

Trajectories study publications

1. [Interaction between ventricular expansion and structural changes in the corpus callosum and putamen in males with *FMR1* normal and premutation alleles.](#)

Wang JY, Hessler D, Tassone F, Kim K, Hagerman RJ, Rivera SM.

Neurobiol Aging. 2020 Feb;86:27-38. doi: 10.1016/j.neurobiolaging.2019.09.009. Epub 2019 Sep 24.

PMID: 31733943

2. [Middle Cerebellar Peduncle Width-A Novel MRI Biomarker for FXTAS?](#)

Shelton AL, Wang JY, Fourie E, Tassone F, Chen A, Frizzi L, Hagerman RJ, Ferrer E, Hessler D, Rivera SM.

Front Neurosci. 2018 Jun 25;12:379. doi: 10.3389/fnins.2018.00379. eCollection 2018.

PMID: 29988561

Free PMC Article

3. [Age- and CGG repeat-related slowing of manual movement in fragile X carriers: A prodrome of fragile X-associated tremor ataxia syndrome?](#)

Shickman R, Famula J, Tassone F, Leehey M, Ferrer E, Rivera SM, Hessler D.

Mov Disord. 2018 Apr;33(4):628-636. doi: 10.1002/mds.27314. Epub 2018 Feb 1.

PMID: 29389022

Free PMC Article

4. [Clinical and molecular correlates in fragile X premutation females.](#)

Jiraanont P, Sweha SR, AlOlaby RR, Silva M, Tang HT, Durbin-Johnson B, Schneider A, Espinal GM, Hagerman PJ, Rivera SM, Hessler D, Hagerman RJ, Chutabhakdikul N, Tassone F.

eNeurologicalSci. 2017 Jun;7:49-56. doi: 10.1016/j.ensci.2017.04.003. Epub 2017 Apr 11.

PMID: 28971146

Free PMC Article

5. [Abnormal trajectories in cerebellum and brainstem volumes in carriers of the fragile X premutation.](#)

Wang JY, Hessler D, Hagerman RJ, Simon TJ, Tassone F, Ferrer E, Rivera SM.

Neurobiol Aging. 2017 Jul;55:11-19. doi: 10.1016/j.neurobiolaging.2017.03.018. Epub 2017 Mar 18.

PMID: 28391068

Free PMC Article

6. [Psychiatric disorders among women with the fragile X premutation without children affected by fragile X syndrome.](#)

Gossett A, Sansone S, Schneider A, Johnston C, Hagerman R, Tassone F, Rivera SM, Seritan AL, Hessler D.

Am J Med Genet B Neuropsychiatr Genet. 2016 Dec;171(8):1139-1147. doi: 10.1002/ajmg.b.32496. Epub 2016 Sep 12.

PMID: 27615674

Free PMC Article

7. [Levodopa modulates small-world architecture of functional brain networks in Parkinson's disease.](#)

Berman BD, Smucny J, Wylie KP, Shelton E, Kronberg E, Leehey M, Tregellas JR.

Mov Disord. 2016 Nov;31(11):1676-1684. doi: 10.1002/mds.26713. Epub 2016 Jul 27.

PMID: 27461405

Free PMC Article

8. [Broad autism spectrum and obsessive-compulsive symptoms in adults with the fragile X premutation.](#)

Schneider A, Johnston C, Tassone F, Sansone S, Hagerman RJ, Ferrer E, Rivera SM, Hessel D.

Clin Neuropsychol. 2016 Aug;30(6):929-43. doi: 10.1080/13854046.2016.1189536. Epub 2016 Jun 29.

PMID: 27355445

Free PMC Article

9. [Fragile X-associated tremor/ataxia syndrome: another phenotype of the fragile X gene.](#)

Hessel D, Grigsby J.

Clin Neuropsychol. 2016 Aug;30(6):810-4. doi: 10.1080/13854046.2016.1186661. Epub 2016 Jun 29.

PMID: 27355274

Free PMC Article

10. [Robust Machine Learning-Based Correction on Automatic Segmentation of the Cerebellum and Brainstem.](#)

Wang JY, Ngo MM, Hessel D, Hagerman RJ, Rivera SM.

PLoS One. 2016 May 23;11(5):e0156123. doi: 10.1371/journal.pone.0156123. eCollection 2016.

PMID: 27213683

Free PMC Article

11. [Molecular Advances Leading to Treatment Implications for Fragile X Premutation Carriers.](#)

Polussa J, Schneider A, Hagerman R.

Brain Disord Ther. 2014;3. pii: 1000119.

PMID: 25436181

Free PMC Article

12. [Towards an Understanding of Neuropsychiatric Manifestations in Fragile X Premutation Carriers.](#)

Besterman AD, Wilke SA, Mulligan TE, Allison SC, Hagerman R, Seritan AL, Bourgeois JA.

Future Neurol. 2014 Mar;9(2):227-239. doi: 10.2217/fnl.14.11.

PMID: 25013385

Free PMC Article

13. [Association between macroorchidism and intelligence in FMR1 premutation carriers.](#)

Lozano R, Summers S, Lozano C, Mu Y, Hessel D, Nguyen D, Tassone F, Hagerman R.

Am J Med Genet A. 2014 Sep;164A(9):2206-11. doi: 10.1002/ajmg.a.36624. Epub 2014 Jun 5.

PMID: 24903624

Free PMC Article

14. [Altered structural brain connectome in young adult fragile X premutation carriers.](#)

Leow A, Harvey D, Goodrich-Hunsaker NJ, Gadelkarim J, Kumar A, Zhan L, Rivera SM, Simon TJ.

Hum Brain Mapp. 2014 Sep;35(9):4518-30. doi: 10.1002/hbm.22491. Epub 2014 Feb 27.

PMID: 24578183

Free PMC Article

15. [Psychological status in female carriers of premutation *FMR1* allele showing a complex relationship with the size of CGG expansion.](#)

Loesch DZ, Bui MQ, Hammersley E, Schneider A, Storey E, Stimpson P, Burgess T, Francis D, Slater H, Tassone F, Hagerman RJ, Hessel D.

Clin Genet. 2015 Feb;87(2):173-8. doi: 10.1111/cge.12347. Epub 2014 Feb 17.

PMID: 24428240

Free PMC Article

16. [A cross-sectional analysis of orienting of visuospatial attention in child and adult carriers of the fragile X premutation.](#)

Wong LM, Goodrich-Hunsaker NJ, McLennan YA, Tassone F, Rivera SM, Simon TJ.

J Neurodev Disord. 2014;6(1):45. doi: 10.1186/1866-1955-6-45. Epub 2014 Dec 11.

PMID: 25937844

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17. [Caregiver Burden in Fragile X Families.](#)

Iosif AM, Sciolla AF, Brahmabhatt K, Seritan AL.

Curr Psychiatry Rev. 2013 Feb 1;9(1). doi: 10.2174/157340013805289590.

PMID: 24348279

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18. [Psychiatric features in high-functioning adult brothers with fragile x spectrum disorders.](#)

Schneider A, Seritan A, Tassone F, Rivera SM, Hagerman R, Hessel D.

Prim Care Companion CNS Disord. 2013;15(2). pii: PCC.12I01492. doi: 10.4088/PCC.12I01492. No abstract available.

PMID: 23930232

Free PMC Article

19. [A family with two female siblings with compound heterozygous *FMR1* premutation alleles.](#)

Basuta K, Lozano R, Schneider A, Yrigollen CM, Hessel D, Hagerman RJ, Tassone F.

Clin Genet. 2014 May;85(5):458-63. doi: 10.1111/cge.12218. Epub 2013 Jul 28.

PMID: 23786467

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20. [Fragile X-associated tremor/ataxia syndrome: influence of the *FMR1* gene on motor fiber tracts in males with normal and premutation alleles.](#)

Wang JY, Hessel D, Schneider A, Tassone F, Hagerman RJ, Rivera SM.

JAMA Neurol. 2013 Aug;70(8):1022-9. doi: 10.1001/jamaneurol.2013.2934.

PMID: 23753897

Free PMC Article

21. [A multimodal imaging analysis of subcortical gray matter in fragile X premutation carriers.](#)

Wang JY, Hagerman RJ, Rivera SM.
Mov Disord. 2013 Aug;28(9):1278-84. doi: 10.1002/mds.25473. Epub 2013 May 6.

PMID: 23649693

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22. [Fragile X syndrome: psychiatric manifestations, assessment and emerging therapies.](#)

Wadell PM, Hagerman RJ, Hessel DR.
Curr Psychiatry Rev. 2013 Feb 1;9(1):53-58.

PMID: 25632275

Free PMC Article

23. [Cognitive dysfunction in FMR1 premutation carriers.](#)

Seritan A, Cogswell J, Grigsby J.
Curr Psychiatry Rev. 2013 Feb;9(1):78-84.

PMID: 25620901

Free PMC Article

24. [Postpartum Depression in Women with the FMR1 Premutation.](#)

Obadia RW, Iosif AM, Seritan AL.
Curr Psychiatry Rev. 2013;9(1):72-77.

PMID: 25620900

Free PMC Article

25. [Psychiatric disorders associated with FXTAS.](#)

Seritan AL, Ortigas M, Seritan S, Bourgeois JA, Hagerman RJ.
Curr Psychiatry Rev. 2013;9(1):59-64.

PMID: 25620899

Free PMC Article

26. [Young adult male carriers of the fragile X premutation exhibit genetically modulated impairments in visuospatial tasks controlled for psychomotor speed.](#)

Wong LM, Goodrich-Hunsaker NJ, McLennan Y, Tassone F, Harvey D, Rivera SM, Simon TJ.
J Neurodev Disord. 2012 Nov 13;4(1):26. doi: 10.1186/1866-1955-4-26.

PMID: 23148490

Free PMC Article

27. [Male carriers of the FMR1 premutation show altered hippocampal-prefrontal function during memory encoding.](#)

Wang JM, Koldewyn K, Hashimoto R, Schneider A, Le L, Tassone F, Cheung K, Hagerman P, Hessel D, Rivera SM.

Front Hum Neurosci. 2012 Oct 30;6:297. doi: 10.3389/fnhum.2012.00297. eCollection 2012.

PMID: 23115550

Free PMC Article

28. [Influence of the fragile X mental retardation \(*FMR1*\) gene on the brain and working memory in men with normal *FMR1* alleles.](#)

Wang JY, Hessler D, Iwahashi C, Cheung K, Schneider A, Hagerman RJ, Hagerman PJ, Rivera SM. Neuroimage. 2013 Jan 15;65:288-98. doi: 10.1016/j.neuroimage.2012.09.075. Epub 2012 Oct 12.

PMID: 23063447

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29. [Sertraline may improve language developmental trajectory in young children with fragile X syndrome: a retrospective chart review.](#)

Indah Winarni T, Chonchaiya W, Adams E, Au J, Mu Y, Rivera SM, Nguyen DV, Hagerman RJ. Autism Res Treat. 2012;2012:104317. doi: 10.1155/2012/104317. Epub 2012 May 31.

PMID: 22934167

Free PMC Article

30. [Immune-mediated disorders among women carriers of fragile X premutation alleles.](#)

Winarni TI, Chonchaiya W, Sumekar TA, Ashwood P, Morales GM, Tassone F, Nguyen DV, Faradz SM, Van de Water J, Cook K, Hamlin A, Mu Y, Hagerman PJ, Hagerman RJ. Am J Med Genet A. 2012 Oct;158A(10):2473-81. doi: 10.1002/ajmg.a.35569. Epub 2012 Aug 17.

PMID: 22903889

Free PMC Article

31. [Hypertension in *FMR1* premutation males with and without fragile X-associated tremor/ataxia syndrome \(FXTAS\).](#)

Hamlin AA, Sukharev D, Campos L, Mu Y, Tassone F, Hessler D, Nguyen DV, Loesch D, Hagerman RJ. Am J Med Genet A. 2012 Jun;158A(6):1304-9. doi: 10.1002/ajmg.a.35323. Epub 2012 Apr 23.

PMID: 22528549

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32. [Age-dependent structural connectivity effects in fragile X premutation.](#)

Wang JY, Hessler DH, Hagerman RJ, Tassone F, Rivera SM. Arch Neurol. 2012 Apr;69(4):482-9. doi: 10.1001/archneurol.2011.2023.

PMID: 22491193

Free PMC Article

33. [Sleep apnea in fragile X premutation carriers with and without FXTAS.](#)

Hamlin A, Liu Y, Nguyen DV, Tassone F, Zhang L, Hagerman RJ. Am J Med Genet B Neuropsychiatr Genet. 2011 Dec;156B(8):923-8. doi: 10.1002/ajmg.b.31237. Epub 2011 Sep 19.

PMID: 21932336

Free PMC Article

34. [Investigation of amygdala volume in men with the fragile X premutation.](#)

Selmecky D, Koldewyn K, Wang JM, Lee A, Harvey D, Hessler DR, Tassone F, Adams P, Hagerman RJ, Hagerman PJ, Rivera SM. Brain Imaging Behav. 2011 Dec;5(4):285-94. doi: 10.1007/s11682-011-9132-5.

PMID: 21786216

Free PMC Article

35. [Widespread non-central nervous system organ pathology in fragile X premutation carriers with fragile X-associated tremor/ataxia syndrome and CGG knock-in mice.](#)

Hunsaker MR, Greco CM, Spath MA, Smits AP, Navarro CS, Tassone F, Kros JM, Severijnen LA, Berry-Kravis EM, Berman RF, Hagerman PJ, Willemsen R, Hagerman RJ, Hukema RK.

Acta Neuropathol. 2011 Oct;122(4):467-79. doi: 10.1007/s00401-011-0860-9. Epub 2011 Jul 23.

PMID: 21785977

Free PMC Article

36. [Decreased fragile X mental retardation protein expression underlies amygdala dysfunction in carriers of the fragile X premutation.](#)

Hessl D, Wang JM, Schneider A, Koldewyn K, Le L, Iwahashi C, Cheung K, Tassone F, Hagerman PJ, Rivera SM.

Biol Psychiatry. 2011 Nov 1;70(9):859-65. doi: 10.1016/j.biopsych.2011.05.033. Epub 2011 Jul 23.

PMID: 21783174

Free PMC Article

37. [Rare intranuclear inclusions in the brains of 3 older adult males with fragile X syndrome: implications for the spectrum of fragile x-associated disorders.](#)

Hunsaker MR, Greco CM, Tassone F, Berman RF, Willemsen R, Hagerman RJ, Hagerman PJ.

J Neuropathol Exp Neurol. 2011 Jun;70(6):462-9. doi: 10.1097/NEN.0b013e31821d3194.

PMID: 21572337

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38. [Prepulse inhibition in patients with fragile X-associated tremor ataxia syndrome.](#)

Schneider A, Ballinger E, Chavez A, Tassone F, Hagerman RJ, Hessl D.

Neurobiol Aging. 2012 Jun;33(6):1045-53. doi: 10.1016/j.neurobiolaging.2010.09.002. Epub 2010 Oct 20.

PMID: 20961665

Free PMC Article

39. [Lifetime prevalence of mood and anxiety disorders in fragile X premutation carriers.](#)

Bourgeois JA, Seritan AL, Casillas EM, Hessl D, Schneider A, Yang Y, Kaur I, Cogswell JB, Nguyen DV, Hagerman RJ.

J Clin Psychiatry. 2011 Feb;72(2):175-82. doi: 10.4088/JCP.09m05407blu. Epub 2010 Aug 24.

PMID: 20816038

Free PMC Article

40. [Broad clinical involvement in a family affected by the fragile X premutation.](#)

Chonchaiya W, Utari A, Pereira GM, Tassone F, Hessl D, Hagerman RJ.

J Dev Behav Pediatr. 2009 Dec;30(6):544-51. doi: 10.1097/DBP.0b013e3181c35f25.

PMID: 19996900

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41. [Psychological symptoms correlate with reduced hippocampal volume in fragile X premutation carriers.](#)

Adams PE, Adams JS, Nguyen DV, Hessler D, Brunberg JA, Tassone F, Zhang W, Koldewyn K, Rivera SM, Grigsby J, Zhang L, Decarli C, Hagerman PJ, Hagerman RJ.

Am J Med Genet B Neuropsychiatr Genet. 2010 Apr 5;153B(3):775-85. doi: 10.1002/ajmg.b.31046.

PMID: 19908235

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42. [A review of fragile X premutation disorders: expanding the psychiatric perspective.](#)

Bourgeois JA, Coffey SM, Rivera SM, Hessler D, Gane LW, Tassone F, Greco C, Finucane B, Nelson L, Berry-Kravis E, Grigsby J, Hagerman PJ, Hagerman RJ.

J Clin Psychiatry. 2009 Jun;70(6):852-62. doi: 10.4088/JCP.08m04476. Epub 2009 May 5. Review.

PMID: 19422761

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43. [The primary cognitive deficit among males with fragile X-associated tremor/ataxia syndrome \(FXTAS\) is a dysexecutive syndrome.](#)

Brega AG, Goodrich G, Bennett RE, Hessler D, Engle K, Leehey MA, Bounds LS, Paulich MJ, Hagerman RJ, Hagerman PJ, Cogswell JB, Tassone F, Reynolds A, Kooken R, Kenny M, Grigsby J.

J Clin Exp Neuropsychol. 2008 Nov;30(8):853-69. doi: 10.1080/13803390701819044. Epub 2008 Feb 15.

PMID: 18608667

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44. [Altered hypothalamus-pituitary-adrenal gland axis regulation in the expanded CGG-repeat mouse model for fragile X-associated tremor/ataxia syndrome.](#)

Brouwer JR, Severijnen E, de Jong FH, Hessler D, Hagerman RJ, Oostra BA, Willemsen R.

Psychoneuroendocrinology. 2008 Jul;33(6):863-73. doi: 10.1016/j.psyneuen.2008.03.011. Epub 2008 May 12.

PMID: 18472227

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45. [Abnormal nerve conduction features in fragile X premutation carriers.](#)

Soontarapornchai K, Maselli R, Fenton-Farrell G, Tassone F, Hagerman PJ, Hessler D, Hagerman RJ.

Arch Neurol. 2008 Apr;65(4):495-8. doi: 10.1001/archneur.65.4.495.

PMID: 18413472

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46. [Cognitive profile of fragile X premutation carriers with and without fragile X-associated tremor/ataxia syndrome.](#)

Grigsby J, Brega AG, Engle K, Leehey MA, Hagerman RJ, Tassone F, Hessler D, Hagerman PJ, Cogswell JB, Bennett RE, Cook K, Hall DA, Bounds LS, Paulich MJ, Reynolds A.

Neuropsychology. 2008 Jan;22(1):48-60. doi: 10.1037/0894-4105.22.1.48.

PMID: 18211155

47. [Reduced Hippocampal Activation During Recall is Associated with Elevated *FMR1* mRNA and Psychiatric Symptoms in Men with the Fragile X Premutation.](#)

Koldewyn K, Hessel D, Adams J, Tassone F, Hagerman PJ, Hagerman RJ, Rivera SM.
Brain Imaging Behav. 2008 Jan 18;2(2):105-116.

PMID: 19430586

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48. [Cognitive, anxiety and mood disorders in the fragile X-associated tremor/ataxia syndrome.](#)

Bourgeois JA, Cogswell JB, Hessel D, Zhang L, Ono MY, Tassone F, Farzin F, Brunberg JA, Grigsby J, Hagerman RJ.

Gen Hosp Psychiatry. 2007 Jul-Aug;29(4):349-56.

PMID: 17591512

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49. [Impairment of executive cognitive functioning in males with fragile X-associated tremor/ataxia syndrome.](#)

Grigsby J, Brega AG, Leehey MA, Goodrich GK, Jacquemont S, Loesch DZ, Cogswell JB, Epstein J, Wilson R, Jardini T, Gould E, Bennett RE, Hessel D, Cohen S, Cook K, Tassone F, Hagerman PJ, Hagerman RJ.

Mov Disord. 2007 Apr 15;22(5):645-50.

PMID: 17266074

50. [Amygdala dysfunction in men with the fragile X premutation.](#)

Hessel D, Rivera S, Koldewyn K, Cordeiro L, Adams J, Tassone F, Hagerman PJ, Hagerman RJ.
Brain. 2007 Feb;130(Pt 2):404-16. Epub 2006 Dec 12.

PMID: 17166860

51. [Progression of tremor and ataxia in male carriers of the *FMR1* premutation.](#)

Leehey MA, Berry-Kravis E, Min SJ, Hall DA, Rice CD, Zhang L, Grigsby J, Greco CM, Reynolds A, Lara R, Cogswell J, Jacquemont S, Hessel DR, Tassone F, Hagerman R, Hagerman PJ.

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