

Curriculum Vitae

Alain Dagher, MD.

Montreal Neurological Institute, McGill University
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Born: 9 June 1961.

Citizenship: Canadian

Education

Undergraduate

McGill University	Electrical Engineering	B.Eng 1983
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Master's Degree

McGill University	Electrical Engineering	M.Eng 1985
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Medical

University of Toronto	Medicine	M.D. 1989
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Post-Graduate

Hammersmith Hospital, UK	Brain Imaging	1995-96
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Clinical Training

University of Toronto	Medicine Resident	1989-91
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Cornell University	Neurology Resident	1991-92
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McGill University	Neurology Resident	1992-94
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National Hospital for Nervous Diseases, Queen Square, London, UK.	Movement Disorders	1995-96
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Professional Certifications

- Fellow of the Royal College of Physicians of Canada (Neurology).
 - Specialist Certificate in Neurology; Fédération des Médecins Spécialistes du Québec.
- Medical License, Medical Council of Canada.

Appointments

- Professor, Department of Neurology and Neurosurgery, Faculty of Medicine, McGill University.
- MNI Killam Scholar 2002-2007
- Montreal Neurological Hospital, Physician, 1997-present
- Royal Victoria Hospital, Physician, 1997-present

Journal ReviewsEditorial Board

Frontiers in Neuroscience

Frontiers in Brain Imaging Methods

Reviewer (among other journals)

American Journal of Psychiatry

Annals of Neurology

Appetite

Archives of General Psychiatry

Archives of Neurology

Biological Psychiatry

Brain

Canadian Journal of Neurological Sciences

Cell Metabolism

Current Biology

European Journal of Neuroscience

Experimental Brain Research

Human Brain Mapping

Journal of Clinical Investigation

Journal of Neurochemistry

Journal of Neuroscience

Neuroimage

Neurology

Neuron

Neuropsychologia

Pain

PLoS One

PNAS

Psychiatry Research

Science

Synapse

Grant Reviews***Panel member***

CIHR BSB 2013 –

NIDA I/START 2010

NIDA Small molecules and vaccines study section 2009

Canada Fund for Innovation, Leading Edge Fund 2008

NIH Clinical Neuroscience and Disease Study Section, 2007

NIDA P20 translational research centers, 2007

CIHR Behavioural Science B committee member 2001 – 2005
FRSQ Bourses Chercheur-Boursier, 2004-2006
Canada Fund for Innovation, Committee chair, 2006

Membership

- Fellow of the Royal College of Physicians (Canada)
- Organization for Human Brain Mapping (Member of Executive: 2009-2011)
- American Academy of Neurology
- Movement Disorders Society
- Society for Neuroscience
- Canadian Medical Association
- Fédération des Médecins Spécialistes du Québec

Salary Awards

- Fraser-Monat-MacPherson award. 1998-2000
- FRSQ Chercheur-Boursier 2000-2002
- CIHR New Investigator 2002-2007
- FRSQ Chercheur-Boursier (Senior) 2007-2011

Current Research Grants (as PI or co-PI)

Ghrelin and the CNS control of appetite.

CIHR Operating Grant. Duration 2010-2015 Amount: \$150,000/yr

Linking Basic, Clinical & Population Health Research To Prevent & Treat Diabetes, Metabolic Syndrome & Complications

CFI Leading Edge Fund 2009, Co-PI (PI: Marc Prentki). \$12,400,000

CIHR Team in the Neurobiology of Obesity

Funding agency: Canadian Institutes for Health Research. Duration: 2007-2012 Amount: \$500,000/yr (PI: W Colmers, Univ of Alberta, amount shared among 5 investigators)

The effects of stress on eating behavior and brain activity: a Functional Magnetic Resonance Imaging (fMRI) study.

Funding Agency: Networks of Centres of Excellence. Duration 2008-2012. Amount \$65,000/yr

Early diagnosis of Alzheimer's and Parkinson's diseases using MRI measurements

Funding Agency: Networks of Centres of Excellence. Duration 2008-2013. Amount \$125,000/yr

Completed Research Grants

Mapping dopamine release in the human brain

Funding agency: Canadian Institutes for Health Research. Duration: 2005-2008 Amount: \$95,745/yr

Sensitization to psychomotor stimulants: A PET study in healthy volunteers, using 11C-raclopride

Funding agency: Canadian Institutes for Health Research. Duration: 2003-2007 Amount: \$158,648/yr

Nicotine addiction: Behavioural and brain mechanisms from rodents to humans (PI: Paul Clarke)

Funding agency: National Cancer Institute of Canada. Duration: 2004-2009 Amount: \$99,956/yr

Dopamine release in response to monetary reward in pathological gamblers

Funding agency: The Institute for Research on Pathological Gambling and Related Disorders.

Duration: 2003-2007 Amount: US\$150,000 (total).

Functional neuroimaging of food craving

Funding agency: Unilever PLC. Duration: 2004-2008 Amount: \$110,000 (total).

Orbitofrontal and striatal mechanisms in stress and addiction (PI: Lesley Fellows)

Funding Agency: NIDA. Duration 2006-2009. Amount: \$937,699 (total)

Compulsion and control: prefrontal and mesolimbic systems in human addiction

Funding agency: Canadian Institutes for Health Research. Duration: 2006-2008. Amount: \$130,000 (total)

PUBLICATIONS

Journal Articles (H index = 49; Total citations ≈ 6800; published: 107, submitted: 4)

1. Felix Carbonell, Atsuko Nagano-Saito, Marco Leyton, Paul Cisek, Chawki Benkelfat, Yong He and Alain Dagher. Dopamine precursor depletion impairs structure and efficiency of resting state brain functional networks. *Neuropharmacol.* In Press
2. Casey KF, Benkelfat C, Cherkasova M, Baker GB, Dagher A, Leyton M. Reduced Dopamine Response to Amphetamine in Subjects at Ultra-High Risk for Addiction. In Press *Biol Psych.*
3. Casey KF, Cherkasova M, Larcher K, Evans A, Baker G, Dagher A, Benkelfat C, Leyton M. Individual Differences in Frontal Cortical Thickness Correlate with the Amphetamine Induced Striatal Dopamine Response in Humans. In Press *J Neurosci.*
4. Nagano-Saito A, Dagher A, Booij L, Gravel P, Welfeld K, Casey KF, Leyton M, Benkelfat C. Stress-induced dopamine release in human medial prefrontal cortex - 18 F-Fallypride / PET study in healthy volunteers. *Synapse* 2013.
5. Setiawan E, Pihl RO, Dagher A, Schlagintweit H, Casey KF, Benkelfat C, Leyton M. Differential Striatal Dopamine Responses Following Oral Alcohol in Individuals at Varying Risk for Dependence. *Alcohol Clin Exp Res.* 2013.
6. Rowley J, Fonov V, Wu O, Eskildsen SF, Schoemaker D, Wu L, Mohades S, Shin M, Cheewakriengkra L, Sziklas V, Dagher A, Gauthier S, Rosa-Neto P. White matter abnormalities and structural hippocampal disconnections in amnesic mild cognitive impairment and Alzheimer's disease. *Plos ONE.* 2013.
7. Salimpoor V, van den Bosch I, Kovacevic N, McIntosh AR, Dagher A, R J. Zatorre. Interactions between nucleus accumbens and cortical sensory processing predict music reward value. *Science.* In Press.
8. Hayashi T, Ko JH, Strafella AP, Dagher A. From motivated decision-making to drug craving: role of the prefrontal cortex. *PNAS.* In Press.
9. Fotos A, Casey KF, Larcher K, Verhaeghe JAJ, Cox SML, Gravel P, Reader AJ, Dagher A, Benkelfat C, Leyton M. Cocaine Cue-Induced Dopamine Release in Amygdala and Hippocampus: A High-Resolution PET [18F]Fallypride Study in Cocaine Dependent Participants. *Neuropsychopharmacology* In Press.
10. Vainik U, Dagher A, Dubé L, Fellows L. Neurobehavioural correlates of body mass index and eating behaviours in adults: A systematic review. *Neuroscience & Biobehavioral Reviews* 2013.
11. Coull JT, Hwang H, Leyton M, and Dagher A. Dopamine precursor depletion impairs timing in healthy volunteers by attenuating activity in putamen and SMA. *J Neurosci.* 32(47):16704-15. 2012.
12. Hammond RA, Ornstein JT, Fellows LK, Dubé L, Levitan R, Dagher A. A model of food reward learning with dynamic reward exposure. *Front Comput Neurosci.* 2012;6:82. doi: 10.3389/fncom.2012.00082.
13. Simioni A, Dagher A, Fellows L. Dissecting the Effects of Disease and Treatment on Impulsivity in Parkinson's Disease. *J Int Neuropsych Soc* 18, 1–10, 2012.
14. Dagher A. Functional brain imaging of appetite. *Trends in endocrinology and metabolism: TEM* 23: 250-260, 2012.
15. Nagano-Saito A, Cisek P, Perna AS, Shirdel FZ, Benkelfat C, Leyton M, and Dagher A. From Anticipation to Action, the Role of Dopamine in Perceptual Decision-Making:

- an fMRI - Tyrosine Depletion Study. *J Neurophysiol* 2012.
16. Tang DW, Fellows LK, Small DM, and Dagher A. Food and drug cues activate similar brain regions: A meta-analysis of functional MRI studies. *Physiology & behavior* 106: 317-324, 2012.
 17. Tang DW, Hello B, Mroziowicz M, Fellows LK, Tyndale RF, and Dagher A. Genetic variation in CYP2A6 predicts neural reactivity to smoking cues as measured using fMRI. *Neuroimage* 2012.
 18. Yoon C, Gonzalez R, Bechara A, Berns GS, Dagher A, Dube L, Huettel SA, Kable JW, Liberzon I, Plassman H, Smidts A, and Spence C. Decision neuroscience and consumer decision making. *Marketing Letters* 23: 473-485, 2012.
 19. Dagher A. Addiction as aberrant learning-evidence from Parkinson's disease. *Addiction*. 2012 107(2):248-50.
 20. Soliman A, O'Driscoll GA, Pruessner J, Joober R, Ditto B, Streicker E, Goldberg Y, Caro J, Rekkas PV, Dagher A. Limbic response to psychosocial stress in schizotypy: A functional magnetic resonance imaging study. *Schizophr Res*. 2011 Sep;131(1-3):184-91.
 21. Cox SM, Benkelfat C, Dagher A, Delaney JS, Durand F, Kolivakis T, Casey KF, Leyton M. Effects of lowered serotonin transmission on cocaine-induced striatal dopamine response: PET [11C]raclopride study in humans. *Br J Psychiatry*. 2011 May 4. [Epub ahead of print]
 22. Salimpoor VN, Benovoy M, Larcher K, Dagher A, Zatorre RJ. Anatomically distinct dopamine release during anticipation and experience of peak emotion to music. *Nat Neurosci*. 2011 Feb;14(2):257-62.
 23. Malik S, McGlone F, Dagher A. State of expectancy modulates the neural response to visual food stimuli in humans. *Appetite*. 2011
 24. Stice E, Yokum S, Zald D, Dagher A. Dopamine-based reward circuitry responsivity, genetics, and overeating. *Curr Top Behav Neurosci*. 2011;6:81-93.
 25. Xie G, Deschamps A, Backman SB, Fiset P, Chartrand D, Dagher A, Plourde G. Critical involvement of the thalamus and precuneus during restoration of consciousness with physostigmine in humans during propofol anaesthesia: a positron emission tomography study. *Br J Anaesth*. 2011
 26. Engert V, Efanov SI, Dedovic K, Duchesne A, Dagher A, Pruessner JC. Perceived early-life maternal care and the cortisol response to repeated psychosocial stress. *J Psychiatry Neurosci*. 2010 Nov;35(6):370-7.
 27. Allman AA, Benkelfat C, Durand F, Sibon I, Dagher A, Leyton M, Baker GB, O'Driscoll GA. Effect of D-amphetamine on inhibition and motor planning as a function of baseline performance. *Psychopharmacology (Berl)*. 2010 Sep;211(4):423-33. Epub 2010 Jul 4.
 28. Engert V, Efanov SI, Dedovic K, Dagher A, Pruessner JC. Increased cortisol awakening response and afternoon/evening cortisol output in healthy young adults with low early life parental care. *Psychopharmacology (Berl)*. 2010 Jul 3

29. Stice E, Dagher A. (2010). Genetic variation in dopaminergic reward in humans. *Forum Nutr.* 63:176-85.
30. Dagher A, Tannenbaum B, Hayashi T, Pruessner J, McBride D (2009). An acute psychosocial stress enhances the neural response to smoking cues. *Brain Res* 1293:40-8.
31. Dagher A (2009). The neurobiology of appetite: hunger as addiction. *Int J Obesity* 33:S30-S33.
32. Dagher A, Robbins TW (2009) Personality, addiction, dopamine: insights from Parkinson's disease. *Neuron* 61:502-510.
33. Costes N, Dagher A, Larcher K, Evans AC, Collins DL, Reilhac A (2009) Motion correction of multi-frame PET data in neuroreceptor mapping: Simulation based validation. *Neuroimage* 47(4):1496-505.
34. He Y, Dagher A, Chen Z, Charil A, Zijdenbos A, Worsley K, Evans A (2009) Impaired small-world efficiency in structural cortical networks in multiple sclerosis associated with white matter lesion load. *Brain*. May 12.
35. Nagano-Saito A, Liu J, Doyon J, Dagher A (2009) Dopamine modulates default mode network deactivation in elderly individuals during the Tower of London task. *Neurosci Lett* 458:1-5.
36. Pruessner JC, Dedovic K, Pruessner M, Lord C, Buss C, Collins L, Dagher A, Lupien SJ (2009) Stress regulation in the central nervous system: Evidence from structural and functional neuroimaging studies in human populations. *Psychoneuroendocrinology*.
37. Cox SM, Benkelfat C, Dagher A, Delaney JS, Durand F, McKenzie SA, Kolivakis T, Casey KF, Leyton M (2009) Striatal Dopamine Responses to Intranasal Cocaine Self-Administration in Humans. *Biol Psychiatry*.
38. Malik S, McGlone F, Dagher A. Ghrelin Modulates the Hedonic Value of Visual Food Stimuli: A fMRI Study in Humans. *Cell Metabolism* 2008 7(5):400-9.
39. Soliman A, O'Driscoll GA, Pruessner J, Holahan AL, Boileau I, Gagnon D, Dagher A (2008) Stress-Induced Dopamine Release in Humans at Risk of Psychosis: a [(11)C]Raclopride PET Study. *Neuropsychopharmacology* 33:2033-2041.
40. Fraraccio M, Ptito A, Sadikot A, Panisset M, Dagher A (2008) Absence of cognitive deficits following deep brain stimulation of the subthalamic nucleus for the treatment of Parkinson's disease. *Arch Clin Neuropsychol* 23:399-408.
41. Beauchamp MH, Dagher A, Panisset M, Doyon J (2008) Neural substrates of cognitive skill learning in Parkinson's disease. *Brain Cogn* 68:134-143.
42. Beauchamp MH, Dagher A, Panisset M, Doyon J. (2008) Behavioural Correlates of Cognitive Skill Learning in Parkinson's Disease *The Open Behavioral Science Journal* 2: 1-12.
43. Wood PB, Schweinhardt P, Jaeger E, Dagher A, Hakyemez H, Rabiner EA, Bushnell MC, Chizh BA (2007) Fibromyalgia patients show an abnormal dopamine response

- to pain. *Eur J Neurosci* 25:3576-3582.
44. Mendez I, Viñuela A, Astradsson A, Mukhida K, Hallett P, Robertson H, Tierney T, Holness R, Dagher A, Trojanowski JQ, Isacson O. Dopamine neurons implanted into people with Parkinson's disease survive without pathology for 14 years. *Nat Med*. 2008 14(5):507-9.
 45. Nagano-Saito A, Leyton M, Monchi O, Goldberg YK, He Y, Dagher A. Dopamine depletion impairs frontostriatal functional connectivity during a set-shifting task. *J Neurosci*. 2008 Apr 2;28(14):3697-706
 46. Soliman A, O'Driscoll GA, Pruessner J, Holahan AV, Boileau I, Gagnon D, Dagher A. Stress-induced dopamine release in the of striatum humans at risk of schizophrenia: a [11C]-raclopride pet study. *Neuropsychopharmacology* 2008 33(8):2033-41.
 47. Hakyemez HS, Dagher A, Smith SD, Zald DH. Striatal dopamine transmission in healthy humans during a passive monetary reward task. *Neuroimage*. 2008 15;39(4):2058-65.
 48. Pruessner JC, Dedovic K, Khalili-Mahani N, Engert V, Pruessner M, Buss C, et al. Deactivation of the Limbic System during Acute Psychosocial Stress: Evidence from Positron Emission Tomography and Functional Magnetic Resonance Imaging Studies. *Biol Psychiatry* 2008; 63(2):234-240.
 49. Dubé L, A Bechara, U Böckenholt, A Ansari, A Dagher, WS De Sarbo, LK Fellows, RA Hammond, TT Huang, S Huettel, P Kooreman, A Smidts (2008) Towards a brain-to-society model of individual choice. *Marketing Lett*, 19:323-36.
 50. Berney A, Panisset M, Sadikot AF, Ptito A, Dagher A, Fraraccio M, et al. Mood stability during acute stimulator challenge in Parkinson's disease patients under long-term treatment with subthalamic deep brain stimulation. *Mov Disord* 2007; 22: 1093-1096.
 51. Boileau I, Dagher A, Leyton M, Welfeld K, Booij L, Diksic M, et al. Conditioned dopamine release in humans: a positron emission tomography [11C]raclopride study with amphetamine. *J Neurosci* 2007; 27: 3998-4003.
 52. Charil A, Dagher A, Lerch JP, Zijdenbos AP, Worsley KJ, Evans AC. Focal cortical atrophy in multiple sclerosis: relation to lesion load and disability. *Neuroimage* 2007; 34: 509-17.
 53. Dagher A. Shopping centers in the brain. *Neuron* 2007; 53: 7-8.
 54. Dagher A, Nagano-Saito A. Functional and Anatomical Magnetic Resonance Imaging in Parkinson's Disease. *Mol Imaging Biol* 2007; 9: 234-242.
 55. Boileau I, Dagher A, Leyton M, Gunn RN, Baker GB, Diksic M, et al. Modeling sensitization to stimulants in humans: an [11C]raclopride/positron emission tomography study in healthy men. *Arch Gen Psychiatry* 2006; 63: 1386-95.
 56. McBride D, Barrett SP, Kelly JT, Aw A, Dagher A. Effects of expectancy and abstinence on the neural response to smoking cues in cigarette smokers: an fMRI study. *Neuropsychopharmacology* 2006; 31: 2728-38.

57. Postuma RB, Dagher A. Basal ganglia functional connectivity based on a meta-analysis of 126 positron emission tomography and functional magnetic resonance imaging publications. *Cereb Cortex* 2006; 16: 1508-21.
58. Wood PB, Schweinhardt P, Jaeger E, Dagher A, Hakyemez H, Rabiner EA, et al. Fibromyalgia patients show an abnormal dopamine response to pain. *Eur J Neurosci* 2007; 25: 3576-82.
59. Postuma RB, Dagher A. Basal ganglia functional connectivity based on a meta-analysis of 126 PET and fMRI publications. *Cerebral Cortex*. Accepted for Publication.
60. Landau AM, Luk KC, Jones ML, Siegrist-Johnstone R, Young YK, Kouassi E, Rymar VV, Dagher A, Sadikot AF, Desbarats J. Defective Fas expression exacerbates neurotoxicity in a model of Parkinson's disease. *J Exp Med*. 2005 Sep 5;202(5):575-81.
61. Mendez I, Sanchez-Pernaute R, Cooper O, Vinuela A, Ferrari D, Bjorklund L, Dagher A, Isacson O. Cell type analysis of functional fetal dopamine cell suspension transplants in the striatum and substantia nigra of patients with Parkinson's disease. *Brain* 2005 128(7): 1498-510.
62. Nagano-Saito A, Washimi Y, Arahata Y, Kachi T, Lerch JP, Evans AC, Dagher A, MD, and Ito K. Cerebral atrophy and its relation to cognitive impairment in Parkinson's disease. *Neurology* 2005 64(2):224-9.
63. Barrett SP, Boileau I, Okker J, Pihl RO, Dagher A. The hedonic response to cigarette smoking is proportional to dopamine release in the human striatum as measured by positron emission tomography and [¹¹C]raclopride. *Synapse* 2004. 54:65-71.
64. David H. Zald, Isabelle Boileau, Wael El-Dearedy, Roger Gunn, Francis McGlone, Gabriel S. Dichter, and Alain Dagher. Dopamine transmission in the human striatum during predictable and unpredictable monetary reward in humans. *J Neurosci* 2004. 24(17):4105-12.
65. Atsuko Nagano-Saito; Takashi Kato; Yutaka Arahata; Yukihiko Washimi; Akinori Nakamura; Yuji Abe; Takako Yamada; Katsushige Iwai; Kentaro Hatano; Yasuhiro Kawasumi; Teruhiko Kachi; Alain Dagher; and Kengo Ito. Cognitive and motor-related regions in Parkinson's disease. FDOPA and FDG PET studies. *Neuroimage* 2004. 22(2):553-61.
66. Moro E, Lang AE, Strafella AP, Poon YY, Arango PM, Dagher A, Hutchison WD, Lozano AM. Bilateral globus pallidus stimulation for Huntington's disease. *Ann Neurol* 2004. 56:290-294.
67. Xie G, Gunn RN, Dagher A, Daloz T, Plourde G, Backman SB, Diksic M, Fiset P. PET quantification of muscarinic cholinergic receptors with [N-¹¹C-methyl]-benztropine and application to studies of propofol-induced unconsciousness in healthy human volunteers. *Synapse* 2004. 51(2): 91-101.
68. Monchi O, Petrides M, Doyon J, Postuma RB, Worsley K, Dagher A. Neural bases of set-shifting deficits in Parkinson's disease. *J Neurosci* 2004. 24(3): 702-10.

69. Pruessner JC, Champagne F, Meaney MJ, Dagher A. Dopamine release in response to a psychological stress in humans and its relationship to early life maternal care: a positron emission tomography study using [¹¹C]raclopride. *J Neurosci* 2004. 24(11): 2825-31.
70. Perruchot F, Reilhac A, Grova C, Evans AC, Dagher A (2004) Motion correction of multi-frame PET data. *IEEE Trans Nucl Sci Conference Record* 5:3186-3190.
71. Beauchamp MH, Dagher A, Aston JA, Doyon J. Dynamic functional changes associated with cognitive skill learning of an adapted version of the Tower of London task. *Neuroimage* 2003. 20(3): 1649-60.
72. Boileau I, Assaad JM, Pihl RO, Benkelfat C, Leyton M, Diksic M, Tremblay RE, Dagher A. Alcohol promotes dopamine release in the human nucleus accumbens. *Synapse* 2003. 49: 226-231.
73. Charil A, Zijdenbos AP, Taylor J, Boelman C, Worsley KJ, Evans AC, Dagher A. Statistical mapping analysis of lesion location and neurological disability in multiple sclerosis: application to 452 patient data sets. *Neuroimage* 2003. 19(3): 532-44.
74. Iaria G, Petrides M, Dagher A, Pike B, Bohbot VD. Cognitive strategies dependent on the hippocampus and caudate nucleus in human navigation: variability and change with practice. *J Neurosci* 2003. 23(13): 5945-52.
75. Leyton M, Dagher A, Boileau I, Casey K, Baker GB, Diksic M, Gunn R, Young SN, Benkelfat C. Decreasing Amphetamine-Induced Dopamine Release by Acute Phenylalanine/Tyrosine Depletion: A PET/[¹¹C]Raclopride Study in Healthy Men. *Neuropsychopharmacology* 2003.
76. Small DM, Jones-Gotman M, Dagher A. Feeding-induced dopamine release in dorsal striatum correlates with meal pleasantness ratings in healthy human volunteers. *Neuroimage* 2003. 19(4): 1709-15.
77. Strafella AP, Dagher A, Sadikot A. Cerebral blood flow changes induced by subthalamic stimulation in Parkinson's disease. *Neurology* 2003. 60(6): 1039-1042.
78. Strafella AP, Paus T, Fraraccio M, Dagher A. Striatal dopamine release induced by repetitive transcranial magnetic stimulation of the human motor cortex. *Brain* 2003.
79. Strafella AP, Sadikot AF, Dagher A. Subthalamic deep brain stimulation does not induce striatal dopamine release in Parkinson's disease. *Neuroreport* 2003. 14(9): 1287-9.
80. Boecker H, Ceballos-Baumann AO, Bartenstein P, Dagher A, Forster K, Haslinger B, Brooks DJ, Schwager M, Conrad B. A H(²)(¹⁵O) positron emission tomography study on mental imagery of movement sequences--the effect of modulating sequence length and direction. *Neuroimage* 2002. 17(2): 999-1009.
81. Sechet S, Reilhac A, Gunn R, Evans AC, Dagher, A. Frame misalignment-induced errors in PET studies: An investigation on strategies for correction. *IEEE Nucl Sci Symp and Med Imag Conference* 2002. 2:1330-1334.
82. Leyton M, Boileau I, Benkelfat C, Diksic M, Baker G, Dagher A. Amphetamine-Induced

- Increases in Extracellular Dopamine, Drug Wanting, and Novelty Seeking A PET/[11C]Raclopride Study in Healthy Men. *Neuropsychopharmacology* 2002. 27(6): 1027-1035.
83. Mendez I, Dagher A, Hong M, Gaudet P, Weerasinghe S, McAlister V, King D, Desrosiers J, Darvesh S, Acorn T, Robertson H. Simultaneous intrastriatal and intranigral fetal dopaminergic grafts in patients with Parkinson disease: a pilot study. Report of three cases. *J Neurosurg* 2002. 96(3): 589-96.
84. Dagher A, Owen AM, Boecker H, Brooks DJ. The role of the striatum and hippocampus in planning: a PET activation study in Parkinson's disease. *Brain* 2001. 124(Pt 5): 1020-32.
85. Dagher A. Functional imaging in Parkinson's disease. *Semin Neurol* 2001. 21(1): 23-32.
86. Dagher A, Bleicher C, Aston JA, Gunn RN, Clarke PB, Cumming P. Reduced dopamine D1 receptor binding in the ventral striatum of cigarette smokers. *Synapse* 2001. 42(1): 48-53.
87. Monchi O, Petrides M, Petre V, Worsley K, Dagher A. Wisconsin Card Sorting Revisited: Distinct Neural Circuits Participating in Different Stages of the Task Identified by Event-Related fMRI. *J Neurosci* 2001. 21(19): 7733-7741.
88. Small DM, Zatorre RJ, Dagher A, Evans AC, Jones-Gotman M. Changes in brain activity related to eating chocolate: From pleasure to aversion. *Brain* 2001. 124(Pt 9): 1720-33.
89. Strafella AP, Paus T, Barrett J, Dagher A. Repetitive transcranial magnetic stimulation of the human prefrontal cortex induces dopamine release in the caudate nucleus. *J Neurosci* 2001. 21(15): RC157.
90. Aston JA, Gunn RN, Worsley KJ, Ma Y, Evans AC, Dagher A. A Statistical Method for the Analysis of Positron Emission Tomography Neuroreceptor Ligand Data. *Neuroimage* 2000. 12(3): 245-256.
91. Dagher A. Measuring dopamine D(2) receptors. *Am J Psychiatry* 2000. 157(10): 1708-10.
92. Mendez I, Dagher A, Hong M, Hebb A, Gaudet P, Law A, Weerasinghe S, King D, Desrosiers J, Darvesh S, Acorn T, Robertson H. Enhancement of survival of stored dopaminergic cells and promotion of graft survival by exposure of human fetal nigral tissue to glial cell line--derived neurotrophic factor in patients with Parkinson's disease. Report of two cases and technical considerations. *J Neurosurg* 2000. 92(5): 863-9.
93. Mendez I, Hong M, Smith S, Dagher A, Desrosiers J. Neural transplantation cannula and microinjector system: experimental and clinical experience. Technical note. *J Neurosurg* 2000. 92(3): 493-9.
94. Monchi O, Taylor JG, Dagher A. A neural model of working memory processes in normal subjects, Parkinson's disease and schizophrenia for fMRI design and

- predictions. *Neural Netw* 2000. 13(8-9): 953-73.
95. Cumming P, Yokoi F, Chen A, Deep P, Dagher A, Reutens D, Kapczynski F, Wong DF, Gjedde A. Pharmacokinetics of radiotracers in human plasma during positron emission tomography. *Synapse* 1999. 34(2): 124-34.
96. Dagher A, Owen AM, Boecker H, Brooks DJ. Mapping the network for planning: a correlational PET activation study with the Tower of London task. *Brain* 1999. 122(Pt 10): 1973-1987.
97. Deep P, Dagher A, Sadikot A, Gjedde A, Cumming P. Stimulation of dopa decarboxylase activity in striatum of healthy human brain secondary to NMDA receptor antagonism with a low dose of amantadine. *Synapse* 1999. 34(4): 313-8.
98. Kumar R, Dagher A, Hutchison WD, Lang AE, Lozano AM. Globus pallidus deep brain stimulation for generalized dystonia: clinical and PET investigation [In Process Citation]. *Neurology* 1999. 53(4): 871-4.
99. Rakshi JS, Uema T, Ito K, Bailey DL, Morrish PK, Ashburner J, Dagher A, Jenkins IH, Friston KJ, Brooks DJ. Frontal, midbrain and striatal dopaminergic function in early and advanced Parkinson's disease A 3D [(18)F]dopa-PET study [In Process Citation]. *Brain* 1999. 122(Pt 9): 1637-50.
100. Boecker H, Dagher A, Ceballos-Baumann AO, Passingham RE, Samuel M, Friston KJ, Poline J, Dettmers C, Conrad B, Brooks DJ. Role of the human rostral supplementary motor area and the basal ganglia in motor sequence control: investigations with H2 150 PET [published erratum appears in *J Neurophysiol* 1998 Jun;79(6):3301]. *J Neurophysiol* 1998. 79(2): 1070-80.
101. Koeppe MJ, Gunn RN, Lawrence AD, Cunningham VI, Dagher A, Jones T, Brooks DJ, Bench CJ, Grasby PM. Evidence for striatal dopamine release during a video game. *Nature* 1998. 393(6682): 266-8.
102. Owen AM, Doyon J, Dagher A, Sadikot A, Evans AC. Abnormal basal ganglia outflow in Parkinson's disease identified with PET. Implications for higher cortical functions. *Brain* 1998. 121(Pt 5): 949-65.
103. Tyler JL, Leblanc R, Meyer E, Dagher A, Yamamoto YL, Diksic M, Hakim A. Hemodynamic and metabolic effects of cerebral arteriovenous malformations studied by positron emission tomography. *Stroke* 1989. 20(7): 890-8.
104. Evans AC, Diksic M, Yamamoto YL, Kato A, Dagher A, Redies C, Hakim A. Effect of vascular activity in the determination of rate constants for the uptake of 18F-labeled 2-fluoro-2-deoxy-D-glucose: error analysis and normal values in older subjects. *J Cereb Blood Flow Metab* 1986. 6(6): 724-38.
105. Thompson CJ, Dagher A, Lunney DN. A Technique to Reject Scattered Radiation in PET Transmission Scans. *Proc SPIE* 1986. 671: 244-253.
106. Thompson CJ, Dagher A, Meyer E, Evans AC. Imaging Performance of a Dynamic Positron Emission Tomograph: Positome IIIp. *IEEE Trans Med Imaging* 1986. MI-5(4): 183-198.

107. Dagher A, Thompson CJ. Real-Time Data Rebinning in PET to Obtain Uniformly Sampled Projections. *IEEE Trans Nucl Sci* 1985. NS-32: 811-817.

Books and Book Chapters

Tuite P and Dagher A, Editors. Magnetic Resonance Imaging in Movement Disorders. Cambridge University Press, 2013.

Dagher A. Hormones Hunger and Food Addiction. In Brownell KD and Gold M Eds. Handbook of Food and Addiction. Oxford University Press.

Dagher A. Effect of Treatment: Pharmacologic. In Eidelberg D. Ed. "Imaging in Parkinson's Disease", Oxford University Press, 2011.

Dubé, L., Bechara, A., Dagher, A., Drewnowski, A., LeBel, J., James, P, Richard, D. and Yada, R. Y. (In press). Obesity Prevention: The Role of Society and Brain on Individual Behavior A Handbook for Integrative Science, Policy and Action to Stop the Progression of the Obesity Pandemic. UK: Elsevier/Academic Press. 2010.

Dagher A. Hedonic and homeostatic responses to food: Hunger as addiction. In Obesity Prevention: The Role of Society and Brain on Individual Behavior A Handbook for Integrative Science, Policy and Action to Stop the Progression of the Obesity Pandemic. UK: Elsevier/Academic Press. 2010.

Eric Stice, Alain Dagher. Genetic Variation in Dopaminergic Reward in Humans. In: Frontiers in Eating and Weight Regulation. Karger. 2010.

Dagher A Studying cognition with positron emission tomography. In: Kraft, E., Gulyas, B., Poppel, E. Neural Correlates of Thinking. Berlin: Springer 2009.

Dagher A, Gunn RN, Lockwood G, Cunningham VJ, Grasby P, Brooks DJ: Measuring Neurotransmitter release with PET: Methodological Issues. In Carson, RE and Herscovitch, P eds. Quantitative Functional Brain Imaging with Positron Emission Tomography, Academic Press 1997.

Dagher, A. Functional Imaging in Parkinson's Disease. In Galvez-Jimenez, ed. Scientific Basis for the Treatment of Parkinson's Disease, 2nd Edition. London: Taylor and Francis. 2005.

Boileau I, Benkelfat C, Leyton M, Dagher A (2005) Imaging vulnerability factors in addiction with PET and [¹¹C]raclopride. In: Beyond Nature & Nurture in Psychiatry – Genes, Environment & Their Interplay. MacCabe, O'Daly, Murray, McGuffin & Wright (eds), Taylor & Francis Medical Books.

Invited Presentations

- | | |
|---------|---|
| 03/2013 | University of Calgary, Neurology Grand Rounds
<i>How does dopamine promote impulsivity?</i> |
| 01/2013 | Dept of Endocrinology, MUHC
<i>Obesity as a disorder of decision making</i> |
| 01/2013 | Montreal Diabetes Research Centre
<i>Obesity as a disorder of decision making</i> |
| 01/2013 | Annual National Resident's Seminar on Movement Disorders, Montreal.
<i>What do the basal ganglia do?</i> |
| 11/2012 | Concordia University, Montreal. Neuroscience Seminar.
<i>How does dopamine promote impulsivity?</i> |
| 10/2012 | Yale University, New Haven CT |

- 09/2012 *How does dopamine promote impulsivity?*
University of Oslo
- 08/2012 *Dopamine and risky behavior: a neuroeconomics approach*
Neuroreceptor Mapping 2012, Baltimore MD, Invited Keynote Speaker
- 06/2012 *Dopamine Involvement in Impulse Control Disorders*
Conference on Obesity and Mental Health, Toronto
- 06/2012 *The neurobiology of appetite (Insights from brain imaging)*
Canadian Neurological Sciences Meeting, Ottawa, Invited Keynote Speaker
- 05/2012 *Dopamine Involvement in Impulse Control Disorders*
Canadian Congress of Neuropsychopharmacology, Vancouver
- 03/2012 *FMRI identifies value signals in OFC: relevance to addiction and obesity*
NIH Workshop, Bethesda MD, Biomarkers of Weight Loss
- 01/2012 *The neurobiology of appetite (Insights from brain imaging)*
Annual National Resident's Seminar on Movement Disorders, Montreal.
- 11/2011 *(1) What do the basal ganglia do? (2) Diagnosis of Parkinson's Disease*
University of Alberta, Edmonton, Neuroscience Seminar
- 10/2011 *The neural control of appetite*
University of British Columbia, Neuroscience Seminar
- 10/2011 *The neural control of appetite*
University of British Columbia, Neurology Grand Rounds
- 08/2011 *Pathological Gambling in PD (What it tells us about dopamine)*
European Behavioural Pharmacology Society, Amsterdam
- 07/2011 *Modulation of neural control of appetite and motivation by gut peptides*
Society for the Study of Ingestive Behavior, Clearwater FL
- 05/2011 *Addiction and obesity: Insights from brain imaging*
World Congress of Biological Psychiatry, Prague, Czech Rep.
- 05/2011 *Imaging appetite: Hunger as addiction*
American Psychiatric Association, Honolulu HI.
- 04/2011 *Central control of food intake: Insights from brain imaging*
Les Rencontres québécoises de l'industrie de la musique, Montreal.
- 03/2011 *Le frisson musical*
University of Cincinnati
- 03/2011 *Imaging appetite*
International Congress on Schizophrenia Research, Colorado Springs, CO
- 02/2011 *Functional brain imaging of vulnerability to schizophrenia*
Symposium on Complications of Obesity, Laval and Sherbrooke Universities
- 02/2011 *Imaging Appetite*
Reseau De Bio-Imagerie du Quebec, Invited Lecturer
- 01/2011 *Imaging Appetite*
University of Texas Southwestern, Dallas TX
- 01/2011 *Ghrelin and the CNS Control of Appetite*
Annual National Resident's Seminar on Movement Disorders, Montreal.
- 11/2010 *(1) What do the basal ganglia do? (2) Diagnosis of Parkinson's Disease*
Parkinson Society Canada, Montreal QC
- 10/2010 *Brain imaging in Parkinson's Disease*
Duke University National University of Singapore
- 9/2010 *Addiction and obesity*
Canadian Psychiatric Association Annual Conference, Toronto, Ont.
- Neural control of appetite*

- 5/2010 8th invitational choice symposium, Key Largo, FL, USA.
Addiction and obesity
- 5/2010 Société québécoise de lipidologie, nutrition et métabolisme, Quebec.
Imagerie des voies cérébrales de contrôle métabolique
- 4/2010 Schizophrenia International Research Society Conference, Florence Italy.
Dysregulation of the dopamine system: Environmental Factors
- 3/2010 European Winter Conference on Brain Research, Les 2 Alpes, France.
Dopamine release in schizophrenia: promises and pitfalls
- 3/2010 Donders Institute, Nijmegen, The Netherlands.
Addiction and Obesity: Functional neuroimaging studies
- 1/2010 Annual National Resident's Seminar on Movement Disorders, Montreal.
What do the basal ganglia do?
- 11/2009 Université de Montréal, Neurology Rounds.
Pathological Gambling in Parkinson's Disease.
- 11/2009 Annual Winter Symposium on Schizophrenia. Douglas Hospital, Montreal
Imaging Schizophrenia: From Pnemo-encephalography To DTI: What Have We Learned, What Can We Learn?
- 10/2009 Cognitive Neuroscience Treatment Research to Improve Cognition in Schizophrenia
Evaluating Potential Biomarkers of Cognitive Function, Baltimore, MD.
Dynamic Ligand Based Cognitive and Affective Imaging
- 10/2009 State of the Art in Addiction Medicine, Washington DC
Obesity as addiction.
- 10/2009 The University of Hong Kong. Discovering the Social Brain.
Addiction and Obesity: Insight from the Dopamine System
- 10/2009 Normal University, Beijing, China.
Imaging Appetite: Functional neuroimaging studies of drugs and natural rewards
- 06/2009 International Life Sciences Institute, Washington DC
Functional Neuroimaging: what it can and cannot tell us.
- 05/2009 Canadian Obesity Network, Kananaskis, Alberta
Imaging Appetite: Functional neuroimaging studies of drugs and natural rewards
- 04/2009 Monell Spring Colloquium, Philadelphia PA.
Introduction to brain imaging
- 03/2009 International Workshop on Gambling, Reward, Decision-Making, and PFC
Kyoto University, Kyoto Japan.
Prefrontal-striatal interactions in drug and non-drug reward
- 11/2008 Brain Research Symposium, Washington DC
Stress and Appetite
- 10/2008 Queens University, Kingston ON
Imaging Appetite: Functional neuroimaging studies of drugs and natural rewards
- 08/2008 Gordon Research Conference, Andover NH
Imaging neuropathology in the living brain
- 07/2008 Japanese Neuroscience Society, Tokyo. Invited Speaker.
Human dopamine response to drugs and natural rewards
- 07/2008 National Institute for Radiological Sciences, Chiba Japan.
Molecular Imaging of Brain Function.
- 06/2008 Human Brain Mapping, Melbourne Aus. Symposium.
In-vivo imaging of dopamine.
- 05/2008 Canadian Association for Neuroscience annual meeting, Montreal.
Dopamine and addiction: new insights from Parkinson's disease
- 05/2008 Monell Chemical Senses Center, Philadelphia PA
Food and drug rewards in humans: insights from functional brain imaging.

- 04/2008 GSK Imaging Centre, London UK
Imaging Appetite
- 01/2008 Parkinson Alliance, Ottawa, ONT
Functional MRI in Parkinson's Disease
- 12/2007 University of Montreal
Food and drug rewards in humans: insights from functional brain imaging.
- 10/2007 Unilever PLC, Oxford UK
Hunger as addiction.
- 10/2007 Parmenides Foundation, Munich Germany
Functional MRI in cognitive neuroscience
- 09/2007 EEG and Clinical Neuroscience Society Meeting, Montreal
Functional brain imaging of nicotine addiction
- 06/2007 Society for Nuclear Medicine Annual Meeting, Washington DC
Molecular Imaging of Brain Function: Reward Systems and Addiction
- 05/2007 American Psychiatric Association Annual Meeting, San Diego.
Food and drug rewards in humans: insights from functional brain imaging.
- 03/2007 Concordia University, Montreal.
Food and drug rewards in humans: dorsal versus ventral striatal function.
- 02/2007 Society for Research on Nicotine and Tobacco Annual Meeting, Austin TX.
Functional brain imaging of tobacco craving
- 11/2006 National Center for Cardiovascular Research, Osaka, Japan
Natural and drug rewards in humans: insights from functional brain imaging
- 10/2006 Conférences Scientifiques Desjardins, Université Laval
L'obésité : une addiction à la nourriture?
- 06/2006 Parmenides Foundation workshop: The neural correlates of thinking.
Isle of Elba, Italy. Invited Speaker.
- 05/2006 Monitoring Molecules in Neuroscience, Sardegna, Italy. Invited Speaker.
Measuring dopamine release in the human brain.
- 05/2006 ACFAS, Montréal, QC, Canada.
Comportements Alimentaires Et Drogues: Circuits Neuronaux
- 04/2006 University of British Columbia. Workshop on executive Functions.
Vulnerability to addiction in humans: craving, sensitization and conditioning studied with functional brain imaging.
- 03/2006 Hopital de l'Hotel-Dieu, Montreal.
Du plaisir à la dépendance: imagerie des systèmes dopaminergiques.
- 02/2006 University of Pennsylvania, Philadelphia PA.
Natural and drug rewards in humans: insights from functional brain imaging.
- 01/2006 Brainstorm 2006, Aarhus Denmark. Invited Speaker.
Natural and drug rewards in humans: insights from functional brain imaging.
- 12/2005 The John B Pierce Foundation and Yale University, New Haven, CT.
Natural and drug rewards in humans: insights from functional brain imaging.
- 11/2005 Tobacco Control Conference - Toronto, Canada. Invited Speaker.
Nicotine addiction studied with functional brain imaging
- 09/2005 Conference of the International Society for Psychoneuroendocrinology
Montreal, QC. Invited Speaker.
- 09/2005 Queens University, Kingston, ON
Natural and drug rewards in humans: insights from functional brain imaging.
- 06/2005 NIDA Symposium, College on Problems of Drug Dependence, Orlando, Fla.
Invited Speaker.
Food and drug rewards: similarities and differences.
- 06/2005 Brain PET 2005, Amsterdam, The Netherlands. Invited Speaker.

- 05/2005 *Mapping dopamine function in humans.*
Quebec Addictions Research Axis, Research Day, Montreal, Canada
Natural and drug rewards, insights from brain imaging studies
- 05/2005 Neurologie 2005, Quebec City, Canada
Brain imaging in the evaluation of neuroprotection in Parkinson's disease.
- 04/2005 Centre de Recherche Fernand Seguin, Montreal, Canada
Natural and drug rewards, brain imaging studies
- 11/2004 North American Association For The Study Of Obesity Annual Meeting
Las Vegas, NV. Invited Speaker.
Functional brain imaging of hunger and addiction.
- 09/2004 Concordia University, Montreal, Canada
Natural and drug rewards, brain imaging studies
- 08/2004 University of Minnesota, Neurology Dept.
Dementia and cognitive impairment in Parkinson's disease.
- 08/2004 National Institute of Diabetes & Digestive & Kidney Diseases, Phoenix, AZ.
Functional brain imaging of drug addiction and obesity.
- 06/2004 Symposium speaker, Human Brain Mapping 2004, Budapest.
Dopamine release in response to drug and artificial rewards in humans: similarities and differences
- 06/2004 Annual meeting of the Canadian College of Neuropsychopharmacology, Kingston, Ont.
Dopamine release in response to drug and artificial rewards in humans: similarities and differences
- 05/2004 Parkinson Society Canada
Can we slow the progression of Parkinson's disease?
- 04/2004 Annual Meeting of the Canadian Society for Nuclear Medicine, Niagara Ont.
Amersham Radiant Speaker
Functional Brain Imaging of Hunger and Food Reward
- 06/2003 Human Brain Mapping 2003 New York, NY
Mapping dopamine release in the human brain
- 03/2003 CEA Service Hospitalier Frédéric Joliot, Orsay, France.
Mapping dopamine release in the human brain
- 02/2003 Basal Ganglia Symposium, University of Ulm, Germany
Basal Ganglia and Dopamine Functional Imaging Studies in Humans
- 06/2002 Invited speaker, Human Brain Mapping 2002
Sendai, Japan
Deep Brain Stimulation
- 06/2002 National Institute for Longevity Studies, Obu, Japan.
Dopamine and behaviour
- 04/2002 Queens University, Kingston, ONT.
Dopamine and behaviour
- 02/2002 University of Toronto
Dopamine and behaviour
- 02/2002 Columbia University, New York NY.
Dopamine and behaviour
- 02/2002 Massachusetts General Hospital NMR Centre, Charlestown, MA
Dopamine and behaviour
- 06/2001 University of Ulm, International Symposium on fMRI Basal ganglia and behaviour
- 11/2000 Université de Montréal, Movement Disorders Unit
Functional neuroimaging of basal ganglia
- 10/2000 Canadian Neuro Transplantation Conference, Halifax, NS.

- 10/2000 *PET Imaging of neural transplantation*
Northwestern University, Chicago, IL.
- 09/1999 *Functional neuroimaging of basal ganglia*
Concordia University, Montreal
- 06/1999 *Imaging dopamine release in the human brain*
Technical University, Munich, Germany.
- 01/1999 *Functional neuroimaging of basal ganglia*
Riken Institute, Wako-shi, Japan.
- 01/1999 *Functional neuroimaging of basal ganglia*
National Institute for Radiological Sciences, Chiba University, Japan.
- 01/1999 *Functional neuroimaging of basal ganglia*
Osaka Brain Sciences Institute, Osaka, Japan.
- 01/1999 *Functional neuroimaging of basal ganglia*
Cleveland Clinic Florida, Movement Disorder course.
- 10/1998 *Clinical Usefulness of PET in Parkinson's Disease*
Massachusetts General Hospital NMR Centre, Charlestown, MA.
- 09/1998 *Functional neuroimaging of basal ganglia*
Université de Montréal, Sacré Coeur Hospital, Neurology Rounds
- 06/1998 *Functional neuroimaging of basal ganglia*
Canadian Congress of Neurological Sciences, Course on brain imaging.
- 01/1998 *PET in Pediatric Neurology*
Clarke Institute of Psychiatry, University of Toronto.
- 01/1998 *Imaging Neurotransmitter Release with PET*
University of Toronto, Neuroscience Rounds.
- 01/1998 *Functional neuroimaging of basal ganglia*
University of Minnesota, Neurology Rounds.
- 01/1998 *Functional neuroimaging of basal ganglia*
Minnesota VA Hospital.
- 11/1997 *Imaging Neurotransmitter Release with PET*
Dalhousie University, Halifax, Neuroscience Rounds.
- 1996 *Functional neuroimaging of basal ganglia*
Cambridge University, Dept. of Psychology
- 1996 *Frontal lobe tasks in Parkinson's Disease studied with PET*
Oxford University, Dept. of Pharmacology
- 1996 *Imaging Neurotransmitter Release with PET*
Oxford University, Centre for Functional MRI of the Brain.
- 1996 *Functional neuroimaging of basal ganglia*

Selected Publications (+ times cited from <http://scholar.google.com>)**1. Cognition in Parkinson's Disease**

I have carried out PET and fMRI activation studies in healthy volunteers and PD patients while they performed planning, set-shifting, or implicit learning tasks. These studies attempt to uncover the mechanism by which basal ganglia dysfunction leads to cognitive impairment.

- Dagher A, Owen AM, Boecker H, Brooks DJ. Mapping the network for planning: a correlational PET activation study with the Tower of London task. *Brain* 1999; 122: 1973-1987. **(Cited by 288)**
- Dagher A, Owen AM, Boecker H, Brooks DJ. The role of the striatum and hippocampus in planning: a PET activation study in Parkinson's disease. *Brain* 2001; 124: 1020-32. **(Cited by 183)**
- Monchi O, Petrides M, Petre V, Worsley K, Dagher A. Wisconsin Card Sorting Revisited: Distinct Neural Circuits Participating in Different Stages of the Task Identified by Event-Related fMRI. *J Neurosci* 2001; 21: 7733-7741. **(Cited by 523)**

2. Measuring dopamine release in the human brain

I have also worked on developing a PET method to measure the release of dopamine in the human brain. E.g.:

- Pruessner JC, Champagne F, Meaney MJ, Dagher A. Dopamine release in response to a psychological stress in humans and its relationship to early life maternal care: a positron emission tomography study using [¹¹C]raclopride. *J Neurosci* 2004. 24(11): 2825-31. **(Cited by 293)**
- Koeppe MJ, Gunn RN, Lawrence AD, Cunningham VJ, Dagher A, Jones T, et al. Evidence for striatal dopamine release during a video game. *Nature* 1998; 393: 266-8. **(Cited by 675)**
- Leyton M, Boileau I, Benkelfat C, Diksic M, Baker G, Dagher A. Amphetamine-Induced Increases in Extracellular Dopamine, Drug Wanting, and Novelty Seeking A PET/[¹¹C]Raclopride Study in Healthy Men. *Neuropsychopharmacology* 2002. 27(6): 1027-1035. **(Cited by 195)**
- Strafella AP, Paus T, Barrett J, Dagher A. Repetitive transcranial magnetic stimulation of the human prefrontal cortex induces dopamine release in the caudate nucleus. *J Neurosci* 2001; 21: RC157. **(Cited by 374)**
- Boileau I, Dagher A, Leyton M, Gunn RN, Baker GB, Diksic M, et al. Modeling sensitization to stimulants in humans: an [¹¹C]raclopride/positron emission tomography study in healthy men. *Arch Gen Psychiatry* 2006; 63: 1386-95. **(Cited by 138)**

3. Studies of food reward

- Malik S, McGlone F, Dagher A. Ghrelin Modulates the Hedonic Value of Visual Food Stimuli: A fMRI Study in Humans. *Cell Metabolism* 2008 7(5):400-9. **(cited by 173)**
- Small DM, Jones-Gotman M, Dagher A. Feeding-induced dopamine release in dorsal striatum correlates with meal pleasantness ratings in healthy human volunteers. *Neuroimage* 2003. 19(4): 1709-15. **(cited by 168)**
- Small DM, Zatorre RJ, Dagher A, Evans AC, Jones-Gotman M. Changes in brain activity related to eating chocolate: From pleasure to aversion. *Brain* 2001. 124(Pt 9): 1720-33. **(cited by 623).**