主な研究業績（古川芳明：Yoshiaki Furukawa）

A. 主要50論文 (Peer-Reviewed English Papers)

[IF = Impact Factor] [主要50論文のIF = 8.92 (average)]

1. Furukawa Y, Mizuno Y, Nishi K, Narabayashi H: A clue to the pathogenesis of dopa-responsive dystonia. Ann Neurol 37: 139-140, 1995 [IF = 9.496]

2. Furukawa Y, Shimadzu M, Rajput AH, Shimizu Y, Tagawa T, Mori H, Yokochi M, Narabayashi H, Hornykiewicz O, Mizuno Y, Kish SJ: GTP-cyclohydrolase I gene mutations in hereditary progressive and dopa-responsive dystonia. Ann Neurol 39: 609-617, 1996 [IF = 9.496]

3. Furukawa Y, Kish SJ, Bebin EM, Jacobson RD, Fryburg JS, Wilson WG, Shimadzu M, Hyland K, Trugman JM: Dystonia with motor delay in compound heterozygotes for GTP-cyclohydrolase I gene mutations. Ann Neurol 44: 10-16, 1998 [IF = 9.496]

4. Furukawa Y, Lang AE, Trugman JM, Bird TD, Hunter A, Sadeh M, Tagawa T, St George-Hyslop PH, Guttman M, Morris LW, Hornykiewicz O, Shimadzu M, Kish SJ: Gender-related penetrance and de novo GTP-cyclohydrolase I gene mutations in dopa-responsive dystonia. Neurology 50: 1015-1020, 1998 [IF = 8.689]

5. Kish SJ, Lopes-Cendes I, Guttman M, Furukawa Y, Koeppen A, Pandolfo M, Rouleau GA, Ross BM, Nance M, Schut L, Ang L, DiStefano L: Brain glyceraldehyde-3-phosphate dehydrogenase activity in human trinucleotide repeat disorders. Arch Neurol 55: 1299-1304, 1998 [IF = 12.321]

6. Furukawa Y, Kish SJ: Influence of development and aging on brain biopterin: implications for dopa-responsive dystonia onset. Neurology 51: 632-634, 1998 [IF = 8.689]

7. Furukawa Y, Kish SJ: Dopa-responsive dystonia: recent advances and remaining issues to be addressed. Mov Disord 14: 709-715, 1999 [IF = 8.061]

8. Furukawa Y, Nygaard TG, Gütlich M, Rajput AH, Pifl C, DiStefano L, Chang LJ, Price K, Shimadzu M, Hornykiewicz O, Haycock JW, Kish SJ: Striatal biopterin, neopterin, and tyrosine hydroxylase protein reduction in dopa-responsive dystonia. Neurology 53: 1032-1041, 1999 [IF = 8.689]

9. Kish SJ, Kalasinsky KS, Furukawa Y, Guttman M, Ang L, Li L, Adams V, Reiber G, Anthony RA, Anderson W, Smialek J, DiStefano L: Brain choline acetyltransferase activity in chronic, human users of cocaine, methamphetamine, and heroin. Mol Psychiatry 4: 26-32, 1999 [IF = 11.973]

10. Furukawa Y, Hornykiewicz O, Fahn S, Kish SJ: Striatal dopamine in early-onset primary torsion dystonia with the *DYT1* mutation. Neurology 54: 1193-1195, 2000 [IF = 8.689]

11. Furukawa Y, Kish SJ, Lang AE: Scoliosis in a dopa-responsive dystonia family with a mutation of the GTP cyclohydrolase I gene. Neurology 54: 2187, 2000 [IF = 8.689]

12. Worsley JM, Moszczynska A, Falardeau P, Kalasinsky KS, Schmunk G, Guttman M, Furukawa Y, Ang L, Adams V, Reiber G, Anthony RA, Wickham D, Kish SJ: Dopamine D1 receptor protein is elevated in nucleus accumbens of human, chronic methamphetamine users. Mol Psychiatry 5: 664-672, 2000 [IF = 11.973]

13. Furukawa Y, Guttman M, Sparagana SP, Trugman JM, Hyland K, Wyatt P, Lang AE, Rouleau GA, Shimadzu M, Kish SJ: Dopa-responsive dystonia due to a large deletion in the GTP cyclohydrolase I gene. Ann Neurol 47: 517-520, 2000 [IF = 9.496]

14. Kish SJ, Furukawa Y, Ang L, Vorce SP, Kalasinsky KS: Striatal serotonin is depleted in brain of a human MDMA (Ecstasy) user. Neurology 55: 294-296, 2000 [IF = 8.689]

15. Furukawa Y, Graf WD, Wong H, Shimadzu M, Kish SJ: Dopa-responsive dystonia simulating spastic paraplegia due to tyrosine hydroxylase (TH) gene mutations. Neurology 56: 260-263, 2001 [IF = 8.689]

16. Kish SJ, Kalasinsky KS, Schmunk G, Furukawa Y, Guttman M, Ang L: Dopaminergic changes in human brain following acute exposure to gamma-hydroxybutyrate. Neurology 56: 1602-1603, 2001 [IF = 8.689]

17. Kish SJ, Kalasinsky KS, Derkach P, Schmunk GA, Guttman M, Ang L, Adams V, Furukawa Y, Haycock JW: Striatal dopaminergic and serotonergic markers in human heroin users. Neuropsychopharmacology 24: 561-567, 2001 [IF = 7.16]

18. Grimes DA, Barclay CL, Duff J, Furukawa Y, Lang AE: Phenocopies in a large GCH1 mutation positive family with dopa-responsive dystonia: confusing the picture? J Neurol Neurosurg Psychiatry 72: 801-804, 2002 [IF = 8.272]

19. Furukawa Y, Kapatos G, Haycock JW, Worsley J, Wong H, Kish SJ, Nygaard TG: Brain biopterin and tyrosine hydroxylase in asymptomatic dopa-responsive dystonia. Ann Neurol 51: 637-641, 2002 [IF = 9.496]

20. Fitzmaurice PS, Bamsey CL, Ang L, Guttman M, Rajput AH, Furukawa Y, Kish SJ: Brain aconitase activity is not decreased in progressive supranuclear palsy. Neurology 59: 137-138, 2002 [IF = 8.689]

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23. Furukawa Y, Guttman M, Wong H, Farrell SA, Furtado S, Kish SJ: Serum prolactin in symptomatic and asymptomatic dopa-responsive dystonia due to a *GCH1* mutation. Neurology 61: 269-270, 2003 [IF = 8.689]

24. Tong J, Ross BM, Schmunk GA, Peretti FJ, Kalasinsky KS, Furukawa Y, Ang LC, Aiken SS, Wickham DJ, Kish SJ: Decreased striatal dopamine D1 receptor-stimulated adenylyl cyclase activity in human methamphetamine users. Am J Psychiatry 160: 896-903, 2003 [IF = 13.655]

25. Fitzmaurice PS, Ang L, Guttman M, Rajput AH, Furukawa Y, Kish SJ: Nigral glutathione deficiency is not specific for idiopathic Parkinson's disease. Mov Disord 18: 969-976, 2003 [IF = 8.061]

26. Postuma RB, Furukawa Y, Rogaeva E, St George-Hyslop PH, Farrer MJ, Lang AE: Dopa-responsive dystonia presenting with prominent isolated bilateral resting leg tremor: evidence for a role of *parkin*? Mov Disord 18: 1069-1072, 2003 [IF = 8.061]

27. Guttman M, Kish SJ, Furukawa Y: Current concepts in the diagnosis and management of Parkinson's disease. CMAJ 168: 293-301, 2003 [IF = 6.938]

28. Tong J, Fitzmaurice PS, Ang LC, Furukawa Y, Guttman M, Kish SJ: Brain dopamine-stimulated adenylyl cyclase activity in Parkinson's disease, multiple system atrophy, and progressive supranuclear palsy. Ann Neurol 55: 125-129, 2004 [IF = 9.496]

29. Furukawa Y, Kish SJ, Fahn S: Dopa-responsive dystonia due to mild tyrosine hydroxylase deficiency. Ann Neurol 55: 147-148, 2004 [IF = 9.496]

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dyskinesia in compound heterozygotes for *GCH1* mutations. Mov Disord 19: 1256-1258, 2004 [IF = 8.061]

31. Kish SJ, Tong J, Hornykiewicz O, Rajput A, Chang L-J, Guttman M, Furukawa Y: Preferential loss of serotonin markers in caudate versus putamen in Parkinson's disease. Brain 131: 120-131, 2008 [IF = 11.814]

32. Boileau I, Guttman M, Rusjan P, Adams JR, Houle S, Tong J, Hornykiewicz O, Furukawa Y, Wilson AA, Kapur S, Kish SJ: Decreased binding of the D_3 dopamine receptor-preferring ligand [^{11}C]-(+)-PHNO in drug-naïve Parkinson's disease. Brain 132: 1366-1375, 2009 [IF = 11.814]

33. Tong J, Wong H, Guttman M, Ang LC, Forno LS, Shimadzu M, Rajput AH, Muenter MD, Kish SJ, Hornykiewicz O, Furukawa Y: Brain α-synuclein accumulation in multiple system atrophy, Parkinson's disease and progressive supranuclear palsy: a comparative investigation. Brain 133: 172-188, 2010 [IF = 11.814]

34. Kish SJ, Lerch J, Furukawa Y, Tong J, McCluskey T, Wilkins D, Houle S, Meyer J, Mundo E, Wilson AA, Rusjan PM, Saint-Cyr JA, Guttman M, Collins DL, Shapiro C, Warsh JJ, Boileau I: Decreased cerebral cortical serotonin transporter binding in ecstasy users: a positron emission tomography/[(11C)]DASB and structural brain imaging study. Brain 133: 1779-1797, 2010 [IF = 11.814]

35. Nakamura S, Kitami M, Furukawa Y: Opalski syndrome: ipsilateral hemiplegia due to a lateral-medullary infarction. Neurology 75: 1658, 2010 [IF = 8.689]

36. Tong J, Furukawa Y, Sherwin A, Hornykiewicz O, Kish SJ: Heterogeneous intrastriatal pattern of proteins regulating axon growth in normal adult human

brain. Neurobiol Dis 41: 458-468, 2011 [IF = 5.16]

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40. Kambe T, Takahashi Y, Furukawa Y: A mild form of adult-onset opsoclonus-myoclonus syndrome associated with antiglutamate receptor antibodies. JAMA Neurol 70: 654-655, 2013 [IF = 12.321]

41. Tong J, Fitzmaurice P, Furukawa Y, Schmunk GA, Wickham DJ, Ang L-C, Sherwin A, McCluskey T, Boileau I, Kish SJ: Is brain gliosis a characteristic of chronic methamphetamine use in the human? Neurobiol Dis 67: 107-118, 2014 [IF = 5.16]

42. Payer DE, Guttman M, Kish SJ, Tong J, Strafella A, Zack M, Adams JR, Rusjan P, Houle S, Furukawa Y, Wilson AA, Boileau I: [^{11}C]-(+)-PHNO PET imaging of dopamine $D_{2/3}$ receptors in Parkinson's disease with impulse control disorders. Mov Disord 30: 160-166, 2015 [IF = 8.061]

43. Furukawa Y, Kish SJ: Parkinsonism in GTP cyclohydrolase 1-deficient DOPA-responsive dystonia. Brain 138: e351 (1-3), 2015 [IF = 11.814]

44. Tong J, Ang LC, Williams B, Furukawa Y, Fitzmaurice P, Guttman M, Boileau I, Hornykiewicz O, Kish SJ: Low levels of astroglial markers in Parkinson's disease: relationship to α-synuclein accumulation. Neurobiol Dis 82: 243-253, 2015 [IF = 5.16]

45. Payer DE, Guttman M, Kish SJ, Tong J, Adams JR, Rusjan P, Furukawa Y, Wilson AA, Boileau I: D_3 dopamine receptor-preferring [^{11}C]PHNO PET imaging in Parkinson's patients with dyskinesia. Neurology 86: 224-230, 2016 [IF = 8.689]

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47. Tong J, Fitzmaurice PS, Moszczynska A, Mattina K, Ang LC, Boileau I, Furukawa Y, Sailasuta N, Kish SJ: Do glutathione levels decline in aging human brain? Free Radic Biol Med 93: 110-117, 2016 [IF = 5.657]

48. Furukawa Y, Rajput AH, Tong J, Tomizawa Y, Hornykiewicz O, Kish SJ: A marked contrast between serotonergic and dopaminergic changes in dopa-responsive dystonia. Neurology 87: 1060-1061, 2016 [IF = 8.689]

49. Tong J, Rathitharan G, Meyer JH, Furukawa Y, Ang LC, Boileau I, Guttman M, Hornykiewicz O, Kish SJ: Brain monoamine oxidase B and A in human parkinsonian dopamine deficiency disorders. Brain 140: 2460-2474, 2017 [IF = 11.814]

50. Tong J, Williams B, Rusjan PM, Mizrahi R, Lacapere J-J, McCluskey T, Furukawa Y, Boileau I, Meyer JH, Kish SJ. Concentration, distribution, and

influence of aging on the 18 kDa translocator protein in human brain: implications for brain imaging studies. J Cereb Blood Flow Metab (in press) 2019 [IF = 6.04]

B. 主要10総説 (English Review Articles)

1. Furukawa Y, Nishi K, Kondo T, Mizuno Y, Narabayashi H: CSF biopterin levels and clinical features of patients with juvenile parkinsonism. Adv Neurol 60: 562-567, 1993

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4. Furukawa Y: Genetics and biochemistry of dopa-responsive dystonia: significance of striatal tyrosine hydroxylase protein loss. Adv Neurol 91: 401-410, 2003

5. Furukawa Y: Update on dopa-responsive dystonia: locus heterogeneity and biochemical features. Adv Neurol 94: 127-138, 2004

6. Furukawa Y, Guttman M, Kish SJ: Dopa-responsive dystonia. Current Clinical Neurology: Movement Disorder Emergencies: Diagnosis and Treatment, Frucht SJ, Fahn S, eds, Humana Press, Totowa, 209-229, 2005

7. Trugman JM, Hyland K, Furukawa Y. A curable cause of dystonia. Movement Disorders: 100 Instructive Cases, Reich SG, ed, Informa Healthcare, London, 93-97, 2008

8. Furukawa Y, Guttman M, Nakamura S, Kish SJ: Dopa-responsive dystonia.

Current Clinical Neurology: Movement Disorder Emergencies: Diagnosis and Treatment (2nd ed), Frucht SJ, ed, Springer (Humana Press), New York, 319-340, 2013

9. Furukawa Y, Kish SJ: Tyrosine hydroxylase deficiency. GeneReviews (National Center for Biotechnology Information [www.ncbi.nlm.nih.gov/books/NBK1437/], NIH): 1-19, 2017

10. Furukawa Y: GTP cyclohydrolase 1-deficient dopa-responsive dystonia. GeneReviews (National Center for Biotechnology Information [www.ncbi.nlm.nih.gov/books/NBK1508/], NIH): 1-20, 2019

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2005年度日本神経学会「楢林賞」受賞

古川芳明:ドーパ反応性ジストニー: 臨床・遺伝・生化学的研究. 臨床神経 46: 19-34, 2006