietrich, D. (2010). The fate of synaptic input to NG2 glial cells: neurons specifically downregulate transmitter release onto differentiating oligodendroglial cells. *Journal of Neuroscience*, 30(24), 8320-8331.
- Lappe-Siefke, C., Goebbels, S., Gravel, M., Nicksch, E., Lee, J., Braun, P. E., ... & Nave, K. A. (2003). Disruption of Cnp1 uncouples oligodendroglial functions in axonal support and myelination. *Nature genetics*, 33(3), 366-374.
- Larimore, J. L., Chapleau, C. A., Kudo, S., Theibert, A., Percy, K., & Pozzo-miller, L. (2009). Bdnf Overexpression in Hippocampal Neurons Prevents Dendritic Atrophy Caused by Rett-Associated MECP2 Mutations. *Neurobiology of Disease*, 34(2), 199–211.
- Laursen, L. S., & Chan, C. W. (2011). Translation of myelin basic protein mRNA in oligodendrocytes is regulated by integrin activation and hnRNP-K. *The Journal of cell biology*, 192(5), 797-811.
- Lee, S., Leach, M. K., Redmond, S. A., Chong, S. C., Mellon, S. H., Tuck, S. J., ... & Chan, J. R. (2012). A culture system to study oligodendrocyte myelination processes using engineered nanofibers. *Nature methods*, 9(9), 917-922.
- Lehrmann, E., Christensen, T., Zimmer, J., Diemer, N. H., & Finsen, B. (1997). Microglial and macrophage reactions mark progressive changes and define the penumbra in the rat neocortex and striatum after transient middle cerebral artery occlusion. *Journal of Comparative Neurology*, 386(3), 461-476.
- Leisewitz, A. V., Urrutia, C. R., Martinez, G. R., Loyola, G., & Bronfman, M. (2008). A PPARs cross- talk concertedly commits C6 glioma cells to oligodendrocytes and induces enzymes involved in myelin synthesis. *Journal of cellular physiology*, 217(2), 367-376.
- LeVine, S. M., Wong, D., & Macklin, W. B. (1990). Developmental expression of proteolipid protein and DM20 mRNAs and proteins in the rat brain. *Developmental neuroscience*, 12(4-5), 235-250.
- Lewis, J. D., Meehan, R. R., Henzel, W. J., Maurer-Fogy, I., Jeppesen, P., Klein, F., & Bird, A. (1992). Purification, sequence, and cellular localization of a novel chromosomal protein that binds to methylated DNA. *Cell*, 69(6), 905-914.

- Li, C., Tropak, M. B., Gerlai, R., Clapoff, S., Abramow-Newerly, W., Trapp, B., ... & Roder, J. (1994). Myelination in the absence of myelin-associated glycoprotein.
- Li, H., Lu, Y., Smith, H. K., & Richardson, W. D. (2007). Olig1 and Sox10 interact synergistically to drive myelin basic protein transcription in oligodendrocytes. *Journal of Neuroscience*, 27(52), 14375-14382.
- Li, Q. J., Cai, J. Q., & Liu, C. Y. (2016). Evolving molecular genetics of glioblastoma. *Chinese medical journal*, 129(4), 464.
- Li, W., Calfa, G., Larimore, J., & Pozzo-Miller, L. (2012). Activity-dependent BDNF release and TRPC signaling is impaired in hippocampal neurons of Mecp2 mutant mice. *Proceedings of the National Academy of Sciences of the United States of America*, 109(42), 17087–92.
- Ligon, K. L., Kesari, S., Kitada, M., Sun, T., Arnett, H. A., Alberta, J. A., ... & Rowitch, D. H. (2006). Development of NG2 neural progenitor cells requires Olig gene function. *Proceedings of the National Academy of Sciences*, 103(20), 7853-7858.
- Lin, R. K., Hsu, H. S., Chang, J. W., Chen, C. Y., Chen, J. T., & Wang, Y. C. (2007). Alteration of DNA methyltransferases contributes to 5' CpG methylation and poor prognosis in lung cancer. *Lung cancer*, 55(2), 205-213.
- Lin, S. C., & Bergles, D. E. (2004). Synaptic signaling between GABAergic interneurons and oligodendrocyte precursor cells in the hippocampus. *Nature neuroscience*, 7(1), 24-32.
- Lind, C. R. P., Gray, C. W., Pearson, A. G., Cameron, R. E., O'Carroll, S. J., Narayan, P. J., ... & Dragunow, M. (2006). The mitogen-activated/extracellular signal-regulated kinase kinase 1/2 inhibitor U0126 induces glial fibrillary acidic protein expression and reduces the proliferation and migration of C6 glioma cells. *Neuroscience*, 141(4), 1925-1933.
- Lioy, D. T., Garg, S. K., Monaghan, C. E., Raber, J., Foust, K. D., Kaspar, B. K., ... Mandel, G. (2011). A role for glia in the progression of Rett ' s syndrome. *Nature*, 475(7357), 497–500.
- Liu, A., Li, J., Marin- Husstege, M., Kageyama, R., Fan, Y., Gelinas, C., & Casaccia- Bonnefil, P. (2006). A molecular insight of Hes5- dependent inhibition of myelin gene expression: old partners and new players. *The EMBO journal*, 25(20), 4833-4842.
- Liu, J., Moyon, S., Hernandez, M., & Casaccia, P. (2016). Epigenetic control of oligodendrocyte development: adding new players to old keepers. *Current Opinion in Neurobiology*, 39, 133-138.

- Liu, Z., Hu, X., Cai, J., Liu, B., Peng, X., Wegner, M., & Qiu, M. (2007). Induction of oligodendrocyte differentiation by Olig2 and Sox10: evidence for reciprocal interactions and dosage-dependent mechanisms. *Developmental biology*, 302(2), 683-693.
- Livak, K. J., & Schmittgen, T. D. (2001). Analysis of relative gene expression data using real-time quantitative PCR and the 2- $\Delta\Delta$ CT method. *methods*,25(4), 402-408.
- Lopez-Serra, L., & Esteller, M. (2008). Proteins that bind methylated DNA and human cancer: reading the wrong words. *British journal of cancer*, 98(12), 1881-1885.
- Louis, D. N., Ohgaki, H., Wiestler, O. D., Cavenee, W. K., Burger, P. C., Jouvett, A., ... & Kleihues, P. (2007). The 2007 WHO classification of tumours of the central nervous system. *Acta neuropathologica*, 114(2), 97-109.
- Lu, Q. R., Sun, T., Zhu, Z., Ma, N., Garcia, M., Stiles, C. D., & Rowitch, D. H. (2002). Common developmental requirement for Olig function indicates a motor neuron/oligodendrocyte connection. *Cell*, 109(1), 75-86.
- Lu, Q. R., Yuk, D. I., Alberta, J. A., Zhu, Z., Pawlitzky, I., Chan, J., ... & Rowitch, D. H. (2000). Sonic hedgehog-regulated oligodendrocyte lineage genes encoding bHLH proteins in the mammalian central nervous system. *Neuron*, 25(2), 317-329.
- Lyst, M. J., Ekiert, R., Ebert, D. H., Merusi, C., Nowak, J., Guy, J., ... Bird, A. (2013). Rett syndrome mutations abolish the interaction of MeCP2 with the NCoR / SMRT co-repressor. *Nature Neuroscience*, 16(7), 1–14.
- Maezawa, I., & Jin, L.-W. (2010). Rett syndrome microglia damage dendrites and synapses by the elevated release of glutamate. *The Journal of Neuroscience*, 30(15), 5346–56.
- Maezawa, I., & Swanberg, S. (2009). Rett syndrome astrocytes are abnormal and spread MeCP2 deficiency through gap junctions. *The Journal of Neuroscience*, 29(16), 5051–5061.
- Magri, L., Gacias, M., Wu, M., Swiss, V. A., Janssen, W. G., & Casaccia, P. (2014a). c-Myc-dependent transcriptional regulation of cell cycle and nucleosomal histones during oligodendrocyte differentiation. *Neuroscience*, 276, 72-86.
- Magri, L., Swiss, V. A., Jablonska, B., Lei, L., Pedre, X., Walsh, M., ... & Casaccia, P. (2014b). E2F1 coregulates cell cycle genes and chromatin components during the transition of oligodendrocyte progenitors from proliferation to differentiation. *Journal of Neuroscience*, 34(4), 1481-1493.

- Maher, E. A., Furnari, F. B., Bachoo, R. M., Rowitch, D. H., Louis, D. N., Cavenee, W. K., & DePinho, R. A. (2001). Malignant glioma: genetics and biology of a grave matter. *Genes & development*, 15(11), 1311-1333.
- Mahmood, A., Bibat, G., Zhan, A.-L., Izbudak, I., Farage, L., Horska, A., ... Naidu, S. (2010). White Matter Impairment in Rett Syndrome : Diffusion Tensor Imaging Study with Clinical Correlations. *AJNR. American Journal of Neuroradiology*, 31(2), 295–299.
- Major, E. O., Amemiya, K., Tornatore, C. S., Houff, S. A., & Berger, J. R. (1992). Pathogenesis and molecular biology of progressive multifocal leukoencephalopathy, the JC virus-induced demyelinating disease of the human brain. *Clinical microbiology reviews*, 5(1), 49-73.
- Mao, X. G., Hutt-Cabezas, M., Orr, B. A., Weingart, M., Taylor, I., Rajan, A. K., ... & Eberhart, C. G. (2013). LIN28A facilitates the transformation of human neural stem cells and promotes glioblastoma tumorigenesis through a pro-invasive genetic program. *Oncotarget*, 4(7), 1050-1064.
- Maragakis, N. J., & Rothstein, J. D. (2006). Mechanisms of disease: astrocytes in neurodegenerative disease. *Nature clinical practice Neurology*, 2(12), 679-689.
- Martinowich, K., Hattori, D., Wu, H., Fouse, S., He, F., Hu, Y., ... Sun, Y. E. (2003). DNA Methylation – Related Chromatin Remodeling in Activity- Dependent Bdnf Gene Regulation. *Science*, 302(5646), 890–893.
- Matsuoka, T., Tsunoda, M., Sumiyoshi, T., Takasaki, I., Tabuchi, Y., Seo, T., ... & Kurachi, M. (2008). Effect of MK-801 on gene expressions in the amygdala of rats. *Synapse*, 62(1), 1-7.
- Mattei, M. G., Alliel, P. M., Dautigny, A., Passage, E., Pham-Dinh, D., Mattei, J. F., & Jolles, P. (1986). The gene encoding for the major brain proteolipid (PLP) maps on the q-22 band of the human X chromosome. *Human genetics*, 72(4), 352-353.
- Matthews, M. A., & Duncan, D. (1971). A quantitative study of morphological changes accompanying the initiation and progress of myelin production in the dorsal funiculus of the rat spinal cord. *Journal of Comparative Neurology*, 142(1), 1-22.
- Mayer, M., Bögl, O., & Noble, M. (1993). The inhibition of oligodendrocytic differentiation of O- 2A progenitors caused by basic fibroblast growth factor is overridden by astrocytes. *Glia*, 8(1), 12-19.

- McKerracher, L. D., David, S., Jackson, D. L., Kottis, V., Dunn, R. J., & Braun, P. E. (1994). Identification of myelin-associated glycoprotein as a major myelin-derived inhibitor of neurite growth. *Neuron*, 13(4), 805-811.
- Meehan, R., Lewis, J. D., & Bird, A. P. (1992). Characterization of MeCP2, a vertebrate DNA binding protein with affinity for methylated DNA. *Nucleic acids research*, 20(19), 5085-5092.
- Meklat, F., Li, Z., Wang, Z., Zhang, Y., Zhang, J., Jewell, A., & Lim, S. H. (2007). Cancer- testis antigens in haematological malignancies. *British journal of haematology*, 136(6), 769-776.
- Melanson, M., Grossberndt, A., Klowak, M., Leong, C., Frost, E. E., Prout, M., ... & Esfahani, F. (2010). Fatigue and cognition in patients with relapsing multiple sclerosis treated with interferon beta. *International Journal of Neuroscience*, 120(10), 631-640.
- Melanson, M., Miao, P., Eisenstat, D., Gong, Y., Gu, X., Au, K., ... & Namaka, M. (2009). Experimental autoimmune encephalomyelitis-induced upregulation of tumor necrosis factor-alpha in the dorsal root ganglia. *Multiple Sclerosis*, 15(10), 1135-1145.
- Miller, R. H. (2002). Regulation of oligodendrocyte development in the vertebrate CNS. *Progress in neurobiology*, 67(6), 451-467.
- Milner, R., Frost, E., Nishimura, S., Delcommenne, M., Streuli, C., & Pytela, R. (1997). Expression of $\alpha v \beta 3$ and $\alpha v \beta 8$ integrins during oligodendrocyte precursor differentiation in the presence and absence of axons. *Glia*, 21(4), 350-360.
- Miltenberger- Miltenyi, G., & Laccone, F. (2003). Mutations and polymorphisms in the human methyl CpG- binding protein MECP2. *Human mutation*, 22(2), 107-115.
- Minkowski, A. (1967)Regional development of the brain in early life F.A. Davis Co., Philadelphia,.
- Mitew, S., Hay, C. M., Peckham, H., Xiao, J., Koenning, M., & Emery, B. (2014). Mechanisms regulating the development of oligodendrocytes and central nervous system myelin. *Neuroscience*, 276, 29-47.
- Miyake, K., & Nagai, K. (2007). Phosphorylation of methyl-CpG binding protein 2 (MeCP2) regulates the intracellular localization during neuronal cell differentiation. *Neurochemistry international*, 50(1), 264-270.

- Mnatzakanian, G. N., Lohi, H., Munteanu, I., Alfred, S. E., Yamada, T., MacLeod, P. J. M., ... Minassian, B. A. (2004). A previously unidentified MECP2 open reading frame defines a new protein isoform relevant to Rett syndrome. *Nature Genetics*, 36(4), 339–41.
- Möbius, W., Cooper, B., Kaufmann, W. A., Imig, C., Ruhwedel, T., Snaidero, N., ... & Varoqueaux, F. (2010). Electron microscopy of the mouse central nervous system. *Methods in cell biology*, 96, 475-512.
- Monasterio- Schrader, P., Patzig, J., Möbius, W., Barrette, B., Wagner, T. L., Kusch, K., ... & Werner, H. B. (2013). Uncoupling of neuroinflammation from axonal degeneration in mice lacking the myelin protein tetraspanin- 2. *Glia*, 61(11), 1832-1847
- Montag, D., Giese, K. P., Bartsch, U., Martini, R., Lang, Y., Blüthmann, H., ... & Zielasek, J. (1994). Mice deficient for the glycoprotein show subtle abnormalities in myelin. *Neuron*, 13(1), 229-246.
- Montague, P., McCallion, A. S., Davies, R. W., & Griffiths, I. R. (2006). Myelin-associated oligodendrocytic basic protein: a family of abundant CNS myelin proteins in search of a function. *Developmental neuroscience*, 28(6), 479-487.
- Morell,P.,Quarles,R. and Norton, W.(1994) Myelin formation, structure and biochemistry.; in Basic neurochemistry: molecular, cellular, and medical aspects, Siegel, G. J.,Agranoff, B.W., Albers,R. W. and Molinoff, P. B. (eds.), pp. xx, 1080p., Raven Press, NewYork.
- Moser, A. B., Kreiter, N., Bezman, L., Lu, S. E., Raymond, G. V., Naidu, S., & Moser, H. W. (1999). Plasma very long chain fatty acids in 3,000 peroxisome disease patients and 29,000 controls. *Annals of neurology*, 45(1), 100-110.
- Moser, H. W., Moser, A. B., Kawamura, N., Migeon, B., O'Neill, B. P., Fenselau, C., & Kishimoto, Y. (1980). Adrenoleukodystrophy: studies of the phenotype, genetics and biochemistry. *The Johns Hopkins medical journal*, 147(6), 217-224.
- Mosser,J.,Douar,A.M.,Sarde, C.O.,Kioschis,P.,Feil, R.,Moser,H., Poustka,A.M., Mandel, J.L.and Aubourg,P.(1993)Putative X-linked adrenoleukodystrophy gene shares unexpected homology with ABC transporters. *Nature* 361, 726-730.
- Moyon, S., Huynh, J. L., Dutta, D., Zhang, F., Ma, D., Yoo, S., ... & Lubetzki, C. (2016). Functional characterization of DNA methylation in the oligodendrocyte lineage. *Cell reports*, 15(4), 748-760.

- Murphy, K. G., Hatton, J. D., & Sang U, H. (1998). Role of glial fibrillary acidic protein expression in the biology of human glioblastoma U-373MG cells. *Journal of neurosurgery*, 89(6), 997-1006.
- Nagai, K., Miyake, K., & Kubota, T. (2005). A transcriptional repressor MeCP2 causing Rett syndrome is expressed in embryonic non-neuronal cells and controls their growth. *Developmental brain research*, 157(1), 103-106.
- Nagarajan, R. P., Patzel, K. A., Martin, M., Yasui, D. H., Swanberg, S. E., Hertz-Picciotto, I., ... & LaSalle, J. M. (2008). MECP2 promoter methylation and X chromosome inactivation in autism. *Autism Research*, 1(3), 169-178.
- Namihira, M., Nakashima, K., & Taga, T. (2004). Developmental stage dependent regulation of DNA methylation and chromatin modification in a immature astrocyte specific gene promoter. *FEBS letters*, 572(1-3), 184-188.
- Nan, X., Hou, J., Maclean, A., Nasir, J., Lafuente, M. J., Shu, X., ... Bird, A. (2007). Interaction between chromatin proteins MECP2 and ATRX is disrupted by mutations that cause inherited mental retardation. *Proceedings of the National Academy of Sciences of the United States of America*, 104(8), 2709–14.
- Nan, X., Ng, H., Johnson, C. A., Laherty, C. D., Turner, B. M., Eisenman, R. N., & Bird, A. (1998). Transcriptional repression by the methyl-CpG-binding protein MeCP2 involves a histone deacetylase complex. *Nature*, 393(6683), 386–389.
- Natarajan, M., Hecker, T. P., & Gladson, C. L. (2003). FAK Signaling in Anaplastic Astrocytoma and Glioblastoma Tumors. *The Cancer Journal*, 9(2), 126-133.
- Nave, K. A., & Werner, H. B. (2014). Myelination of the nervous system: mechanisms and functions. *Annual review of cell and developmental biology*, 30, 503-533.
- Nave, K. A., Lai, C., Bloom, F. E., & Milner, R. J. (1986). Jimpj mutant mouse: a 74-base deletion in the mRNA for myelin proteolipid protein and evidence for a primary defect in RNA splicing. *Proceedings of the National Academy of Sciences*, 83(23), 9264-9268.
- Nayak, D., Roth, T. L., & McGavern, D. B. (2014). Microglia development and function. *Annual review of immunology*, 32, 367-402.
- Nectoux, J., & Florian, C. (2012). Altered microtubule dynamics in Mecp2- deficient astrocytes. *Journal of Neuroscience Research*, 90(5), 990–998.

- Nery, S., Wichterle, H., & Fishell, G. (2001). Sonic hedgehog contributes to oligodendrocyte specification in the mammalian forebrain. *Development*, 128(4), 527-540.
- Nguyen, M. V. C., Felice, C. a, Du, F., Covey, M. V, Robinson, J. K., Mandel, G., & Ballas, N. (2013). Oligodendrocyte lineage cells contribute unique features to rett syndrome neuropathology. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 33(48), 18764–74.
- Nishiyama, A., Komitova, M., Suzuki, R., & Zhu, X. (2009). Polydendrocytes (NG2 cells): multifunctional cells with lineage plasticity. *Nature Reviews Neuroscience*, 10(1), 9-22.
- Noseworthy,J. H.,Lucchinetti,C.,Rodriguez, M.and Weinshenker, B.G.(2000)Multiple sclerosis. *N Engl J Med* 343, 938-952.
- Noushmehr, H., Weisenberger, D. J., Diefes, K., Phillips, H. S., Pujara, K., Berman, B. P., ... & Verhaak, R. G. (2010). Identification of a CpG island methylator phenotype that defines a distinct subgroup of glioma. *Cancer cell*, 17(5), 510-522.
- Ohgaki, H., & Kleihues, P. (2005). Epidemiology and etiology of gliomas. *Acta neuropathologica*, 109(1), 93-108.
- Ojeda, S. R., Ma, Y. J., Lee, B. J., & Prevot, V. (1999). Glia-to-neuron signaling and the neuroendocrine control of female puberty. *Recent progress in hormone research*, 55, 197-223.
- Okabe, Y., Takahashi, T., Mitumasu, C., Kosai, K., Tanaka, E., & Matsuishi, T. (2012). Alterations of Gene Expression and Glutamate Clearance in Astrocytes Derived from an MeCP2-Null Mouse Model of Rett Syndrome. *PloS One*, 7(4), e35354.
- Oliveira-Ferrer, L., Hauschild, J., Fiedler, W., Bokemeyer, C., Nippgen, J., Celik, I., & Schuch, G. (2008). Cilengitide induces cellular detachment and apoptosis in endothelial and glioma cells mediated by inhibition of FAK/src/AKT pathway. *Journal of Experimental & Clinical Cancer Research*, 27(1), 1.
- Olson, C. O., Zachariah, R. M., Ezeonwuka, C. D., Liyanage, V. R. B., & Rastegar, M. (2014). Brain Region-Specific Expression of MeCP2 Isoforms Correlates with DNA Methylation within Mecp2 Regulatory Elements. *PLoS ONE*, 9(3), e90645.
- Ostrom, Q. T., Gittleman, H., Liao, P., Rouse, C., Chen, Y., Dowling, J., ... & Barnholtz-Sloan, J. (2014). CBTRUS statistical report: primary brain and central nervous system tumors diagnosed in the United States in 2007–2011. *Neuro-oncology*, 16(suppl 4), iv1-iv63.

- Paintlia, M. K., Paintlia, A. S., Barbosa, E., Singh, I., & Singh, A. K. (2004). N-acetylcysteine prevents endotoxin-induced degeneration of oligodendrocyte progenitors and hypomyelination in developing rat brain. *Journal of neuroscience research*, 78(3), 347-361.
- Pampalakis, G., Prosnikli, E., Agalioti, T., Vlahou, A., Zoumpourlis, V., & Sotiropoulou, G. (2009). A tumor-protective role for human kallikrein-related peptidase 6 in breast cancer mediated by inhibition of epithelial-to-mesenchymal transition. *Cancer research*, 69(9), 3779-3787.
- Pan, B., Fromholt, S. E., Hess, E. J., Crawford, T. O., Griffin, J. W., Sheikh, K. A., & Schnaar, R. L. (2005). Myelin-associated glycoprotein and complementary axonal ligands, gangliosides, mediate axon stability in the CNS and PNS: neuropathology and behavioral deficits in single-and double-null mice. *Experimental neurology*, 195(1), 208-217.
- Pancione, M., Sabatino, L., Fucci, A., Carafa, V., Nebbioso, A., Forte, N., ... & Altucci, L. (2010). Epigenetic silencing of peroxisome proliferator-activated receptor γ is a biomarker for colorectal cancer progression and adverse patients' outcome. *PLoS One*, 5(12), e14229.
- Parry, L., & Clarke, A. R. (2011). The roles of the methyl-CpG binding proteins in cancer. *Genes & cancer*, 2(6), 618-630.
- Peirce, T. R., Bray, N. J., Williams, N. M., Norton, N., Owen, M. J., & Donovan, M. C. O. (2006). Convergent Evidence for 2,3 -Cyclic Nucleotide 3 -Phosphodiesterase as a Possible Susceptibility Gene for Schizophrenia. *Archives of General Psychiatry*, 63(1), 18–24.
- Pekny, M., & Nilsson, M. (2005). Astrocyte activation and reactive gliosis. *Glia*, 50(4), 427-434.
- Pérez-Cerdá, F., Sánchez-Gómez, M. V., & Matute, C. (2015). Pío del Río Hortega and the discovery of the oligodendrocytes. *Frontiers in neuroanatomy*, 9, 92.
- Petazzi, P., Akizu, N., García, A., Estarás, C., Martínez, A., Paz, D., ... Esteller, M. (2014). An increase in MECP2 dosage impairs neural tube formation. *Neurobiology of Disease*, 67, 49–56.
- Peterson, L. K., & Fujinami, R. S. (2007). Inflammation, demyelination, neurodegeneration and neuroprotection in the pathogenesis of multiple sclerosis. *Journal of neuroimmunology*, 184(1), 37-44.
- Pfriege, F. W., & Barres, B. A. (1995). What the fly's glia tell the fly's brain. *Cell*, 83(5), 671-674.

- Pfrieger, F. W., & Barres, B. A. (1997). Synaptic efficacy enhanced by glial cells in vitro. *Science*, 277(5332), 1684-1687.
- Poliak, S., Salomon, D., Elhanany, H., Sabanay, H., Kiernan, B., Pevny, L., ... & Furley, A. J. (2003). Juxtaparanodal clustering of Shaker-like K⁺ channels in myelinated axons depends on Caspr2 and TAG-1. *The Journal of cell biology*, 162(6), 1149-1160.
- Ponomarev, E. D., Shriver, L. P., Maresz, K., & Dittel, B. N. (2005). Microglial cell activation and proliferation precedes the onset of CNS autoimmunity. *Journal of neuroscience research*, 81(3), 374-389.
- Powell, E. M., Mars, W. M., & Levitt, P. (2001). Hepatocyte growth factor/scatter factor is a motogen for interneurons migrating from the ventral to dorsal telencephalon. *Neuron*, 30(1), 79-89.
- Prineas, J. W., & Raine, C. S. (1976). Electron microscopy and immunoperoxidase studies of early multiple sclerosis lesions. *Neurology*, 26(6 Part 2), 29-32.
- Pringle, N. P., & Richardson, W. D. (1993). A singularity of PDGF alpha-receptor expression in the dorsoventral axis of the neural tube may define the origin of the oligodendrocyte lineage. *Development*, 117(2), 525-533.
- Pulukuri, S. M., Patibandla, S., Patel, J., Estes, N., & Rao, J. S. (2007). Epigenetic inactivation of the tissue inhibitor of metalloproteinase-2 (TIMP-2) gene in human prostate tumors. *Oncogene*, 26(36), 5229-5237.
- Qi, Y., Cai, J., Wu, Y., Wu, R., Lee, J., Fu, H., ... & Qiu, M. (2001). Control of oligodendrocyte differentiation by the Nkx2. 2 homeodomain transcription factor. *Development*, 128(14), 2723-2733.
- Qin, R., Zhou, J., Chen, C., Xu, T., Yan, Y., Ma, Y., ... & Chen, J. (2014). LIN28 is involved in glioma carcinogenesis and predicts outcomes of glioblastoma multiforme patients. *PLoS One*, 9(1), e86446.
- Quaderi, N. A., Meehan, R. R., Tate, P. H., Cross, S. H., Bird, A. P., Chatterjee, A., ... & Brown, S. D. M. (1994). Genetic and physical mapping of a gene encoding a methyl CpG binding protein, Mecp2, to the mouse X chromosome. *Genomics*, 22(3), 648-651.
- Quarles, R. H., Macklin, W. B., & Morell, P. (2006). *Biochemistry*, 51–72.

- Raff, M. C., Barres, B. A., Burne, J. F., Coles, H. S., Ishizaki, Y., & Jacobson, M. D. (1993). Programmed cell death and the control of cell survival: lessons from the nervous system. *SCIENCE-NEW YORK THEN WASHINGTON-*, 262, 695-695.
- Ramocki, M. B., Tavyev, Y. J., & Peters, S. U. (2010). The MECP2 duplication syndrome. *American Journal of Medical Genetics. Part A*, 152A(5), 1079–88.
- Ransohoff, R. M. (1999). Mechanisms of inflammation in MS tissue: adhesion molecules and chemokines. *Journal of neuroimmunology*, 98(1), 57-68.
- Rasband, M. N., Tayler, J., Kaga, Y., Yang, Y., Lappe- Siefke, C., Nave, K. A., & Bansal, R. (2005). CNP is required for maintenance of axon–glia interactions at nodes of Ranvier in the CNS. *Glia*, 50(1), 86-90.
- Ravn, K., Nielsen, J. B., Uldall, P., Hansen, F. J., & Schwartz, M. (2003). No correlation between phenotype and genotype in boys with a truncating MECP2 mutation. *Journal of medical genetics*, 40(1), e5-e5.
- Ray, B. K., Dhar, S., Henry, C., Rich, A., & Ray, A. (2013). Epigenetic regulation by Z-DNA silencer function controls cancer-associated ADAM-12 expression in breast cancer: cross-talk between MeCP2 and NF1 transcription factor family. *Cancer research*, 73(2), 736-744.
- Readhead, C., Schneider, A., Griffiths, I., & Nave, K. A. (1994). Premature arrest of myelin formation in transgenic mice with increased proteolipid protein gene dosage. *Neuron*, 12(3), 583-595.
- Rett,A.(1966) [On a unusual brain atrophy syndrome in hyperammonemia in childhood].Wien Med Wochenschr 116, 723-726.
- Richardson, E.P., Jr. (1988) Progressive multifocal leukoencephalopathy 30 years later. *N Engl J Med* 318, 315-317.
- Richardson, W. D., Kessaris, N., & Pringle, N. (2006). Oligodendrocyte wars. *Nature Reviews Neuroscience*, 7(1), 11-18
- Richardson, W. D., Smith, H. K., Sun, T., Pringle, N. P., Hall, A., & Woodruff, R. (2000). Oligodendrocyte lineage and the motor neuron connection. *Glia*, 29(2), 136-142.
- Robinson, S., Tani, M., Strieter, R. M., Ransohoff, R. M., & Miller, R. H. (1998). The chemokine growth-regulated oncogene- α promotes spinal cord oligodendrocyte precursor proliferation. *Journal of Neuroscience*, 18(24), 10457-10463.

- Rodriguez-Pena, A., Ibarrola, N., Iniguez, M. A., Munoz, A., & Bernal, J. (1993). Neonatal hypothyroidism affects the timely expression of myelin-associated glycoprotein in the rat brain. *Journal of Clinical Investigation*, 91(3), 812.
- Roxburgh, R. H. S. R., Seaman, S. R., Masterman, T., Hensiek, A. E., Sawcer, S. J., Vukusic, S., ... & Edan, G. (2005). Multiple Sclerosis Severity Score Using disability and disease duration to rate disease severity. *Neurology*, 64(7), 1144-1151.
- Roy, K., Murtie, J. C., El-Khodori, B. F., Edgar, N., Sardi, S. P., Hooks, B. M., ... & Brunner, D. (2007). Loss of erbB signaling in oligodendrocytes alters myelin and dopaminergic function, a potential mechanism for neuropsychiatric disorders. *Proceedings of the National Academy of Sciences*, 104(19), 8131-8136.
- Rudge, J. S., Alderson, R. F., Pasnikowski, E., McClain, J., Ip, N. Y., & Lindsay, R. M. (1992). Expression of Ciliary Neurotrophic Factor and the Neurotrophins—Nerve Growth Factor, Brain-Derived Neurotrophic Factor and Neurotrophin 3—in Cultured Rat Hippocampal Astrocytes. *European Journal of Neuroscience*, 4(6), 459-471.
- Sadakata, T., Mizoguchi, A., Sato, Y., Katoh-Semba, R., Fukuda, M., Mikoshiba, K., & Furuichi, T. (2004). The secretory granule-associated protein CAPS2 regulates neurotrophin release and cell survival. *The Journal of neuroscience*, 24(1), 43-52.
- Saher, G., Rudolph, F., Corthals, K., Ruhwedel, T., Schmidt, K. F., Löwel, S., ... & Nave, K. A. (2012). Therapy of Pelizaeus-Merzbacher disease in mice by feeding a cholesterol-enriched diet. *Nature medicine*, 18(7), 1130-1135.
- Salvati, S., Natali, F., Attorri, L., Raggi, C., Di Biase, A., & Sanchez, M. (2004). Stimulation of myelin proteolipid protein gene expression by eicosapentaenoic acid in C6 glioma cells. *Neurochemistry international*, 44(5), 331-338.
- Salzer, J. L. (2003). Polarized domains of myelinated axons. *Neuron*, 40(2), 297-318.
- Samanta, J., & Kessler, J. A. (2004). Interactions between ID and OLIG proteins mediate the inhibitory effects of BMP4 on oligodendroglial differentiation. *Development*, 131(17), 4131-4142.
- Sambrook, J., and Russell, D. W. (2001) *Molecular Cloning: A Laboratory Manual*, 3rd ed. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y.

- Saywell, V., Viola, A., Confort-Gouny, S., Le Fur, Y., Villard, L., & Cozzone, P. J. (2006). Brain magnetic resonance study of Mecp2 deletion effects on anatomy and metabolism. *Biochemical and Biophysical Research Communications*, 340(3), 776–783.
- Schaeren-Wiemers, N., Bonnet, A., Erb, M., Erne, B., Bartsch, U., Kern, F., ... & Suter, U. (2004). The raft-associated protein MAL is required for maintenance of proper axon–glia interactions in the central nervous system. *The Journal of cell biology*, 166(5), 731-742.
- Schlegel, J. U. R., Piontek, G., Kersting, M., Schuermann, M., Kappler, R., Scherthan, H., ... & Mennel, H. D. (2000). The p16/Cdkn2a/Ink4a gene is frequently deleted in nitrosourea-induced rat glial tumors. *Pathobiology*, 67(4), 202-206.
- Schlierf, B., Werner, T., Glaser, G., & Wegner, M. (2006). Expression of connexin47 in oligodendrocytes is regulated by the Sox10 transcription factor. *Journal of molecular biology*, 361(1), 11-21.
- Schoonover, C. M., Seibel, M. M., Jolson, D. M., Stack, M. J., Rahman, R. J., Jones, S. A., ... & Anderson, G. W. (2004). Thyroid hormone regulates oligodendrocyte accumulation in developing rat brain white matter tracts. *Endocrinology*, 145(11), 5013-5020.
- Scolding, N. J., Frith, S., Linington, C., Morgan, B. P., Campbell, A. K., & Compston, D. A. S. (1989). Myelin-oligodendrocyte glycoprotein (MOG) is a surface marker of oligodendrocyte maturation. *Journal of neuroimmunology*, 22(3), 169-176.
- Setoguchi, H., Namihira, M., Kohyama, J., Asano, H., Sanosaka, T., & Nakashima, K. (2006). Methyl- CpG binding proteins are involved in restricting differentiation plasticity in neurons. *Journal of neuroscience research*, 84(5), 969-979.
- Shahbazian, M. D., Antalffy, B., Armstrong, D. L., & Zoghbi, H. Y. (2002). Insight into Rett syndrome: MeCP2 levels display tissue- and cell-specific differences and correlate with neuronal maturation. *Human Molecular Genetics*, 11(2), 115–124.
- Sharma, K., Singh, J., Pillai, P. P., & Frost, E. E. (2015). Involvement of MeCP2 in Regulation of Myelin-Related Gene Expression in Cultured Rat Oligodendrocytes. *Journal of Molecular Neuroscience*, 57(2), 176-184.
- Shen, S., Li, J., & Casaccia-Bonnel, P. (2005). Histone modifications affect timing of oligodendrocyte progenitor differentiation in the developing rat brain. *The Journal of cell biology*, 169(4), 577-589.

- Sher, F., Boddeke, E., Olah, M., & Copray, S. (2012). Dynamic changes in Ezh2 gene occupancy underlie its involvement in neural stem cell self-renewal and differentiation towards oligodendrocytes. *PLoS One*, 7(7), e40399.
- Sher, F., Rößler, R., Brouwer, N., Balasubramaniyan, V., Boddeke, E., & Copray, S. (2008). Differentiation of neural stem cells into oligodendrocytes: involvement of the polycomb group protein Ezh2. *Stem Cells*, 26(11), 2875-2883.
- Sherman, D. L., & Brophy, P. J. (2005). Mechanisms of axon ensheathment and myelin growth. *Nature Reviews Neuroscience*, 6(9), 683-690.
- Shin, J. E., Park, S. H., & Jang, Y. K. (2011). Epigenetic up-regulation of leukemia inhibitory factor (LIF) gene during the progression to breast cancer. *Molecules and cells*, 31(2), 181-189.
- Sibenaller, Z. A., Etame, A. B., Ali, M. M., Barua, M., Braun, T. A., Casavant, T. L., & Ryken, T. C. (2005). Genetic characterization of commonly used glioma cell lines in the rat animal model system. *Neurosurgical focus*, 19(4), 1-9.
- Siegel GJ (editor) (1998) Basic Neurochemistry – Molecular, Cellular and Medical Aspects. Lippincott Williams & Wilkins, 6th edition.
- Simons, M., & Nave, K. A. (2016). Oligodendrocytes: myelination and axonal support. *Cold Spring Harbor perspectives in biology*, 8(1), a020479.
- Simpson, P. B., & Armstrong, R. C. (1999). Intracellular signals and cytoskeletal elements involved in oligodendrocyte progenitor migration. *Glia*, 26(1), 22-35.
- Skene, P. J., Illingworth, R. S., Webb, S., Kerr, A. R. W., James, K. D., Turner, D. J., ... Bird, A. P. (2010). Neuronal MeCP2 is expressed at near histone-octamer levels and globally alters the chromatin state. *Molecular Cell*, 37(4), 457–68.
- Skoff, R. P., Bessert, D. A., Cerghet, M., Franklin, M. J., Rout, U. K., Nave, K. A., ... & Armant, D. R. (2004a). The myelin proteolipid protein gene modulates apoptosis in neural and non-neural tissues. *Cell Death & Differentiation*, 11(12), 1247-1257.
- Slezak, M., & Pfrieger, F. W. (2003). New roles for astrocytes: regulation of CNS synaptogenesis. *Trends in neurosciences*, 26(10), 531-535.
- Smrt, R. D., Pfeiffer, R. L., & Zhao, X. (2011). Age-dependent expression of MeCP2 in a heterozygous mosaic mouse model. *Human Molecular Genetics*, 20(9), 1834–43.

- Smrt, R. D., Pfeiffer, R. L., & Zhao, X. (2011). Age-dependent expression of MeCP2 in a heterozygous mosaic mouse model. *Human molecular genetics*, 20(9), 1834-1843.
- Snaidero, N., Möbius, W., Czopka, T., Hekking, L. H., Mathisen, C., Verkleij, D., ... & Nave, K. A. (2014). Myelin membrane wrapping of CNS axons by PI (3, 4, 5) P3-dependent polarized growth at the inner tongue. *Cell*, 156(1), 277-290.
- Soldán, M. M. P., & Pirko, I. (2012, February). Biogenesis and significance of central nervous system myelin. In *Seminars in neurology* (Vol. 32, No. 01, pp. 009-014). Thieme Medical Publishers.
- Spassky, N., Heydon, K., Mangatal, A., Jankovski, A., Olivier, C., Queraud-Lesaux, F., ... & Zalc, B. (2001). Sonic hedgehog-dependent emergence of oligodendrocytes in the telencephalon: evidence for a source of oligodendrocytes in the olfactory bulb that is independent of PDGFR α signaling. *Development*, 128(24), 4993-5004.
- Spassky, N., Olivier, C., Perez- Villegas, E., Goujet- Zalc, C., Martinez, S., Thomas, J. L., & Zalc, B. (2000). Single or multiple oligodendroglial lineages: a controversy. *Glia*, 29(2), 143-148.
- Sprinkle, T. J. (1988). 2', 3'-cyclic nucleotide 3'-phosphodiesterase, an oligodendrocyte-Schwann cell and myelin-associated enzyme of the nervous system. *Critical reviews in neurobiology*, 4(3), 235-301.
- Stecca, B., Southwood, C. M., Gragerov, A., Kelley, K. A., Friedrich, V. L., & Gow, A. (2000). The evolution of lipophilin genes from invertebrates to tetrapods: DM-20 cannot replace proteolipid protein in CNS myelin. *Journal of Neuroscience*, 20(11), 4002-4010.
- Stolt, C. C., Rehberg, S., Ader, M., Lommes, P., Riethmacher, D., Schachner, M., ... & Wegner, M. (2002). Terminal differentiation of myelin-forming oligodendrocytes depends on the transcription factor Sox10. *Genes & development*, 16(2), 165-170.
- Stolt, C. C., Schlierf, A., Lommes, P., Hillgärtner, S., Werner, T., Kosian, T., ... & Wegner, M. (2006). SoxD proteins influence multiple stages of oligodendrocyte development and modulate SoxE protein function. *Developmental cell*, 11(5), 697-709.
- Stupp, R., Mason, W. P., Van Den Bent, M. J., Weller, M., Fisher, B., Taphoorn, M. J., ... & Curschmann, J. (2005). Radiotherapy plus concomitant and adjuvant temozolomide for glioblastoma. *New England Journal of Medicine*, 352(10), 987-996.

- Sugiarto, S., Persson, A. I., Munoz, E. G., Waldhuber, M., Lamagna, C., Andor, N., ... & Lim, D. A. (2011). Asymmetry-defective oligodendrocyte progenitors are glioma precursors. *Cancer cell*, 20(3), 328-340.
- Suzuki, K. (2003). Globoid cell leukodystrophy (Krabbe's disease): update. *Journal of child neurology*, 18(9), 595-603.
- Suzuki, K., & Suzuki, Y. (1970). Globoid cell leucodystrophy (Krabbe's disease): Deficiency of galactocerebroside β -galactosidase. *Proceedings of the National Academy of Sciences*, 66(2), 302-309.
- Suzuki, Y., Takemoto, Y., Shimozawa, N., Imanaka, T., Kato, S., Furuya, H., ... & Tsuji, S. (2005). Natural history of X-linked adrenoleukodystrophy in Japan. *Brain and Development*, 27(5), 353-357.
- Swiss, V. A., Nguyen, T., Dugas, J., Ibrahim, A., Barres, B., Androulakis, I. P., & Casaccia, P. (2011). Identification of a gene regulatory network necessary for the initiation of oligodendrocyte differentiation. *PLoS One*, 6(4), e18088.
- Tao, J., Hu, K., & Chang, Q. (2009). Phosphorylation of MeCP2 at Serine 80 regulates its chromatin association and neurological function. *Proceedings of the National Academy of Sciences*, 106(12), 4882–4887.
- Taveggia, C., Thaker, P., Petrylak, A., Caporaso, G. L., Toews, A., Falls, D. L., ... & Salzer, J. L. (2008). Type III neuregulin- 1 promotes oligodendrocyte myelination. *Glia*, 56(3), 284-293.
- Tekki-Kessaris, N., Woodruff, R., Hall, A. C., Gaffield, W., Kimura, S., Stiles, C. D., ... & Richardson, W. D. (2001). Hedgehog-dependent oligodendrocyte lineage specification in the telencephalon. *Development*, 128(13), 2545-2554.
- Timsit, S., Martinez, S., Allinquant, B., Peyron, F., Puellas, L., & Zalc, B. (1995). Oligodendrocytes originate in a restricted zone of the embryonic ventral neural tube defined by DM-20 mRNA expression. *Journal of Neuroscience*, 15(2), 1012-1024.
- Tochiki, K. K., Cunningham, J., Hunt, S. P., & Géranton, S. M. (2012). The expression of spinal methyl-CpG-binding protein 2 , DNA methyltransferases and histone deacetylases is modulated in persistent pain states. *Molecular Pain*, 8(1), 14. doi:10.1186/1744-8069-8-14.
- Tortora, G. J., & Derrickson, B. H. (2008). *Principles of anatomy and physiology*. John Wiley & Sons.

- Traiffort, E., Zakaria, M., Laouarem, Y., & Ferent, J. (2016). Hedgehog: A Key Signaling in the Development of the Oligodendrocyte Lineage. *Journal of Developmental Biology*, 4(3), 28.
- Trapp, B. D., Nishiyama, A., Cheng, D., & Macklin, W. (1997). Differentiation and death of premyelinating oligodendrocytes in developing rodent brain. *The Journal of cell biology*, 137(2), 459-468.
- Tremblay, M.-È., Stevens, B., Sierra, A., Wake, H., Bessis, A., & Nimmerjahn, A. (2011). The role of microglia in the healthy brain. *The Journal of Neuroscience : The Official Journal of the Society for Neuroscience*, 31(45), 16064–9.
- Tripathi RB, Clarke LE, Burzomato V, Kessar N, Anderson PN, Attwell D, Richardson WD (2011) Dorsally and ventrally derived oligodendrocytes have similar electrical properties but myelinate preferred tracts. *J Neurosci* 31:6809-6819.
- Tsai, H. H., Frost, E., To, V., Robinson, S., Geertman, R., Ransohoff, R. M., & Miller, R. H. (2002). The chemokine receptor CXCR2 controls positioning of oligodendrocyte precursors in developing spinal cord by arresting their migration. *Cell*, 110(3), 373-383.
- Tsai, H. H., Tessier-Lavigne, M., & Miller, R. H. (2003). Netrin 1 mediates spinal cord oligodendrocyte precursor dispersal. *Development*, 130(10), 2095-2105.
- Tsai, H., Frost, E., Robinson, S., Ransohoff, R., Sussman, C., French-Constant, C., Miller, R.H., 2000. The inhibitory effect on oligodendrocyte precursor migration by growth regulated oncogene-a (GRO-a) is mediated by CXCR2. *J. Neurosci. Abstr.* 26 (Part 2), 506.1.
- Turnley, A. M., & Bartlett, P. F. (1998). MAG and MOG enhance neurite outgrowth of embryonic mouse spinal cord neurons. *Neuroreport*, 9(9), 1987-1990.
- Turovsky, E., Karagiannis, A., Abdala, A. P., & Gourine, A. V. (2015). Impaired CO2 sensitivity of astrocytes in a mouse model of Rett syndrome. *The Journal of physiology*, 593(14), 3159-3168.
- Ueno, M., Fujita, Y., Tanaka, T., Nakamura, Y., Kikuta, J., Ishii, M., & Yamashita, T. (2013). Layer V cortical neurons require microglial support for survival during postnatal development. *Nature neuroscience*, 16(5), 543-551.
- Ueno, T., Ito, J., Hoshikawa, S., Ohori, Y., Fujiwara, S., Yamamoto, S., ... & Ogata, T. (2012). The identification of transcriptional targets of *Ascl1* in oligodendrocyte development. *Glia*, 60(10), 1495-1505.

- Umemori, H., Sato, S., Yagi, T., Aizawa, S., & Yamamoto, T. (1994). Initial events of myelination involve Fyn tyrosine kinase signalling. *Nature*, 367(6463), 572.
- Urdinguio, R., Lopez-Serra, L., Lopez-nieva, P., Alaminos, M., Diaz-Uriarte, R., Fernandez, A., & Esteller, M. (2008). Mecp2-null mice provide new neuronal targets for Rett syndrome. *PLoS One*, 3(11), e3669.
- Vallstedt A, Klos JM, Ericson J (2005) Multiple dorsoventral origins of oligodendrocyte generation in the spinal cord and hindbrain. *Neuron*45:55-67.
- Van't Veer, A., Du, Y., Fischer, T. Z., Boetig, D. R., Wood, M. R., & Dreyfus, C. F. (2009). Brain- derived neurotrophic factor effects on oligodendrocyte progenitors of the basal forebrain are mediated through trkB and the MAP kinase pathway. *Journal of neuroscience research*, 87(1), 69-78.
- Ventura, R., & Harris, K. M. (1999). Three-dimensional relationships between hippocampal synapses and astrocytes. *Journal of Neuroscience*, 19(16), 6897-6906.
- Verkhatsky, A., & Butt, A. (2013). Neuroglia: definition, classification, evolution, numbers, development. *glial physiology and pathophysiology*, 73-104.
- Villard, L., Kpebe, A., Cardoso, C., Chelly, J., Tardieu, M., & Fontes, M. (2000). Two affected boys in a Rett syndrome family Clinical and molecular findings. *Neurology*, 55(8), 1188-1193.
- Vora, P., Mina, R., Namaka, M., & Frost, E. (2010). A novel transcriptional regulator of myelin gene expression: implications for neurodevelopmental disorders. *Neuroreport*, 21(14), 917–921.
- Vora, P., Pillai, P. P., Zhu, W., Mustapha, J., Namaka, M. P., & Frost, E. E. (2011). Differential effects of growth factors on oligodendrocyte progenitor migration. *European journal of cell biology*, 90(8), 649-656.
- Wada, R., Akiyama, Y., Hashimoto, Y., Fukamachi, H., & Yuasa, Y. (2010). miR- 212 is downregulated and suppresses methyl- CpG- binding protein MeCP2 in human gastric cancer. *International journal of cancer*, 127(5), 1106-1114.
- Wake, H., Lee, P. R., & Fields, R. D. (2011). Control of local protein synthesis and initial events in myelination by action potentials. *Science*, 333(6049), 1647-1651.
- Wang, D. D., & Bordey, A. (2008). The astrocyte odyssey. *Progress in neurobiology*, 86(4), 342-367.

- Wang, J. T., Wu, T. T., Bai, L., Ding, L., Hao, M., & Wang, Y. (2013). Effect of folate in modulating the expression of DNA methyltransferase 1 and methyl-CpG-binding protein 2 in cervical cancer cell lines. *Zhonghua liu xing bing xue za zhi= Zhonghua liuxingbingxue zazhi*, 34(2), 173-177.
- Wang, Z., Zhang, J., Zhang, Y., Srivenugopal, K. S., & Lim, S. H. (2006). SPAN- XB core promoter sequence is regulated in myeloma cells by specific CpG dinucleotides associated with the MeCP2 protein. *International journal of cancer*, 119(12), 2878-2884.
- Waxman S., Kocsis J., Stys P., (1995). The axon. Orford Uni Press.
- Weber, F., Goldmann, C., Krämer, M., Kaup, F. J., Pickhardt, M., Young, P., ... & Lüke, W. (2001). Cellular and humoral immune response in progressive multifocal leukoencephalopathy. *Annals of neurology*, 49(5), 636-642.
- Wegner, M. (2008). A matter of identity: transcriptional control in oligodendrocytes. *Journal of Molecular Neuroscience*, 35(1), 3-12.
- Wen, P. Y., & Kesari, S. (2008). Malignant gliomas in adults. *New England Journal of Medicine*, 359(5), 492-507.
- Wenger, D. A., Rafi, M. A., & Luzi, P. (1997). Molecular genetics of Krabbe disease (globoid cell leukodystrophy): diagnostic and clinical implications. *Human mutation*, 10(4), 268.
- Werner, H. B., Krämer- Albers, E. M., Strenzke, N., Saher, G., Tenzer, S., Ohno- Iwashita, Y., ... & Nave, K. A. (2013). A critical role for the cholesterol- associated proteolipids PLP and M6B in myelination of the central nervous system. *Glia*, 61(4), 567-586.
- White, R., Gonsior, C., Krämer-Albers, E. M., Stöhr, N., Hüttelmaier, S., & Trotter, J. (2008). Activation of oligodendroglial Fyn kinase enhances translation of mRNAs transported in hnRNP A2-dependent RNA granules. *The Journal of cell biology*, 181(4), 579-586.
- Williams, E. C., Zhong, X., Mohamed, A., Li, R., Liu, Y., Dong, Q., ... Chang, Q. (2014). Mutant astrocytes differentiated from Rett syndrome patients-specific iPSCs have adverse effects on wild-type neurons. *Human Molecular Genetics*, 23(11), 2968–80.
- Wu, Q., Miller, R. H., Ransohoff, R. M., Robinson, S., Bu, J., & Nishiyama, A. (2000). Elevated Levels of the Chemokine GRO-1 Correlate with Elevated Oligodendrocyte Progenitor Proliferation in the Jimpy Mutant. *Journal of Neuroscience*, 20(7), 2609-2617.

- Xiao, J., Wong, A. W., Willingham, M. M., van den Buuse, M., Kilpatrick, T. J., & Murray, S. S. (2010). Brain-derived neurotrophic factor promotes central nervous system myelination via a direct effect upon oligodendrocytes. *Neurosignals*, 18(3), 186.
- Xin, M., Yue, T., Ma, Z., Wu, F. F., Gow, A., & Lu, Q. R. (2005). Myelinogenesis and axonal recognition by oligodendrocytes in brain are uncoupled in Olig1-null mice. *Journal of Neuroscience*, 25(6), 1354-1365.
- Xiong, J., Zhou, L., Lim, Y., Yang, M., Zhu, Y. H., Li, Z. W., ... & Zhou, X. F. (2013b). Mature BDNF promotes the growth of glioma cells in vitro. *Oncology reports*, 30(6), 2719-2724.
- Xiong, Jing, Li Zhou, Miao Yang, Yoon Lim, Yu-hong Zhu, Deng-li Fu, Zhi-wei Li, Jin-hua Zhong, Zhi-cheng Xiao, and Xin-Fu Zhou. "ProBDNF and its receptors are upregulated in glioma and inhibit the growth of glioma cells in vitro." *Neuro-oncology* 15, no. 8 (2013a): 990-1007.
- Xu, M., Bian, S., Li, J., He, J., Chen, H., Ge, L., ... & Mo, Y. (2016). MeCP2 suppresses LIN28A expression via binding to its methylated-CpG islands in pancreatic cancer cells. *Oncotarget*, 7(12), 14476-14485.
- Xu, X., Jin, H., Liu, Y., Liu, L., Wu, Q., Guo, Y., ... & Dong, X. (2012). The expression patterns and correlations of claudin-6, methy-CpG binding protein 2, DNA methyltransferase 1, histone deacetylase 1, acetyl-histone H3 and acetyl-histone H4 and their clinicopathological significance in breast invasive ductal carcinomas. *Diagnostic pathology*, 7(1), 33.
- Yakabe, S., Soejima, H., Yatsuki, H., Tominaga, H., Zhao, W., Higashimoto, K., ... & Mukai, T. (2008). MeCP2 knockdown reveals DNA methylation-independent gene repression of target genes in living cells and a bias in the cellular location of target gene products. *Genes & genetic systems*, 83(2), 199-208.
- Yamamoto, Y., Yoshikawa, H., Nagano, S., Kondoh, G., Sadahiro, S., Gotow, T., ... & Sakoda, S. (1999). Myelin- associated oligodendrocytic basic protein is essential for normal arrangement of the radial component in central nervous system myelin. *European Journal of Neuroscience*, 11(3), 847-855.
- Yamamuro, K., Kimoto, S., Rosen, K. M., Kishimoto, T., & Makinodan, M. (2015). Potential primary roles of glial cells in the mechanisms of psychiatric disorders. *Frontiers in cellular neuroscience*, 9, 154.

- Yan, H., & Rivkees, S. A. (2002). Hepatocyte growth factor stimulates the proliferation and migration of oligodendrocyte precursor cells. *Journal of neuroscience research*, 69(5), 597-606.
- Yang, X., & Skoff, R. P. (1997). Proteolipid protein regulates the survival and differentiation of oligodendrocytes. *Journal of Neuroscience*, 17(6), 2056-2070.
- Yasui, D. H., Xu, H., Dunaway, K. W., Lasalle, J. M., Jin, L., & Maezawa, I. (2013). MeCP2 modulates gene expression pathways in astrocytes. *Molecular Autism*, 4(1), 3.
- Yazdani, M., Deogracias, R., Guy, J., Poot, R., Bird, A., & Barde, Y.-A. (2012). Disease modeling using embryonic stem cells: MeCP2 regulates nuclear size and RNA synthesis in neurons. *STEM CELLS*, 30(10), 2128–2139.
- Ye, F., Chen, Y., Hoang, T., Montgomery, R. L., Zhao, X. H., Bu, H., ... & Hsieh, J. (2009). HDAC1 and HDAC2 regulate oligodendrocyte differentiation by disrupting the β -catenin–TCF interaction. *Nature neuroscience*, 12(7), 829-838.
- Ye, P., Carson, J., & D'Ercole, A. J. (1995). In vivo actions of insulin-like growth factor-I (IGF-I) on brain myelination: studies of IGF-I and IGF binding protein-1 (IGFBP-1) transgenic mice. *Journal of Neuroscience*, 15(11), 7344-7356.
- Ye, P., Kanoh, M., Zhu, W., Laszkiewicz, I., Royland, J. E., Wiggins, R. C., & Konat, G. (1992). Cyclic AMP- induced upregulation of proteolipid protein and myelin associated glycoprotein gene expression in C6 cells. *Journal of neuroscience research*, 31(3), 578-583.
- Yin, X., Crawford, T. O., Griffin, J. W., Tu, P. H., Lee, V. M. Y., Li, C., ... & Trapp, B. D. (1998). Myelin-associated glycoprotein is a myelin signal that modulates the caliber of myelinated axons. *Journal of Neuroscience*, 18(6), 1953-1962.
- Yoshikawa, F., Sato, Y., Tohyama, K., Akagi, T., Hashikawa, T., Nagakura-Takagi, Y., ... & Sugano, S. (2008). Opalin, a transmembrane sialylglycoprotein located in the central nervous system myelin paranodal loop membrane. *Journal of Biological Chemistry*, 283(30), 20830-20840.
- Young, J. I., Hong, E. P., Castle, J. C., Crespo-barreto, J., Aaron, B., Rose, M. F., ... Zoghbi, H. Y. (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*, 102(49), 17551–17558.

- Yu, Y., Chen, Y., Kim, B., Wang, H., Zhao, C., He, X., ... & Chan, J. R. (2013). Olig2 targets chromatin remodelers to enhancers to initiate oligodendrocyte differentiation. *Cell*, 152(1), 248-261.
- Yusufzai, T., & Wolffe, A. (2000). Functional consequences of Rett syndrome mutations on human MeCP2. *Nucleic Acids Research*, 28(21), 4172–4179.
- Zachariah, R. M., & Rastegar, M. (2012). Linking epigenetics to human disease and Rett syndrome: the emerging novel and challenging concepts in MeCP2 research. *Neural plasticity*, 2012.
- Zachariah, R. M., Olson, C. O., Ezeonwuka, C., & Rastegar, M. (2012). Novel MeCP2 Isoform-Specific Antibody Reveals the Endogenous MeCP2E1 Expression in Murine Brain , Primary Neurons and Astrocytes. *PloS One*, 7(11), e49763.
- Zamvil, S. S., & Steinman, L. (2003). Diverse targets for intervention during inflammatory and neurodegenerative phases of multiple sclerosis. *Neuron*, 38(5), 685-688.
- Zhang, Z. N., Freitas, B. C., Qian, H., Lux, J., Acab, A., Trujillo, C. A., ... & Karpiak, J. V. (2016). Layered hydrogels accelerate iPSC-derived neuronal maturation and reveal migration defects caused by MeCP2 dysfunction. *Proceedings of the National Academy of Sciences*, 113(12), 3185-3190.
- Zhao, X., Dai, J., Ma, Y., Mi, Y., Cui, D., Ju, G., ... & Jin, W. (2014). Dynamics of ten- eleven translocation hydroxylase family proteins and 5- hydroxymethylcytosine in oligodendrocyte differentiation. *Glia*, 62(6), 914-926.
- Zhou Q, Choi G, Anderson DJ (2001) The bHLH transcription factor Olig2 promotes oligodendrocyte differentiation in collaboration with Nkx2.2. *Neuron* 3:791-807.
- Zhou, Q., Wang, S., & Anderson, D. J. (2000). Identification of a novel family of oligodendrocyte lineage-specific basic helix–loop–helix transcription factors. *Neuron*, 25(2), 331-343.
- Zhou, Z., Hong, E. J., Cohen, S., Zhao, W., Ho, H.-Y. H., Schmidt, L., ... Greenberg, M. E. (2006). Brain-specific phosphorylation of MeCP2 regulates activity-dependent Bdnf transcription, dendritic growth, and spine maturation. *Neuron*, 52(2), 255–69.
- Zhu, Q., Zhao, X., Zheng, K., Li, H., Huang, H., Zhang, Z., ... & Qiu, M. (2014). Genetic evidence that Nkx2. 2 and Pdgfra are major determinants of the timing of oligodendrocyte differentiation in the developing CNS. *Development*, 141(3), 548-555.

- Zhu, W., Wiggins, R. C., & Konat, G. W. (1994). Glucocorticoid- induced upregulation of proteolipid protein and myelin- associated glycoprotein genes in C6 cells. *Journal of neuroscience research*, 37(2), 208-212.
- Zhu, X., Hill, R. A., Dietrich, D., Komitova, M., Suzuki, R., & Nishiyama, A. (2011). Age-dependent fate and lineage restriction of single NG2 cells. *Development*, 138(4), 745-753.
- Zoghbi H, Francke U. Rett syndrome. In: Scriver CR, Beaudet AL, Sly WS, Valle D. (2001). *The Metabolic & Molecular Bases of Inherited Disease*. New York: McGraw-Hill/Medical Publishing Division pp. 6329–6338.
- Zong, H., Verhaak, R. G., & Canoll, P. (2012). The cellular origin for malignant glioma and prospects for clinical advancements. *Expert review of molecular diagnostics*, 12(4), 383-394.