

Recent publications support the connection between allergies, brain inflammation and autism

Theoharides' 2014-15 relevant publications:

1. Tsilioni I, Taliou A, Francis K, Theoharides TC. Children with autistic spectrum disorders who benefit from a luteolin formulation have reduced serum levels of IL-6 and TNF following treatment. *Transl Psychiatry*. 2015. In press.
2. Theoharides TC, Stewart JM, Panagiotidou S, Melamed I. Mast cells, brain inflammation and autism. *Eur J Pharmacol*. 2015 May 1. pii: S0014-2999(15)00398-2. [Epub ahead of print] PMID:25941080
3. Theoharides TC, Valent P, Akin C. Mast Cells, Mastocytosis, and Related Disorders. *N Engl J Med*. 2015 Jul 9;373(2):163-72. PMID: 26154789
4. Polyzoidis S, Koletsa T, Panagiotidou S, Ashkan K, Theoharides TC. Mast cells in meningiomas and brain inflammation. *J Neuroinflammation*. 2015 Sep 17;12(1):170. PMID: 26377554
5. Theoharides TC, Stewart JM, Hatziagelaki E, Kolaitis G. Brain "fog," inflammation and obesity: key aspects of neuropsychiatric disorders improved by luteolin. *Front Neurosci*. 2015 Jul 3;9:225. PMID: 26190965
6. Petra AI, Panagiotidou S, Hatziagelaki E, Stewart JM, Conti P, Theoharides TC. Gut-Microbiota-Brain Axis and its effect on neuropsychiatric disorders with suspected immune dysregulation. *Clin Ther*. 2015 May1;37(5):984-95. PMID: 26046241
7. Theoharides TC, Petra AI, Taracanova A, Panagiotidou S, Conti P. Targeting IL-33 in autoimmunity and inflammation.. *J Pharmacol Exp Ther*. 2015 Jul;354(1):24-31. PMID: 25906776
8. Theoharides TC, Athanassiou M, Panagiotidou S, Doyle R. Dysregulated brain immunity and neurotrophin signaling in Rett syndrome and autism spectrum disorders. *J Neuroimmunol*. 2015 Feb 15;279:33-8. PMID: 25669997
9. Weng Z, Patel AB, Panagiotidou S, Theoharides TC. The novel flavone tetramethoxyluteolin is a potent inhibitor of human mast cells. *J Allergy Clin Immunol*. 2015 Apr;135(4):1044-52.e5. PMID: 25498791
10. Vasiadi M, Newman J, Theoharides TC. Isoflavones inhibit poly(I:C)-induced serum, brain, and skin inflammatory mediators - relevance to chronic fatigue syndrome. *J Neuroinflammation*. 2014 Oct 31;11:168. PMID: 25359293
11. Tsilioni I, Dodman N, Petra AI, Taliou A, Francis K, Moon-Fanelli A, Shuster L, Theoharides TC. Elevated serum neurotensin and CRH levels in children with autistic spectrum disorders and tail-chasing Bull Terriers with a phenotype similar to autism. *Transl Psychiatry*. 2014 Oct 14;4:e466. PMID: 25313509

Environmental contributors and mast cell triggering

Wong CT, Wais J, Crawford DA. Prenatal exposure to common environmental factors affects brain lipids and increases risk of developing Autism Spectrum Disorders. *Eur J Neurosci*. 2015 Jul 28. doi: 10.1111/ejn.13028. [Epub ahead of print] PMID:26215319

McKee AS, Munks MW, MacLeod MK, Fleenor CJ, Van Rooijen N, Kappler JW, Marrack P. Alum induces innate immune responses through macrophage and mast cell sensors, but these sensors are not required for alum to act as an adjuvant for specific immunity. *J Immunol*. 2009 Oct 1;183(7):4403-14. PMID:19734227

O'Brien E, Dolinoy DC, Mancuso P. Perinatal bisphenol A exposures increase production of pro-inflammatory mediators in bone marrow-derived mast cells of adult mice. *J Immunotoxicol*. 2014 Jul-Sep;11(3):205-12 PMID:23914806

O'Brien E, Dolinoy DC, Mancuso P. Bisphenol A at concentrations relevant to human exposure enhances histamine and cysteinyl leukotriene release from bone marrow-derived mast cells. *J Immunotoxicol*. 2014 Jan-Mar;11(1):84-9. PMID:23782309

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Allergic diseases and autism

Lyll K, Van de Water J, Ashwood P, Hertz-Picciotto I. Asthma and Allergies in Children With Autism Spectrum Disorders: Results From the CHARGE Study. *Autism Res*. 2015 Feb 26. doi: 10.1002/aur.1471. [Epub ahead of print] PMID:25722050

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SJ, Qiu M, Huo ST, Ge J, Chen Q. Maternal autoimmune diseases and the risk of autism spectrum disorders in offspring: A systematic review and meta-analysis. *Behav Brain Res*. 2015 Aug 30;296:61-69. PMID:26327239

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Chang HY, Seo JH, Kim HY, Kwon JW, Kim BJ, Kim HB, Lee SY, Jang GC, Song DJ, Kim WK, Shim JY, Kim HJ, Park JW, Cho SH, Lee JS, Shin YJ, Hong SJ. Allergic diseases in preschoolers are associated with psychological and behavioural problems. *Allergy Asthma Immunol Res*. 2013 Sep;5(5):315-21. PMID:24003389

Mostafa GA, Al-Ayadhi LY. The possible relationship between allergic manifestations and elevated serum levels of brain specific auto-antibodies in autistic children. *J Neuroimmunol*. 2013 Aug 15;261(1-2):77-81. PMID:23726766

Brain inflammation, mast cells and microglia

Skaper SD, Facci L, Giusti P. Neuroinflammation, microglia and mast cells in the pathophysiology of neurocognitive disorders: a review. *CNS Neurol Disord Drug Targets*. 2014;13(10):1654-66. PMID:25470401

Hagberg H, Mallard C, Ferriero DM, Vannucci SJ, Levison SW, Vexler ZS, Gressens P. The role of inflammation in perinatal brain injury. *Nat Rev Neurol*. 2015 Apr;11(4):192-208. PMID:25686754

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Estes ML, McAllister AK. Immune mediators in the brain and peripheral tissues in autism spectrum disorder. *Nat Rev Neurosci*. 2015 Jul 20;16(8):469-86. PMID:26189694

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