

# PS3141: Clinical and Cognitive Neuroscience

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1.

Passingham RE, Wise SP. The Neurobiology of the Prefrontal Cortex: Anatomy, Evolution, and the Origin of Insight. 1st ed. Oxford, United Kingdom: Oxford University Press; 2012.

2.

Passingham RE, Wise SP. The Neurobiology of the Prefrontal Cortex: Anatomy, Evolution, and the Origin of Insight [Internet]. Oxford: Oxford University Press; 2012. Available from: <https://ebookcentral.proquest.com/lib/rhul/detail.action?docID=4701018>

3.

Fuster JM. Prefrontal Neurons in Networks of Executive Memory. Brain Research Bulletin. 2000;52(5):331-336.

4.

Fuster JM. The Prefrontal Cortex - An Update: Time Is of the Essence. Neuron. 2001;30(2):319-333.

5.

Fuster JM. Upper Processing Stages of the Perception-action Cycle. Trends in Cognitive Sciences. 2004;8(4):143-145.

6.

Koechlin E, Ody C, Kouneiher F. The Architecture of Cognitive Control in the Human Prefrontal Cortex. *Science* [Internet]. American Association for the Advancement of Science; 2003;302(5648):1181–1185. Available from: [http://www.jstor.org/stable/3835489?seq=1#page\\_scan\\_tab\\_contents](http://www.jstor.org/stable/3835489?seq=1#page_scan_tab_contents)

7.

Koechlin E, Summerfield C. An Information Theoretical Approach to Prefrontal Executive Function. *Trends in Cognitive Sciences*. 2007;11(6):229–235.

8.

Ramnani N, Owen AM. Anterior Prefrontal Cortex: Insights Into Function From Anatomy and Neuroimaging. *Nature Reviews Neuroscience*. 2004;5(3):184–194.

9.

Constantinidis C. Coding Specificity in Cortical Microcircuits: A Multiple-Electrode Analysis of Primate Prefrontal Cortex. *Journal of Neuroscience* [Internet]. Society for Neuroscience; 2001;21(10):3646–3655. Available from: <http://www.jneurosci.org/content/21/10/3646.long>

10.

Leon MI, Shadlen MN. Effect of Expected Reward Magnitude on the Response of Neurons in the Dorsolateral Prefrontal Cortex of the Macaque. *Neuron*. 1999;24(2):415–425.

11.

Quintana J. From Perception to Action: Temporal Integrative Functions of Prefrontal and Parietal Neurons. *Cerebral Cortex*. 1999;9(3):213–221.

12.

Sakai K, Rowe JB, Passingham RE. Active Maintenance in Prefrontal Area 46 Creates Distractor-Resistant Memory. *Nature Neuroscience*. 2002;5(5):479–484.

13.

Rowe JB, Toni I, Josephs O, Frackowiak RSJ, Passingham RE. The Prefrontal Cortex: Response Selection or Maintenance Within Working Memory? *Science* [Internet]. American Association for the Advancement of Science; 2000;288(5471):1656–1660. Available from: [http://www.jstor.org/stable/3075487?seq=1#page\\_scan\\_tab\\_contents](http://www.jstor.org/stable/3075487?seq=1#page_scan_tab_contents)

14.

Ramnani N, Passingham RE. Changes in the Human Brain During Rhythm Learning. *Journal of Cognitive Neuroscience*. 2001;13(7):952–966.

15.

Passingham RE, Weinberger D, Petrides M. Attention to Action. *Philosophical Transactions: Biological Sciences* [Internet]. Royal Society; 1996;351(1346):1473–1479. Available from: [http://www.jstor.org/stable/3069194?seq=1#page\\_scan\\_tab\\_contents](http://www.jstor.org/stable/3069194?seq=1#page_scan_tab_contents)

16.

Jueptner M. Anatomy of Motor Learning. I. Frontal Cortex and Attention to Action. *Journal of Neurophysiology* [Internet]. American Physiological Society; 1997;77(3):1313–1324. Available from: <http://jn.physiology.org/content/77/3/1313>

17.

Shallice T, Burgess P, Robertson I. The Domain of Supervisory Processes and Temporal Organization of Behaviour [And Discussion]. *Philosophical Transactions: Biological Sciences* [Internet]. Royal Society; 1996;351(1346):1405–1412. Available from: [http://www.jstor.org/stable/3069186?seq=1#page\\_scan\\_tab\\_contents](http://www.jstor.org/stable/3069186?seq=1#page_scan_tab_contents)

18.

Miller EK. The Prefrontal Cortex and Cognitive Control. *Nature Reviews Neuroscience*. 2000;1(1):59–65.

19.

Miller EK, Freedman DJ, Wallis JD. The Prefrontal Cortex: Categories, Concepts and Cognition. *Philosophical Transactions: Biological Sciences* [Internet]. Royal Society; 2002;357(1424):1123–1136. Available from: [http://www.jstor.org/stable/3066752?seq=1#page\\_scan\\_tab\\_contents](http://www.jstor.org/stable/3066752?seq=1#page_scan_tab_contents)

20.

Freedman DJ, Riesenhuber M, Poggio T, Miller EK. Categorical Representation of Visual Stimuli in the Primate Prefrontal Cortex. *Science* [Internet]. American Association for the Advancement of Science; 2001;291(5502):312–316. Available from: [http://www.jstor.org/stable/3082349?seq=1#page\\_scan\\_tab\\_contents](http://www.jstor.org/stable/3082349?seq=1#page_scan_tab_contents)

21.

Arai Y. Spatial Orientation of Caloric Nystagmus in Semicircular Canal-Plugged Monkeys. *Journal of Neurophysiology* [Internet]. American Physiological Society; 2002;88(2):914–928. Available from: <http://jn.physiology.org/content/88/2/914>

22.

Freedman DJ. A Comparison of Primate Prefrontal and Inferior Temporal Cortices during Visual Categorization. *Journal of Neuroscience* [Internet]. Society for Neuroscience; 2003;23(12):5235–5246. Available from: <http://www.jneurosci.org/content/23/12/5235.short>

23.

Williams C. The Secret of You. *New Scientist*. 2018;239(3185):36–39.

24.

Ramnani N. The Primate Cortico-Cerebellar System: Anatomy and Function. *Nature Reviews Neuroscience*. 2006;7(7):511–522.

25.

Ramnani N. *Cerebellar Learning* [Internet]. Oxford: Elsevier Science & Technology; 2014. Available from: <https://moodle.royalholloway.ac.uk/mod/resource/view.php?id=160502>

26.

Ramnani N. Automatic and Controlled Processing in the Corticocerebellar System. In: Ramnani N, editor. Cerebellar learning [Internet]. Amsterdam: Elsevier; 2014. p. 255–285. Available from: <https://moodle.royalholloway.ac.uk/mod/resource/view.php?id=160502>

27.

Strick PL, Dum RP, Fiez JA. Cerebellum and Nonmotor Function. Annual Review of Neuroscience. 2009;32(1):413–434.

28.

Strick PL, Dum RP, Fiez JA. Cerebellum and Nonmotor Function. Annual Review of Neuroscience. 2009;32(1):413–434.

29.

Leiner HC, Leiner AL, Dow RS. Cognitive and Language Functions of the Human Cerebellum. Trends in Neurosciences. 1993;16(11):444–447.

30.

The Cerebellum: Connections, Computations and Cognition. Trends in Cognitive Sciences [Internet]. 1998;2(9). Available from: <http://www.sciencedirect.com/science/journal/13646613/2/9>

31.

Kelly RM, Strick PL. Cerebellar Loops with Motor Cortex and Prefrontal Cortex of a Nonhuman Primate. The Journal of Neuroscience. 2003;23(23):8432–8444.

32.

Middleton FA, Strick PL. Dentate Output Channels: Motor and Cognitive Components. The Cerebellum: From Structure to Control [Internet]. Elsevier; 1997;Progress in Brain Research 114:553–566. Available from: <http://linkinghub.elsevier.com/retrieve/pii/S0079612308633865>

33.

Middleton FA, Strick PL. Anatomical Evidence for Cerebellar and Basal Ganglia Involvement in Higher Cognitive Function. *Science* [Internet]. American Association for the Advancement of Science; 1994;266(5184):458–461. Available from: <https://www.jstor.org/stable/2885336>

34.

Hayter AL, Langdon DW, Ramnani N. Cerebellar Contributions to Working Memory. *NeuroImage*. 2007;36(3):943–954.

35.

Balsters JH, Cussans E, Diedrichsen J, Phillips KA, Preuss TM, Rilling JK, Ramnani N. Evolution of the Cerebellar Cortex: The Selective Expansion of Prefrontal-Projecting Cerebellar Lobules. *NeuroImage*. 2010;49(3):2045–2052.

36.

Balsters JH, Ramnani N. Symbolic Representations of Action in the Human Cerebellum. *NeuroImage*. 2008;43(2):388–398.

37.

Balsters JH. Cerebellar Plasticity and the Automation of First-Order Rules. *Journal of Neuroscience* [Internet]. Society for Neuroscience; 2011;31(6):2305–2312. Available from: <http://www.jneurosci.org/content/31/6/2305>

38.

Ramnani N. The Evolution of Prefrontal Inputs to the Cortico-pontine System: Diffusion Imaging Evidence from Macaque Monkeys and Humans. *Cerebral Cortex*. 2005;16(6):811–818.

39.

Ramnani N. Frontal Lobe and Posterior Parietal Contributions to the Cortico-Cerebellar System. *The Cerebellum*. 2012;11(2):366–383.

40.

Balsters JH, Whelan CD, Robertson IH, Ramnani N. Cerebellum and Cognition: Evidence for the Encoding of Higher Order Rules. *Cerebral Cortex*. 2013;23(6):1433–1443.

41.

O'Reilly JX, Beckmann CF, Tomassini V, Ramnani N, Johansen-Berg H. Distinct and Overlapping Functional Zones in the Cerebellum Defined by Resting State Functional Connectivity. *Cerebral Cortex*. 2010 Apr;20(4):953–965.

42.

Glickstein M, May JG, Mercier BE. Corticopontine Projection in the Macaque: The Distribution of Labelled Cortical Cells After Large Injections of Horseradish Peroxidase in the Pontine Nuclei. *The Journal of Comparative Neurology*. 1985;235(3):343–359.

43.

Glickstein M. What Does the Cerebellum Really Do? *Current Biology*. 2007;17(19):R824–R827.

44.

Glickstein M. Motor Skills but Not Cognitive Tasks. *Trends in Neurosciences*. 1993;16(11):450–451.

45.

Glickstein M, Strata P, Voogd J. Cerebellum: History. *Neuroscience*. 2009;162(3):549–559.

46.

Allen G, Buxton RB, Wong EC, Courchesne E. Attentional Activation of the Cerebellum Independent of Motor Involvement. *Science* [Internet]. American Association for the Advancement of Science; 1997;275(5308):1940–1943. Available from: [http://www.jstor.org/stable/2893081?seq=1#page\\_scan\\_tab\\_contents](http://www.jstor.org/stable/2893081?seq=1#page_scan_tab_contents)

47.

Stein J. The Magnocellular Theory of Developmental Dyslexia. *Dyslexia*. 2001;7(1):12–36.

48.

Kirschen MP, Chen SHA, Schraedley-Desmond P, Desmond JE. Load- and Practice-Dependent Increases in Cerebro-Cerebellar Activation in Verbal Working Memory: An fMRI Study. *NeuroImage*. 2005;24(2):462–472.

49.

Kim SG, Uğurbil K, Strick PL. Activation of a Cerebellar Output Nucleus During Cognitive Processing. *Science* [Internet]. American Association for the Advancement of Science; 1994;265(5174):949–951. Available from: [http://www.jstor.org/stable/2884519?seq=1#page\\_scan\\_tab\\_contents](http://www.jstor.org/stable/2884519?seq=1#page_scan_tab_contents)

50.

Kirschen MP, Chen SHA, Schraedley-Desmond P, Desmond JE. Load- and Practice-Dependent Increases in Cerebro-Cerebellar Activation in Verbal Working Memory: An fMRI Study. *NeuroImage*. 2005;24(2):462–472.

51.

Schmahmann J. The Cerebellar Cognitive Affective Syndrome. *Brain*. 1998;121(4):561–579.

52.

Budisavljevic S, Ramnani N. Cognitive Deficits From a Cerebellar Tumour: A Historical Case Report From Luria's Laboratory. *Cortex*. 2012;48(1):26–35.



53.

Baron JC, Bousser MG, Comar D, Dequesnoy N, Castaigne P. Crossed Cerebellar Diaschisis: A Remote Functional Suppression Secondary to Supratentorial Infarction in Man. *Journal of Cerebral Bloodflow Medicine*. 1981;1.

54.

Mai JK, Voss T, Paxinos G. 3.1 Surface Views of the Atlas Brain. *Atlas of the human brain*. 3rd ed. London: Academic; 2008.

55.

Duvernoy HM, Bourgouin P, Vannson JL. *Human Brain: Surface, Three-Dimensional Sectional Anatomy With MRI, and Blood Supply* [Internet]. Second, completely revised and enlarged edition. Wien, [Austria]: Springer; 1999. Available from: <https://ebookcentral.proquest.com/lib/rhul/detail.action?docID=3099186>

56.

Breedlove SM, Watson NV. *General Principles of Sensory Processing, Touch, and Pain. Biological Psychology: An Introduction to Behavioral, Cognitive, and Clinical Neuroscience*. 7th Edition. Sunderland, Massachusetts: Sinauer Associates; 2013.

57.

Schieber MH. Constraints on Somatotopic Organization in the Primary Motor Cortex. *Journal of Neurophysiology* [Internet]. American Physiological Society; 2001;86(5):2125–2143. Available from: <http://jn.physiology.org/content/86/5/2125>

58.

Pons TP, Garraghty PE, Ommaya AK, Kaas JH, Taub E, Mishkin M. Massive Cortical Reorganization After Sensory Deafferentation in Adult Macaques. *Science* [Internet]. American Association for the Advancement of Science; 1991;252(5014):1857–1860. Available from: [http://www.jstor.org/stable/2875886?seq=1#page\\_scan\\_tab\\_contents](http://www.jstor.org/stable/2875886?seq=1#page_scan_tab_contents)

59.

Buonomano DV, Merzenich MM. Cortical Plasticity: From Synapses to Maps. *Annual Review of Neuroscience*. 1998;21(1):149-186.

60.

Flor H, Nikolajsen L, Staehelin Jensen T. Phantom Limb Pain: A Case of Maladaptive CNS Plasticity? *Nature Reviews Neuroscience*. 2006;7(11):873-881.

61.

Farnè A, Roy AC, Giraux P, Dubernard JM, Sirigu A. Face or Hand, Not Both. *Current Biology*. 2002;12(15):1342-1346.

62.

Vargas CD, Aballéa A, Rodrigues ÉC, Reilly KT, Mercier C, Petruzzo P, Dubernard JM, Sirigu A, Kaas JH. Re-Emergence of Hand-Muscle Representations in Human Motor Cortex After Hand Allograft. *Proceedings of the National Academy of Sciences of the United States of America* [Internet]. National Academy of SciencesNational Academy of Sciences; 2009;106(17):7197-7202. Available from: [http://www.jstor.org/stable/40483397?seq=1#page\\_scan\\_tab\\_contents](http://www.jstor.org/stable/40483397?seq=1#page_scan_tab_contents)

63.

Lotze M. Phantom Movements and Pain an fMRI Study in Upper Limb Amputees. *Brain*. 2001;124(11):2268-2277.

64.

Ramachandran V. The Perception of Phantom Limbs. the D. O. Hebb Lecture. *Brain*. 1998;121(9):1603-1630.

65.

Harris AJ. Cortical Origin of Pathological Pain. *The Lancet*. 1999;354(9188):1464-1466.

66.

Giraux P, Sirigu A, Schneider F, Dubernard JM. Cortical Reorganization in Motor Cortex After Graft of Both Hands. *Nature Neuroscience*. 2001;4(7):691-692.

67.

Jain N, Catania KC, Kaas JH. Deactivation and Reactivation of Somatosensory Cortex After Dorsal Spinal Cord Injury. *Nature*. 1997;386(6624):495-498.

68.

Feldman DE, Brecht M. Map Plasticity in Somatosensory Cortex. *Science* [Internet]. American Association for the Advancement of Science American Association for the Advancement of Science; 2005;310(5749):810-815. Available from: [http://www.jstor.org/stable/3842754?seq=1#page\\_scan\\_tab\\_contents](http://www.jstor.org/stable/3842754?seq=1#page_scan_tab_contents)

69.

Jones EG. Cortical and Subcortical Contributions to Activity-Dependent Plasticity in Primate Somatosensory Cortex. *Annual Review of Neuroscience*. 2000;23(1):1-37.

70.

Kaas JH, Merzenich MM, Killackey HP. The Reorganization of Somatosensory Cortex Following Peripheral Nerve Damage in Adult and Developing Mammals. *Annual Review of Neuroscience*. 1983;6(1):325-356.

71.

Engel AK, Singer W. Temporal Binding and the Neural Correlates of Sensory Awareness. *Trends in Cognitive Sciences*. 2001;5(1):16-25.

72.

Fries P. A Mechanism for Cognitive Dynamics: Neuronal Communication Through Neuronal Coherence. *Trends in Cognitive Sciences*. 2005;9(10):474-480.

73.

Fries P. Neuronal Gamma-Band Synchronization as a Fundamental Process in Cortical Computation. *Annual Review of Neuroscience*. 2009;32(1):209–224.

74.

Litvak V, Mattout J, Kiebel S, Phillips C, Henson R, Kilner J, Barnes G, Oostenveld R, Daunizeau J, Flandin G, Penny W, Friston K. EEG and MEG Data Analysis in SPM8. *Computational Intelligence and Neuroscience*. 2011;2011:1–32.

75.

Jenkinson N, Brown P. New Insights Into the Relationship Between Dopamine, Beta Oscillations and Motor Function. *Trends in Neurosciences*. 2011;34(12):611–618.

76.

Tallon-Baudry C. Oscillatory Gamma Activity in Humans and Its Role in Object Representation. *Trends in Cognitive Sciences*. 1999;3(4):151–162.

77.

Uhlhaas PJ, Singer W. Abnormal Neural Oscillations and Synchrony in Schizophrenia. *Nature Reviews Neuroscience*. 2010;11(2):100–113.

78.

Amplitude, Frequency, and Phase [Internet]. 2014. Available from:  
[https://www.youtube.com/watch?v=G5\\_zul5wrTY](https://www.youtube.com/watch?v=G5_zul5wrTY)

79.

Introduction to Brain Waves [Internet]. 2014. Available from:  
<https://www.youtube.com/watch?v=LEJdlkc-EDA>

80.

Neurexpert - The EEG and Gamma Oscillations [Internet]. 2015. Available from:  
<https://www.youtube.com/watch?v=ZRgX1dH1pf8>

81.

Sleep Basics: Wave Form and Sleep Stages [Internet]. 2013. Available from:  
<https://www.youtube.com/watch?v=3vsq8zsF0Kc>

82.

Brain Oscillations: A Video Quick Guide [Internet]. 2012. Available from:  
[https://www.youtube.com/watch?v=\\_vQk9isSSSc](https://www.youtube.com/watch?v=_vQk9isSSSc)

83.

Oscillating Neural Network Demonstration [Internet]. 2015. Available from:  
[https://www.youtube.com/watch?v=bl2aYFv\\_978](https://www.youtube.com/watch?v=bl2aYFv_978)

84.

Massachusetts Institute of Technology (MIT) - YouTube [Internet]. Available from:  
<http://video.mit.edu/watch/what-harm-does-pathological-synchronization-in-parkinsons-disease-do-9489/>

85.

Wichmann T. Oscillatory Neuronal Activity Patterns in Parkinson's Disease. The Biomedical & Life Sciences Collection [Internet]. 2014; Available from:  
<https://hstalks.com/t/2820/oscillatory-neuronal-activity-patterns-in-parkinsons/>

86.

Theta Oscillations and Their Role in Creating Place and Grid Cell Representations | John O'Keefe [Internet]. 2014. Available from:  
<https://www.youtube.com/watch?v=PcYMA27A14A>

87.

Jan's Interview With Wolf Singer (Full-Length) on Vimeo [Internet]. 2010. Available from: <https://vimeo.com/11151854>

88.

Fundamentals of Neuronal Oscillations and Synchrony [Internet]. 2015. Available from: <https://www.youtube.com/watch?v=vwPpSglPJTE>

89.

Fundamentals of Neuronal Oscillations and Synchrony [Internet]. 2015. Available from: <https://www.youtube.com/watch?v=vwPpSglPJTE>

90.

MEG and Neural Oscillations in ScZ: A Translational Perspective [Internet]. 2016. Available from: <https://www.youtube.com/watch?v=pRJxU3Kljyl>

91.

Synchronized Neural Oscillations in the Pathophysiology of Schizophrenia [Internet]. 2008. Available from: <https://www.youtube.com/watch?v=Kn3XZRwd9KY>

92.

TSN: Neural Oscillations in Schizophrenia: Perspectives From MEG [Internet]. Available from: <http://thesciencenetwork.org/programs/rhythmic-dynamics-and-cognition/peter-uhlhaas>

93.

Purves D. Modulation of Movement by the Basal Ganglia. Neuroscience. 4th Edition. Sunderland, Massachusetts: Sinauer; 2008.

94.

Kringelbach ML, Jenkinson N, Owen SLF, Aziz TZ. Translational Principles of Deep Brain Stimulation. *Nature Reviews Neuroscience*. 2007;8(8):623–635.

95.

Gustavsson A, Wittchen HU, Jönsson B, Olesen J. Cost of Disorders of the Brain in Europe 2010. *European Neuropsychopharmacology*. 2011;21(10):718–779.

96.

Bergman H, Wichmann T, DeLong MR. Reversal of Experimental Parkinsonism by Lesions of the Subthalamic Nucleus. *Science [Internet]*. American Association for the Advancement of Science; 1990;249(4975):1436–1438. Available from: [http://www.jstor.org/stable/2878195?seq=1#page\\_scan\\_tab\\_contents](http://www.jstor.org/stable/2878195?seq=1#page_scan_tab_contents)

97.

Fox SH, Brotchie JM. The MPTP-Lesioned Non-Human Primate Models of Parkinson's Disease. Past, Present, and Future. *Recent Advances in Parkinson's Disease - Translational and Clinical Research [Internet]*. Elsevier; 2010;Progress in Brain Research 184:133–157. Available from: <https://ebookcentral-proquest-com.ezproxy01.rhul.ac.uk/lib/rhul/reader.action?docID=616914&ppg=144>

98.

Wichmann T, DeLong MR. Deep Brain Stimulation for Neurologic and Neuropsychiatric Disorders. *Neuron*. 2006;52(1):197–204.

99.

Bezard E, Przedborski S. A Tale on Animal Models of Parkinson's Disease. *Movement Disorders*. 2011;26(6):993–1002.

100.

Wichmann T, DeLong MR, Guridi J, Obeso JA. Milestones in Research on the Pathophysiology of Parkinson's Disease. *Movement Disorders*. 2011;26(6):1032–1041.

101.

Blandini F, Armentero MT, Martignoni E. The 6-Hydroxydopamine Model: News from the Past. *Parkinsonism & Related Disorders*. 2008;14:S124-S129.

102.

Hauser RA. Levodopa: Past, Present, and Future. *European Neurology*. 2009;62(1):1-8.

103.

Fox SH, Brotchie JM. The MPTP-Lesioned Non-Human Primate Models of Parkinson's Disease. Past, Present, and Future. *Recent Advances in Parkinson's Disease - Translational and Clinical Research* [Internet]. Elsevier; 2010;Progress in Brain Research 184:133-157. Available from:  
<https://ebookcentral-proquest-com.ezproxy01.rhul.ac.uk/lib/rhul/reader.action?docID=616914&ppg=144>

104.

Wichmann T, DeLong MR. Deep Brain Stimulation for Neurologic and Neuropsychiatric Disorders. *Neuron*. 2006;52(1):197-204.

105.

Langston JW, Ballard P, Tetrud JW, Irwin I. Chronic Parkinsonism in Humans Due to a Product of Meperidine-Analog Synthesis. *Science* [Internet]. American Association for the Advancement of Science; 1983;219(4587):979-980. Available from:  
[http://www.jstor.org/stable/1690734?seq=1#page\\_scan\\_tab\\_contents](http://www.jstor.org/stable/1690734?seq=1#page_scan_tab_contents)

106.

Patel NK, Heywood P, O'Sullivan K, McCarter R, Love S, Gill SS. Unilateral Subthalamotomy in the Treatment of Parkinson's Disease. *Brain*. 2003;126(5):1136-1145.

107.



Krack P, Batir A, Van Blercom N, Chabardes S, Fraix V, Ardouin C, Koudsie A, Limousin PD, Benazzouz A, LeBas JF, Benabid AL, Pollak P. Five-Year Follow-up of Bilateral Stimulation of the Subthalamic Nucleus in Advanced Parkinson's Disease. *New England Journal of Medicine*. 2003;349(20):1925-1934.

108.

Merola A, Zibetti M, Angrisano S, Rizzi L, Ricchi V, Artusi CA, Lanotte M, Rizzone MG, Lopiano L. Parkinson's disease progression at 30 years: a study of subthalamic deep brain-stimulated patients. *Brain*. 2011 Jul 1;134(7):2074-2084.

109.

Stem Cell Basics: Introduction [Stem Cell Information] [Internet]. Available from: <https://web-beta.archive.org/web/20121120094520/https://stemcells.nih.gov/info/basics/basics1.asp>

110.

Stem Cells [Internet]. Available from: [https://web.archive.org/web/20221005153032/http://ns.umich.edu/stemcells/022706\\_TabA.html](https://web.archive.org/web/20221005153032/http://ns.umich.edu/stemcells/022706_TabA.html)

111.

Gould E. How Widespread Is Adult Neurogenesis in Mammals? *Nature Reviews Neuroscience*. 2007;8(6):481-488.

112.

Gross CG. Neurogenesis in the Adult Brain: Death of a Dogma. *Nature Reviews Neuroscience*. 2000;1(1):67-73.

113.

Alvarez-Buylla A. Neurogenesis in Adult Subventricular Zone. *Journal of Neuroscience* [Internet]. Society for Neuroscience; 2002;22(3):629-634. Available from: <http://www.jneurosci.org/content/22/3/629>

114.

Qiang L, Fujita R, Yamashita T, Angulo S, Rhinn H, Rhee D, Doege C, Chau L, Aubry L, Vanti WB, Moreno H, Abeliovich A. Directed Conversion of Alzheimer's Disease Patient Skin Fibroblasts into Functional Neurons. *Cell*. 2011;146(3):359-371.

115.

Björklund LM, Sánchez-Pernaute R, Chung S, Andersson T, Chen IYC, McNaught KStP, Brownell AL, Jenkins BG, Wahlestedt C, Kim KS, Isacson O. Embryonic Stem Cells Develop Into Functional Dopaminergic Neurons After Transplantation in a Parkinson Rat Model. *Proceedings of the National Academy of Sciences of the United States of America* [Internet]. National Academy of SciencesNational Academy of Sciences; 2002;99(4):2344-2349. Available from: [http://www.jstor.org/stable/3057967?seq=1#page\\_scan\\_tab\\_contents](http://www.jstor.org/stable/3057967?seq=1#page_scan_tab_contents)

116.

Modo M, Stroemer RP, Tang E, Patel S, Hodges H. Effects of Implantation Site of Stem Cell Grafts on Behavioral Recovery From Stroke Damage. *Stroke*. 2002;33(9):2270-2278.

117.

Bliss T, Guzman R, Daadi M, Steinberg GK. Cell Transplantation Therapy for Stroke. *Stroke*. 2007;38(2):817-826.

118.

Piccini P, Brooks DJ, Björklund A, Gunn RN, Grasby PM, Rimoldi O, Brundin P, Hagell P, Rehncrona S, Widner H, Lindvall O. Dopamine Release From Nigral Transplants Visualized in Vivo in a Parkinson's Patient. *Nature Neuroscience*. 1999;2(12):1137-1140.

119.

Gaillard A, Jaber M. Rewiring the Brain With Cell Transplantation in Parkinson's Disease. *Trends in Neurosciences*. 2011;34(3):124-133.

120.

Gaillard A, Prestoz L, Dumartin B, Cantereau A, Morel F, Roger M, Jaber M. Reestablishment of Damaged Adult Motor Pathways by Grafted Embryonic Cortical Neurons. *Nature Neuroscience*. 2007;10(10):1294–1299.

121.

Andres RH, Horie N, Slikker W, Keren-Gill H, Zhan K, Sun G, Manley NC, Pereira MP, Sheikh LA, McMillan EL, Schaar BT, Svendsen CN, Bliss TM, Steinberg GK. Human Neural Stem Cells Enhance Structural Plasticity and Axonal Transport in the Ischaemic Brain. *Brain*. 2011;134(6):1777–1789.

122.

Brundin P, Barker RA, Parmar M. Neural Grafting in Parkinson's Disease. *Recent Advances in Parkinson's Disease - Translational and Clinical Research*. Elsevier; 2010. p. 265–294.

123.

Widner H, Tetrad J, Rehnström S, Snow B, Brundin P, Gustavii B, Björklund A, Lindvall O, Langston JW. Bilateral Fetal Mesencephalic Grafting in Two Patients With Parkinsonism Induced by 1-Methyl-4-Phenyl-L,2,3,6-Tetrahydropyridine (MPTP). *New England Journal of Medicine*. 1992;327(22):1556–1563.

124.

Murphy TH, Corbett D. Plasticity During Stroke Recovery: From Synapse to Behaviour. *Nature Reviews Neuroscience*. 2009;10(12):861–872.

125.

Krakauer JW. Motor Learning: Its Relevance to Stroke Recovery and Neurorehabilitation. *Current Opinion in Neurology*. 2006;19(1):84–90.

126.

Cramer SC. Repairing the Human Brain After Stroke: I. Mechanisms of Spontaneous

Recovery. *Annals of Neurology* [Internet]. 2008;63(3):272–287. Available from: <https://onlinelibrary.wiley.com/doi/full/10.1002/ana.21393>

127.

Cramer SC, Shah R, Juranek J, Crafton KR, Le V. Activity in the Peri-Infarct Rim in Relation to Recovery From Stroke. *Stroke*. 2006;37(1):111–115.

128.

Nudo RJ, Milliken GW. Reorganization of Movement Representations in Primary Motor Cortex Following Focal Ischemic Infarcts in Adult Squirrel Monkeys. *Journal of Neurophysiology*. 1996;75(5):2144–2149.

129.

Nudo RJ, Wise BM, SiFuentes F, Milliken GW. Neural Substrates for the Effects of Rehabilitative Training on Motor Recovery After Ischemic Infarct. *Science* [Internet]. American Association for the Advancement of Science; 1996;272(5269):1791–1794. Available from: [http://www.jstor.org/stable/2889327?seq=1#page\\_scan\\_tab\\_contents](http://www.jstor.org/stable/2889327?seq=1#page_scan_tab_contents)

130.

Nudo RJ. Mechanisms for Recovery of Motor Function Following Cortical Damage. *Current Opinion in Neurobiology*. 2006;16(6):638–644.

131.

Liepert J, Miltner WHR, Bauder H, Sommer M, Dettmers C, Taub E, Weiller C. Motor Cortex Plasticity During Constraint-Induced Movement Therapy in Stroke Patients. *Neuroscience Letters*. 1998;250(1):5–8.

132.

Frost SB. Reorganization of Remote Cortical Regions After Ischemic Brain Injury: A Potential Substrate for Stroke Recovery. *Journal of Neurophysiology*. 2003;89(6):3205–3214.

133.

Biernaskie J, Chernenko G, Corbett D. Efficacy of Rehabilitative Experience Declines With Time After Focal Ischemic Brain Injury. *Journal Of Neuroscience : The Official Journal Of The Society For Neuroscience* [Internet]. 2004;24(5):1245–1254. Available from: [https://librarysearch.royalholloway.ac.uk/primo-explore/openurl?Z39.88-2004&rft.jtitle=Journal%20Of%20Neuroscience%20:%20The%20Official%20Journal%20Of%20The%20Society%20For%20Neuroscience&rft.atitle=Efficacy%20of%20Rehabilitative%20Experience%20Declines%20With%20Time%20After%20Focal%20Ischemic%20Brain%20Injury.&rft.volume=24&rft.spage=1245&rft.issn=-&rft.epage=1254&rft.issue=5&rft.date=2004&rft.aufirst=Jeff&rft.aulast=Biernaskie&vid=44ROY\\_VU2&rft.institution=44ROY&rft.url\\_ctx\\_val=&rft.url\\_ctx\\_fmt=null&rft.isServicePage=true](https://librarysearch.royalholloway.ac.uk/primo-explore/openurl?Z39.88-2004&rft.jtitle=Journal%20Of%20Neuroscience%20:%20The%20Official%20Journal%20Of%20The%20Society%20For%20Neuroscience&rft.atitle=Efficacy%20of%20Rehabilitative%20Experience%20Declines%20With%20Time%20After%20Focal%20Ischemic%20Brain%20Injury.&rft.volume=24&rft.spage=1245&rft.issn=-&rft.epage=1254&rft.issue=5&rft.date=2004&rft.aufirst=Jeff&rft.aulast=Biernaskie&vid=44ROY_VU2&rft.institution=44ROY&rft.url_ctx_val=&rft.url_ctx_fmt=null&rft.isServicePage=true)

134.

Horn SD, DeJong G, Smout RJ, Gassaway J, James R, Conroy B. Stroke Rehabilitation Patients, Practice, and Outcomes: Is Earlier and More Aggressive Therapy Better? *Archives of Physical Medicine and Rehabilitation*. 2005;86(12):101–114.

135.

Salter K, Jutai J, Hartley M, Foley N, Bhogal S, Bayona N, Teasell R. Impact of Early vs Delayed Admission to Rehabilitation on Functional Outcomes in Persons With Stroke. *Journal of Rehabilitation Medicine*. 2006;38(2):113–117.

136.

Lipsanen A, Jolkkonen J. Experimental Approaches to Study Functional Recovery Following Cerebral Ischemia. *Cellular and Molecular Life Sciences*. 2011;68(18):3007–3017.

137.

McDonald MW, Hayward KS, Rosbergen ICM, Jeffers MS, Corbett D. Is Environmental Enrichment Ready for Clinical Application in Human Post-stroke Rehabilitation? *Frontiers in Behavioral Neuroscience*. 2018;12.

138.

Schwartz AB, Cui XT, Weber DJ, Moran DW. Brain-Controlled Interfaces: Movement Restoration with Neural Prosthetics. *Neuron*. 2006;52(1):205–220.

139.

Donoghue JP. Bridging the Brain to the World: A Perspective on Neural Interface Systems. *Neuron*. 2008;60(3):511-521.

140.

Merabet LB, Rizzo JF, Amedi A, Somers DC, Pascual-Leone A. Opinion: What Blindness Can Tell Us About Seeing Again: Merging Neuroplasticity and Neuroprostheses. *Nature Reviews Neuroscience*. 2005;6(1):71-77.

141.

Dagnelie G. Psychophysical Evaluation for Visual Prosthesis. *Annual Review of Biomedical Engineering*. 2008;10(1):339-368.

142.

Nicolelis MAL, Lebedev MA. Principles of Neural Ensemble Physiology Underlying the Operation of Brain-machine Interfaces. *Nature Reviews Neuroscience*. 2009;10(7):530-540.

143.

O'Doherty JE, Lebedev MA, Ifft PJ, Zhuang KZ, Shokur S, Bleuler H, Nicolelis MAL. Active Tactile Exploration Using a Brain-Machine-Brain Interface. *Nature*. 2011;479(7372):228-231.

144.

Velliste M, Perel S, Spalding MC, Whitford AS, Schwartz AB. Cortical Control of a Prosthetic Arm for Self-Feeding. *Nature*. 2008;453(7198):1098-1101.

145.

Nicolelis MAL, Wessberg J, Stambaugh CR, Kralik JD, Beck PD, Laubach M, Chapin JK, Kim J, Biggs SJ, Srinivasan MA. Real-Time Prediction of Hand Trajectory by Ensembles of Cortical

Neurons in Primates. *Nature*. 2000;408(6810):361–365.

146.

Hochberg LR, Serruya MD, Friehs GM, Mukand JA, Saleh M, Caplan AH, Branner A, Chen D, Penn RD, Donoghue JP. Neuronal Ensemble Control of Prosthetic Devices by a Human With Tetraplegia. *Nature*. 2006;442(7099):164–171.

147.

Serruya MD, Hatsopoulos NG, Paninski L, Fellows MR, Donoghue JP. Brain-Machine Interface: Instant Neural Control of a Movement Signal. *Nature*. 2002;416(6877):141–142.

148.

Chapin JK, Moxon KA, Markowitz RS, Nicolelis MAL. Real-Time Control of a Robot Arm Using Simultaneously Recorded Neurons in the Motor Cortex. *Nature Neuroscience*. 1999;2(7):664–670.

149.

Schiller PH, Tehovnik EJ. Visual Prosthesis. *Perception*. 2008;37(10):1529–1559.

150.

Moritz CT, Perlmutter SI, Fetz EE. Direct Control of Paralysed Muscles by Cortical Neurons. *Nature*. 2008;456(7222):639–642.

151.

Dobelle WmH. Artificial Vision for the Blind by Connecting a Television Camera. *ASAIO Journal* [Internet]. 2000;46(1):3–9. Available from: [https://web.archive.org/web/20210605173238/https://journals.lww.com/asaiojournal/fulltext/2000/01000/artificial\\_vision\\_for\\_the\\_blind\\_by\\_connecting\\_a.2.aspx](https://web.archive.org/web/20210605173238/https://journals.lww.com/asaiojournal/fulltext/2000/01000/artificial_vision_for_the_blind_by_connecting_a.2.aspx)

152.

Brindley GS, Lewin WS. The Sensations Produced by Electrical Stimulation of the Visual Cortex. *The Journal of Physiology*. 1968;196(2):479–493.

153.

Merabet LB, Rizzo JF, Amedi A, Somers DC, Pascual-Leone A. Opinion: What Blindness Can Tell Us About Seeing Again: Merging Neuroplasticity and Neuroprostheses. *Nature Reviews Neuroscience*. 2005;6(1):71–77.

154.

Veraart C, Raftopoulos C, Mortimer JT, Delbeke J, Pins D, Michaux G, Vanlierde A, Parrini S, Wanet-Defalque MC. Visual Sensations Produced by Optic Nerve Stimulation Using an Implanted Self-Sizing Spiral Cuff Electrode. *Brain Research*. 1998;813(1):181–186.

155.

Breedlove SM. *The Chemistry of Behavior. Biological psychology: an introduction to behavioral, cognitive, and clinical neuroscience*. Seventh edition. Sunderland, Massachusetts: Sinauer Associates; 2013.

156.

Pierce RC, Kumaresan V. The Mesolimbic Dopamine System: The Final Common Pathway for the Reinforcing Effect of Drugs of Abuse? *Neuroscience & Biobehavioral Reviews*. 2006;30(2):215–238.

157.

Volkow ND, Wang GJ, Fowler JS, Tomasi D. Addiction Circuitry in the Human Brain. *Annual Review of Pharmacology and Toxicology*. 2012;52(1):321–336.

158.

Schultz W. Getting Formal with Dopamine and Reward. *Neuron*. 2002;36(2):241–263.

159.



Olds J. Self-Stimulation of the Brain; Its Use to Study Local Effects of Hunger, Sex, and Drugs. *Science* [Internet]. American Association for the Advancement of Science; 1958;127(3294):315–324. Available from: [http://www.jstor.org/stable/1754983?seq=1#page\\_scan\\_tab\\_contents](http://www.jstor.org/stable/1754983?seq=1#page_scan_tab_contents)

160.

Iversen L. Cannabis and the Brain. *Brain*. 2003;126(6):1252–1270.

161.

Ikemoto S, Wise RA. Mapping of Chemical Trigger Zones for Reward. *Neuropharmacology*. 2004;47:190–201.

162.

Volkow ND, Wang GJ, Fowler JS, Tomasi D. Addiction Circuitry in the Human Brain. *Annual Review of Pharmacology and Toxicology*. 2012;52(1):321–336.

163.

Nutt DJ, Lingford-Hughes A, Erritzoe D, Stokes PRA. The Dopamine Theory of Addiction: 40 Years of Highs and Lows. *Nature Reviews Neuroscience*. 2015;16(5):305–312.

164.

Olds J, Milner P. Positive Reinforcement Produced by Electrical Stimulation of Septal Area and Other Regions of Rat Brain. *Journal of Comparative Psychology* [Internet]. 1954;(6):419–427. Available from: <http://search.ebscohost.com/login.aspx?direct=true&db=pdh&AN=1955-06866-001&site=ehost-live>

165.

Di Chiara G, Imperato A. Drugs Abused by Humans Preferentially Increase Synaptic Dopamine Concentrations in the Mesolimbic System of Freely Moving Rats. *Proceedings of the National Academy of Sciences of the United States of America* [Internet]. National Academy of Sciences; 1988;85(14):5274–5278. Available from: [http://www.jstor.org/stable/32403?seq=1#page\\_scan\\_tab\\_contents](http://www.jstor.org/stable/32403?seq=1#page_scan_tab_contents)

166.

Goldberg SR, Tanda G, Munzar P. Self-Administration Behavior Is Maintained by the Psychoactive Ingredient of Marijuana in Squirrel Monkeys. *Nature Neuroscience*. 2000;3(11):1073–1074.

167.

Justinova Z, Tanda G, Redhi GH, Goldberg SR. Self-Administration of delta9-Tetrahydrocannabinol (THC) by Drug Naive Squirrel Monkeys. *Psychopharmacology*. 2003;169(2):135–140.

168.

Zangen A. Two Brain Sites for Cannabinoid Reward. *Journal of Neuroscience* [Internet]. Society for Neuroscience; 2006;26(18):4901–4907. Available from: <http://www.jneurosci.org/content/26/18/4901>

169.

Volkow ND, Wang GJ, Fowler JS, Logan J, Gatley SJ, Wong C, Hitzemann R, Pappas NR. Reinforcing Effects of Psychostimulants in Humans Are Associated with Increases in Brain Dopamine and Occupancy of D2Receptors. *Journal of Pharmacology and Experimental Therapeutics* [Internet]. 1999;291(1):409–415. Available from: <https://web.archive.org/web/20210517131243/http://jpet.aspetjournals.org/content/291/1/409>

170.

Lingford-Hughes AR, Welch S, Peters L, Nutt DJ. BAP Updated Guidelines: Evidence-Based Guidelines for the Pharmacological Management of Substance Abuse, Harmful Use, Addiction and Comorbidity: Recommendations From BAP. *Journal of Psychopharmacology*. 2012;26(7):899–952.

171.

Weinstein AM. Pharmacological Treatment of Cannabis Dependence. *Current pharmaceutical design* [Internet]. NIH Public Access; 2011;17(14):1351–1358. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3171994/>