

## Autismus und Lyme

### Immunologisch

Vargas DL (2005), Zhao X (2007), Li X (2009), Rossignol DA (2012), Brimberg L (2013), Goh S (2014), Crider A (2014), Wang SS-H (2014), Iossifov I (2015), Mariani J (2015), Feinberg JI (2015), Azmitia EC (2015), Brun L (2016), Siniscalco D (2016), Kern JK (2016), Scherer S (2017), Howsmon DP (2017)

### Viral

Libbey JE (2005), Nicholson GL (2007), Hooker BS (2014), Mahic M (2017),

### Bakteriell

Bransfield RC (2007, 2008, 2009, 2012, 2013), Nicholson GL (2007), Benach JI (2x2012), O'Roak BJ (2012), Kuhn M (2014), Finegold SM (2017),

### Toxine

Eman M (2016), De Santis B (2017), Parker W (2017), Good P (2018)

Vargas DL, Nascimbene C, Krishnan C, Zimmerman AW, Pardo CA. (2005) Neuroglial activation and neuroinflammation in the brain of patients with autism. *Ann Neurol.* 57(1), 67-81

Libbey JE, Sweeten TL, McMahon WM, Fujinami RS (2005) Review. **Autistic disorder and viral infections.** *Journal of NeuroVirology*, 11: 1–10, c\_ 2005 *Journal of NeuroVirology* ISSN: 1355-0284 print / 1538-2443 online DOI: 10.1080/13550280590900553  
<https://pdfs.semanticscholar.org/3cce/eee530ae3bfea851bc61ec59e462c99a9372.pdf>

Bransfield RC, Wulfman JS, Harvey WT, Usman AI (2007) [The association between tick-borne infections, Lyme borreliosis and autism spectrum disorders](#) *Medical Hypotheses*.

Zhao X et al. (2007) **A unified genetic theory for sporadic and inherited autism.** *PNAS*, 104, 12831-36

Nicholson GL, Gann R, Nicholson NL, Haier J (2007) **Evidence for Mycoplasma, ssp., Chlamydia pneumoniae, and Human Herpes-virus 6 Coinfections in Blood of patients with Autistic Spectrum Disorders.** *Journal of Neuroscience Research* 85(5), 1143-8.

[Bransfield RC](#), [Wulfman JS](#), [Harvey WT](#), [Usman AI](#). (2008) **The association between tick-borne infections, Lyme borreliosis and autism spectrum disorders.** *Med Hypotheses*. 70(5), 967-74.  
<http://www.ncbi.nlm.nih.gov/pubmed/17980971>

Lyme und Psychiatrie. Was Psychiater über Lyme-Borreliose und andere zeckenübertragene Krankheiten wissen sollten. (2009)  
[http://www.borreliose.me/mediapool/77/776837/data/Lyme\\_und\\_Psychiatrie.pdf](http://www.borreliose.me/mediapool/77/776837/data/Lyme_und_Psychiatrie.pdf)

Bransfield RC (2009) Preventable cases of autism: relationship between chronic infectious diseases and neurological outcome. *Pediatric Health* 3 (2), 125–140  
[http://www.lymepa.org/autism\\_future\\_medicine.pdf](http://www.lymepa.org/autism_future_medicine.pdf)  
<http://www.futuremedicine.com/doi/abs/10.2217/phe.09.5?journalCode=phe>

Li X. Et al. (2009) Elevated immune response in the brain of autistic patients. *J Neuroimmunol* 209:111-116.

[Rossignol DA, Frye RE.](#) (2012) [Mitochondrial dysfunction in autism spectrum disorders: a systematic review and meta-analysis.](#) *Mol Psychiatry* 17(3), 290-314  
<http://www.ncbi.nlm.nih.gov/pubmed/21263444>

„Overall, this evidence supports the notion that mitochondrial dysfunction is associated with ASD. Additional studies are needed to further define the role of mitochondrial dysfunction in ASD“.

Kuhn M, Grave S, Bransfield R, Harris S (2012) **Long term antibiotic therapy** may be an effective treatment for children co-morbid with Lyme and Autism Spectrum Disorder. *Medical Hypotheses* 1-9 <http://www.ncbi.nlm.nih.gov/pubmed/22361005>

Benach JI, Li E, McGovern MM (2012) A Microbial Association with Autism. *mBio* 3(1), pii: e00019-12. doi: 10.1128/mBio.00019-12. Print 2012.  
<http://www.ncbi.nlm.nih.gov/pubmed/22334515>

O’Roak BJ et al. (2012) Sporadic autism exomes reveal a highly interconnected protein network of de novo mutations. *Nature*, 485, 246-50

O’Roak BJ et al. (2012) Multiplex targeted sequencing identifies recurrently mutated genes in autism spectrum disorders. *Science*, 338, 1619-22

[Bransfield RC](#) (2012) **The Psychoimmunology of Lyme/Tick-Borne Diseases and its Association with Neuropsychiatric Symptoms.** [Open Neurol J.](#) 6, 88–93. Published online 2012 Oct 5. doi: [10.2174/1874205X01206010088](https://doi.org/10.2174/1874205X01206010088)  
PMCID: PMC3474947 Suppl 1 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3474947/>

Lewis WW et al. (2013) Impaired language pathways in tuberous sclerosis complex patients with autism spectrum disorders. *Cereb Cortex*, 23, 1526-32

Wang Lv, Christophersen CT, Sorich MJ et al. (2013) Increased abundance of **Sutterella spp. and Ruminococcus torques** in feces of children with autism spectrum disorder. *Molecular autism* 4(42), 2-4  
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3828002/>

Montaigner Pr (2013) <http://www.youtube.com/watch?v=LRQ-NhEkLXU>

Gentile I, Zappulo E, Militerni R, Pascotto A, Borgia G, Bravaccio C (2013) Etiopathogenesis of autism spectrum disorders: Fitting the pieces of the puzzle together. *Med Hypotheses*. 81(1), 26-35. doi: 10.1016/j.mehy.2013.04.002. Epub 2013 Apr 25.

Bransfield RC, Kuhn M (2013) **Autism and Lyme Disease.** *JAMA.* 310(8), 856-857.  
[http://jama.jamanetwork.com/article.aspx?articleID=1733709&utm\\_source=Silver](http://jama.jamanetwork.com/article.aspx?articleID=1733709&utm_source=Silver)

[Ajamian M](#), [Rajadhyaksha AM](#), [Alaedini A](#). (2013) Autism and Lyme disease--reply. JAMA. 310(8), 857. <http://www.ncbi.nlm.nih.gov/pubmed/23982381>

Ajamian M, Kosofsky BE, Wormser GP, Rajadhyaksha AM, Alaedini A.(2013) **Serologic markers of Lyme disease in children with autism**. JAMA. 309(17), 1771-3. [Related citations](#) <http://www.ncbi.nlm.nih.gov/pubmed/23632714>

Brimberg L, Sadiq A, Gregersen PK, Diamond B (2013) Brain-reactive IgG correlates with autoimmunity in mothers of a child with an autism spectrum disorder. Molecular Psychiatry, doi:10.1038/mp.2013.101 <http://www.nature.com/mp/journal/vaop/ncurrent/full/mp2013101a.html>

GOOGLE (2014) Autism and lyme, (Ca. 3500 Ergebnisse) [http://scholar.google.de/scholar?q=autism+and+lyme&hl=de&as\\_sdt=0&as\\_vis=1&oi=scholar&sa=X&ei=a\\_gmU5KRAcKJtAbw3IGoDQ&ved=0CC0QgQMwAA](http://scholar.google.de/scholar?q=autism+and+lyme&hl=de&as_sdt=0&as_vis=1&oi=scholar&sa=X&ei=a_gmU5KRAcKJtAbw3IGoDQ&ved=0CC0QgQMwAA)

Sroner Rn Chow ML, Boyle MP et al. (2014) **Patches of Disorganization in the Neocortex of Children with Autism**. New England Journal of Medicine 370(13), 1209 <http://www.nejm.org/doi/full/10.1056/NEJMoa1307491>

Goh S, Dong Z, Zhang Y, et al. (2014) **Mitochondrial Dysfunction as a Neurobiological Subtype of Autism Spectrum Disorder Evidence From Brain Imaging**. JAMA Psychiatry. doi:10.1001/jamapsychiatry.2014.179 <https://archpsyc.jamanetwork.com/article.aspx?articleid=1859135>

Hooker BS (2014) **Measles-mumps-rubella vaccination** timing and autism among young african american boys: a reanalysis of CDC data Translational Neurodegeneration 3,16 <http://link.springer.com/article/10.1186%2F2047-9158-3-16#page-1> <http://www.translationalneurodegeneration.com/content/3/1/16>

STATEMENT OF WILLIAM W. THOMPSON, Ph. D., REGARDING THE 2004 ARTICLE EXAMINING THE POSSIBILITY OF A RELATIONSHIP BETWEEN MMR VACCINE AND AUTISM (2014) <http://www.morganverkamp.com/august-27-2014-press-release-statement-of-william-w-thompson-ph-d-regarding-the-2004-article-examining-the-possibility-of-a-relationship-between-mmr-vaccine-and-autism/> <http://retractionwatch.com/2014/08/27/journal-takes-down-autism-vaccine-paper-pending-investigation/>

Crider A, Thakkar R, Ahmed AO et al. (2014) Dysregulation of estrogen receptor beta (ER $\beta$ ), aromatase (CYP19A1), and ER co-activators in the middle frontal gyrus of autism spectrum disorder subjects. Molecular Autism 46 doi:10.1186/2040-2392-5-46 <http://www.molecularautism.com/content/5/1/46>

Kuhn M, Bransfield RC (2014) Divergent Opinions of Proper Lyme Disease Diagnosis and Implications For Children Co-Morbid with Autism Spectrum Disorder. Medical Hypotheses 83(3), 321-5. doi: 10.1016/j.mehy.2014.06.005. Epub 2014 Jun 16. DOI: <http://dx.doi.org/10.1016/j.mehy.2014.06.005> <http://www.ncbi.nlm.nih.gov/pubmed/24986703> [http://www.medical-hypotheses.com/article/S0306-9877\(14\)00233-3/abstract](http://www.medical-hypotheses.com/article/S0306-9877(14)00233-3/abstract)

[Wang SS-H](#), [Kloth AD](#), [Badura A](#) (2014) The **Cerebellum, Sensitive Periods, and Autism**. *Neuron*. 83(3), 518–532. doi: [10.1016/j.neuron.2014.07.016](https://doi.org/10.1016/j.neuron.2014.07.016) PMID: PMC4135479 NIHMSID: NIHMS615526 PMID: [25102558](https://pubmed.ncbi.nlm.nih.gov/25102558/) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4135479/>

lossifov I et al. (2014) **The contribution of de novo coding mutations to autism spectrum disorder.** Nature, 515, 216-21

[Wang](#) SS-H, [Kloth](#) AD, [Badura](#) A (2014) **The Cerebellum, Sensitive Periods, and Autism.** *Neuron*. 83(3), 518–532. doi: [10.1016/j.neuron.2014.07.016](https://doi.org/10.1016/j.neuron.2014.07.016) PMID: PMC4135479 NIHMSID: NIHMS615526 PMID: [25102558](https://pubmed.ncbi.nlm.nih.gov/25102558/)  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4135479/>

Hanson E et al. (2015) **The cognitive and behavioral phenotype of the 16p11.2 deletion in a clinically ascertained population.** Biol Psychiatry, 77, 785-93

lossifov I et al. (2015) **Low load for disruptive mutations in autism genes and their biased transmission.** PNAS, 112, E5600-07

Mariani J et al. (2015) **FOXP1-dependent dysregulation of GABA/glutamate neuron differentiation in autism spectrum disorders.** Cell, 162, 375-90

[Feinberg](#) JI, [Bakulski](#) KM, [Jaffe](#) AE et al. (2015) **Paternal sperm DNA methylation associated with early signs of autism risk in an autism-enriched cohort.** *Int. J. Epidemiol.* (2015) doi: [10.1093/ije/dyv028](https://doi.org/10.1093/ije/dyv028)  
<http://ije.oxfordjournals.org/content/early/2015/04/14/ije.dyv028.full>

[Azmitia](#) EC, [Saccomano](#) ZT, [Alzoobaee](#) MF et al. (2015) **Persistent Angiogenesis in the Autism Brain: An Immunocytochemical Study of Postmortem Cortex, Brainstem and Cerebellum.** *J Autism Dev Disord*. [Epub ahead of print]  
<http://www.ncbi.nlm.nih.gov/pubmed/26667147>

Brun L et al. (2016) **Localized misfolding within Broca's area as a distinctive feature of autistic disorder.** *Biol Psychiatry Cogn Neurosci Neuroimaging*, 1, 160-8  
[https://www.researchgate.net/publication/285594698\\_Localized\\_Misfolding\\_Within\\_Broca's\\_Area\\_as\\_a\\_Distinctive\\_Feature\\_of\\_Autistic\\_Disorder](https://www.researchgate.net/publication/285594698_Localized_Misfolding_Within_Broca's_Area_as_a_Distinctive_Feature_of_Autistic_Disorder)

[Siniscalco](#) D, [Mijatovic](#) T, [Bosmans](#) E et al. (2016) **Decreased Numbers of CD57 Spectrum Disorder.** *In Vivo*. 30(2), 83-89.  
<http://www.ncbi.nlm.nih.gov/pubmed/26912817>

Kern JK. Et al. (2016) **Relevance of Neuroinflammation and Encephalitis in autism.** *Frontiers in Cellular Neuroscience*.

Eman M. Khaled<sup>1</sup> & Nagwa A. Meguid<sup>2</sup>, Geir Bjørklund et al. (2016) **Altered urinary porphyrins and mercury exposure as biomarkers for autism severity in Egyptian children with autism spectrum disorder.** *Metab Brain Dis* DOI 10.1007/s11011-016-9870-6 <https://www.ncbi.nlm.nih.gov/pubmed/27406246>

[Finegold](#) SM, [Summanen](#) PH, [Downes](#) J, [Corbett](#) K, [Komoriya](#) T (2017) **Detection of Clostridium perfringens toxin genes in the gut microbiota of autistic children.** *Anaerobe*. pii: 1075-9964(17)30029-X. doi: [10.1016/j.anaerobe.2017.02.008](https://doi.org/10.1016/j.anaerobe.2017.02.008). [Epub ahead of print] <https://www.ncbi.nlm.nih.gov/pubmed/?term=28215985>

Hazlett HC (2017) **Early brain development in infants at high risk for autism spectrum disorder.** Nature 542, 348-351. doi:10.1038/nature21369.

<http://www.nature.com/nature/journal/v542/n7641/full/nature21369.html>

[http://www.univadis.de/external/exit/?r=http%253A%252F%252Fwww.nature.com%252Fnature%252Fjournal%252Fv542%252Fn7641%252Ffull%252Fnature21369.html&display\\_iframe=1&exit\\_strategy=0&new\\_window=1](http://www.univadis.de/external/exit/?r=http%253A%252F%252Fwww.nature.com%252Fnature%252Fjournal%252Fv542%252Fn7641%252Ffull%252Fnature21369.html&display_iframe=1&exit_strategy=0&new_window=1)

**„A deep-learning algorithm that primarily uses surface area information from magnetic resonance imaging of the brain of 6–12-month-old individuals predicted the diagnosis of autism in individual high-risk children at 24 months (with a positive predictive value of 81% and a sensitivity of 88%). These findings demonstrate that early brain changes occur during the period in which autistic behaviours are first emerging.“**

Bhandari R et al. (2017) **Resveratrol** suppresses neuroinflammation in the experimental paradigm of autism spectrum disorders. Neurochem Int. 103, 8-23.

Mahic M, Mjaaland S, Bøvelstad HM, Gunnes N, Susser E, Bresnahan M, Øyen A-S, Levin B, Che X, Hirtz D, Reichborn-Kjennerud T, Schjølberg S, Roth C, Magnus P, Stoltenberg C, Surén P, Hornig M, Lipkin WI (2017) **Maternal immunoreactivity to herpes simplex virus 2 and risk of autism spectrum disorder in male offspring.** mSphere 2:e00016-17. <https://doi.org/10.1128/mSphere.00016-17>.

Scherer S et al. (2017) **Whole genome sequencing resource identifies 18 new candidate genes for autism spectrum disorder.** Nature Neuroscience. Published online 2017 March 6. Doi: 10.1038/nn.4524.

<http://www.nature.com/neuro/journal/vaop/ncurrent/full/nn.4524.html>

Howsmon DP, Kruger U, Melnyk S, James SJ, Hahn J (2017) **Classification and adaptive behavior prediction of children with autism spectrum disorder based upon multivariate data analysis of markers of oxidative stress and DNA methylation.** PLoS Comput Biol 13(3), e1005385. doi:10.1371/journal.pcbi.1005385 <http://journals.plos.org/ploscompbiol/article?id=10.1371/journal.pcbi.1005385>

[De Santis B](#), [Raggi ME](#), [Moretti G](#) et al. (2017) **Study on the Association among Mycotoxins and other Variables in Children with Autism.** [Toxins \(Basel\)](#). 9(7). pii: E203. doi: 10.3390/toxins9070203.

<https://www.ncbi.nlm.nih.gov/pubmed/?term=28661468>

Kern JK, Geier DA, Deth RC et al. (2017) **Systematic Assessment of Research on Autism Spectrum Disorder (ASD) and Mercury Reveals Conflicts of Interest and the Need for Transparency in Autism Research.** [Science and Engineering Ethics](#) 23(6), 1691–1718 | [Cite as](#)

[Parker W](#), [Hornik CD](#), [Bilbo S](#) et al. (2017) **The role of oxidative stress, inflammation and acetaminophen exposure from birth to early childhood in the induction of autism.** [J Int Med Res](#). 45(2), 407-438. doi:

10.1177/0300060517693423. Epub 2017 Mar 16.

<https://www.ncbi.nlm.nih.gov/pubmed/28415925>

[Good P](#) (2018) **Evidence the U.S. autism epidemic initiated by acetaminophen (Tylenol) is aggravated by oral antibiotic amoxicillin/clavulanate (Augmentin) and now exponentially by herbicide glyphosate (Roundup).** [Clin Nutr ESPEN](#). 23, 171-183. doi: 10.1016/j.clnesp.2017.10.005. Epub 2017 Dec 1. [Clin Nutr ESPEN](#). 23, 171-183. doi: 10.1016/j.clnesp.2017.10.005. Epub 2017 Dec 1.

<https://www.ncbi.nlm.nih.gov/pubmed/29460795>

- **Mitochondrien** <http://www.xerlebnishaft.de/mitochondrien.pdf>
- **Zytoskelett** <http://www.xerlebnishaft.de/zytoskelett.pdf>
- **Methylierung** <http://www.erlebnishaft.de/methylierung.pdf>
  
- **Antibiotika Langzeit-therapie** [http://www.kabilahsystems.de/antibiotika\\_langzeit.pdf](http://www.kabilahsystems.de/antibiotika_langzeit.pdf)
- **Bakterien Stressvarianten** <http://www.erlebnishaft.de/stressvar1.pdf>
  
- **Krankheitserreger-persistenz (am Beispiel Borrelien)**  
<http://www.xerlebnishaft.de/trotzantibiosepat.pdf>
- **Management nach Zecken-Kontakt (nicht validiert, not validated)**  
[http://www.xerlebnishaft.de/management\\_nach\\_zeckenkontakt.pdf](http://www.xerlebnishaft.de/management_nach_zeckenkontakt.pdf)  
[http://www.xerlebnishaft.de/management\\_nach\\_zeckenkontakt\\_en.pdf](http://www.xerlebnishaft.de/management_nach_zeckenkontakt_en.pdf)
  
- **Psychiatrische Patienten, bipolare Störung**  
[http://www.erlebnishaft.de/psychiatric\\_patients.pdf](http://www.erlebnishaft.de/psychiatric_patients.pdf)
- **Neurologische Patienten**  
[http://www.xerlebnishaft.de/neurologische\\_patienten.pdf](http://www.xerlebnishaft.de/neurologische_patienten.pdf)

### **Bildgebende Verfahren, imaging procedures**

[Raz A](#) (2004) **Brain Imaging Data of ADHD**. Psychiatric Times. [ADHD](#), [Addiction](#).  
<http://www.psychiatrictimes.com/adhd/brain-imaging-data-adhd>

Hoogman M, Bralten J, Hibar DP et al. (2017) **Subcortical brain volume differences in participants with attention deficit hyperactivity disorder in children and adults: a cross-sectional mega-analysis**. The Lancet Psychiatry, DOI: [10.1016/S2215-0366\(17\)30049-4](https://doi.org/10.1016/S2215-0366(17)30049-4)

[Bernt - Dieter Huismans](#) Letzte Revision April 2018 [www.Huismans.click](http://www.Huismans.click)  
 Back to top: [http://www.xerlebnishaft.de/autismus\\_und\\_lyme.pdf](http://www.xerlebnishaft.de/autismus_und_lyme.pdf)

