

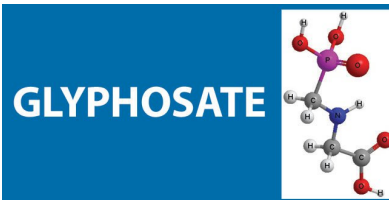
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Glyphosate in MMR: Does This Explain the Autism Link?

Stephanie Seneff
CSAIL, MIT
AutismOne
Friday, May 19, 2017





On Glyphosate Contamination in Food Products ...

“It is heartbreaking to see how this toxic, dangerous and unnecessary technology can strong arm its way into every facet of a supposedly democratic system and pollute its science, regulatory mechanism, academia, media, and the widest imaginable swath of political process, leaving virtually no clear avenue for the people to correct this wholesale chemical attack on society and an assault on nature.”

Tony Mitra, *Canadian activist*

Outline

- Introduction
- Glyphosate in proteins
- Gluten intolerance
- MMR and autism: the evidence
- Glyphosate in MMR?
- Political developments
- How to safeguard yourself and your family
- Summary

Introduction

Life Expectancy vs Health Expenditure

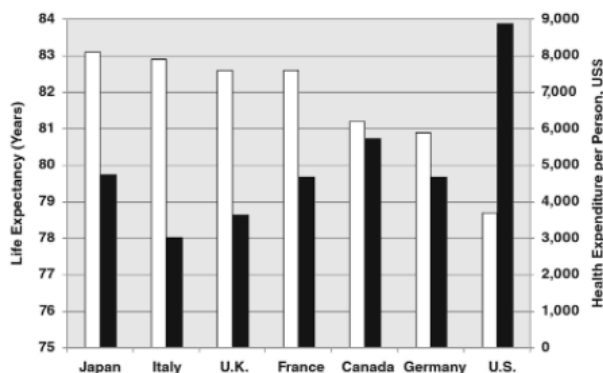


Figure 14-5. Life Expectancy versus Health Expenditure per Person, Group of Seven Countries, 2012

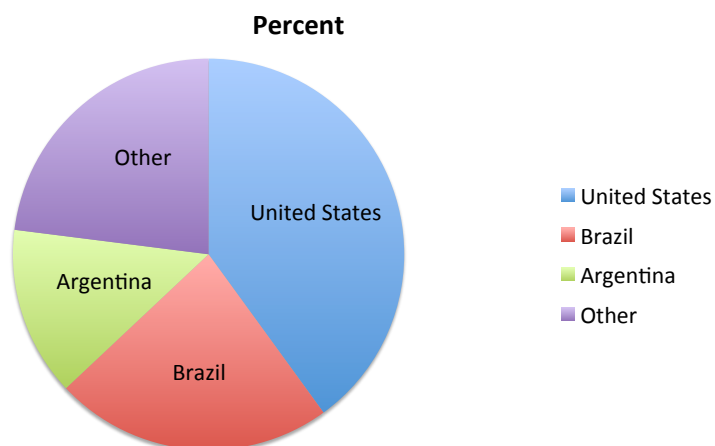
Source: The World Bank (2014). "World Development Indicators," Tables 2.15 and 2.21.

Some Statistics*

- Less than 0.1% of pesticides applied to crops worldwide reach their specific targets
 - The rest is spilled out into the environment
- There are more than 7750 formulations of glyphosate
- Until 2008, U.S. was the world's largest consumer of pesticides
 - Brazil took that distinction since 2008.

*L de Brito Rodrigues et al., Environ Toxicol Chem Aug 12, 2016:1-9 [Epub ahead of print].

Genetically Modified Crops: Distribution*



*N Wagner et al., Environ Toxicol Chem 32:1688-1700.

America's Children are in Trouble!

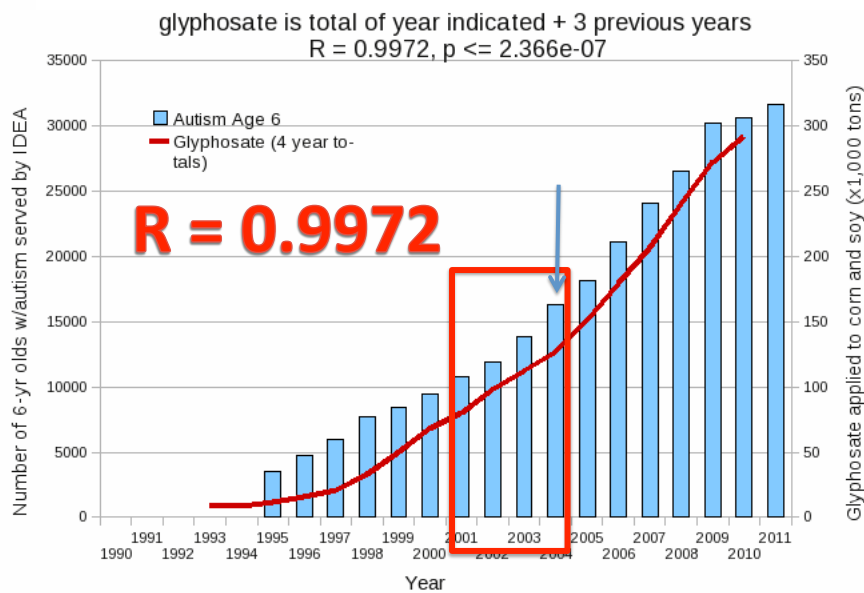
- It is now "normal" for a kindergarten child to have 12 colds every year and for a baby to have nine.
- Fourfold increase in childhood obesity
- Double the asthma rate since the 1980's
- "Chronic illnesses" rose from 1.8% in 1960 to 7% in 2004.
 - Today, 43% of US children are chronically ill.
- 1 in 6 children in the USA has a neurodevelopmental disability
- 1 in 38 boys are autistic
- US has the worst neonatal death rate of all industrialized countries.
- Today's children in the US will have a shortened life span compared to their parents.

Autoimmune Disease: An Invisible Epidemic*

“Taken together, the number of people suffering from autoimmune diseases is 24–50 million Americans, 16% of the US population. To put it in perspective, autoimmune disease prevalence equals heart disease and cancer combined.”

*Feldman B, Martin EM, Simms T. An Invisible Epidemic — When your body attacks itself — Autoimmune Disease; How Reframing the Data Unveils a Public Health Crisis Bigger than Cancer and Heart Disease Combined. www.tincture.io.

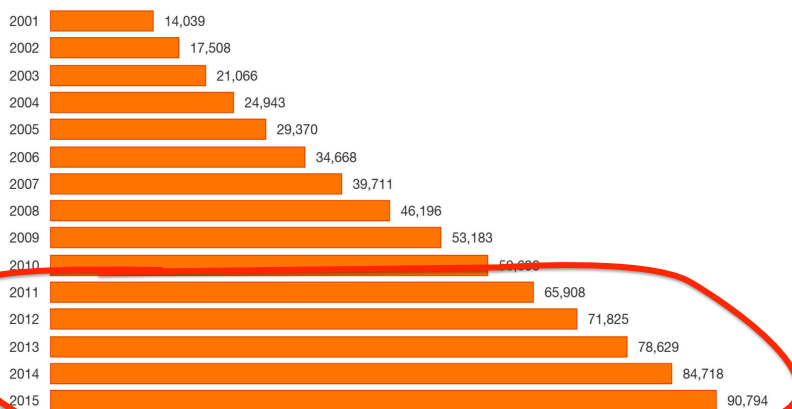
Autism Prevalence: 6 year olds*



* Figure 15, Seneff et al., Agricultural Sciences, 2015, 6, 42-70

Autism Rates in California Public Schools*

California autistic, public school students, 2001-2015



*<http://www.sacbee.com/site-services/databases/article55928865.html>

CASE REPORT

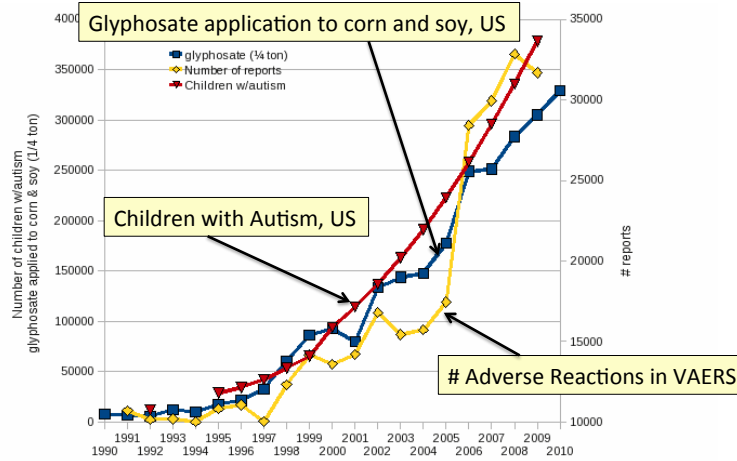
Elevated Urinary Glyphosate and Clostridia Metabolites With Altered Dopamine Metabolism in Triplets With Autistic Spectrum Disorder or Suspected Seizure Disorder: A Case Study*

William Shaw, PhD

- Triplets: two boys, one girl. Both boys have autism and girl has seizure disorder
- Very high levels of glyphosate in urine in all three
- Clostridia overgrowth due to glyphosate disruption of gut microbes
 - Toxic Clostridia metabolites lead to excess dopamine expression
- Damage to neuronal mitochondria and neurofibrils through oxidative stress

*W. Shaw. Integrative Medicine 2017;16(1);50-57.

Autism, Glyphosate, Vaccine Reactions*



*Collaboration with Dr. Nancy Swanson



Source: J.B. Handley, with permission

VACCINES DOSES for U.S. CHILDREN

1962

1983 1986

2016

TOTAL DOSES: 5

TOTAL DOSES: 24

TOTAL DOSES: 72

Polio
Smallpox
DTP

DTP (2 months)
OPV (2 months)
DTP (4 months)
OPV (4 months)
DTP (6 months)
MMR (15 months)
DTP (18 months)
OPV (18 months)
DTP (4 years)
OPV (4 years)
Td (15 years)

Influenza (pregnancy)
DTaP (pregnancy)
Hep B (birth)
Hep B (2 months)
Rotavirus (2 months)
DTaP (2 months)
HIB (2 months)
PCV (2 months)
IPV (2 months)
Rotavirus (4 months)
DTaP (4 months)
HIB (4 months)
PCV (4 months)
IPV (4 months)
Hep B (6 months)
Rotavirus (6 months)
DTaP (6 months)
HIB (6 months)
PCV (6 months)
IPV (6 months)
Influenza (6 months)
Influenza (7 months)
HIB (12 months)
PCV (12 months)
MMR (12 months)
Varicella (12 months)
Hep A (12 months)
DTaP (18 months)

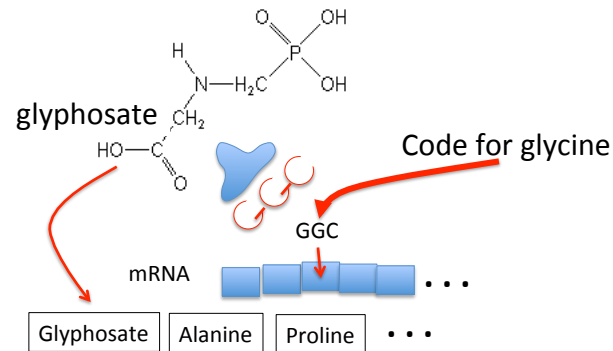
Influenza (18 months)
Hep A (18 months)
Influenza (30 months)
Influenza (42 months)
DTaP (4 years)
IPV (4 years)
MMR (4 years)
Varicella (4 years)
Influenza (5 years)
Influenza (6 years)
Influenza (7 years)
Influenza (8 years)
Influenza (8 years)
HPV (9 years)
Influenza (10 years)
HPV (10 years)
Influenza (11 years)
HPV (11 years)
DTaP (12 years)
Influenza (12 years)
Meningococcal (12 years)
Influenza (13 years)
Influenza (14 years)
Influenza (15 years)
Influenza (16 years)
Meningococcal (16 years)
Influenza (17 years)
Influenza (18 years)

**In 1986, Pharmaceutical manufacturers producing vaccines were freed from ALL liability resulting from vaccine injury or death by the Childhood Vaccine Injury Act.*

With this, vaccines became HIGHLY profitable. There are 271 vaccines in development and mandatory vaccine laws for children — and ADULTS — being pushed in most states.

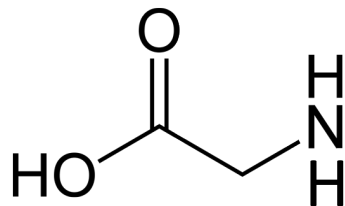
Glyphosate in Proteins

What If Glyphosate Could Insert Itself Into Protein Synthesis by mistake???



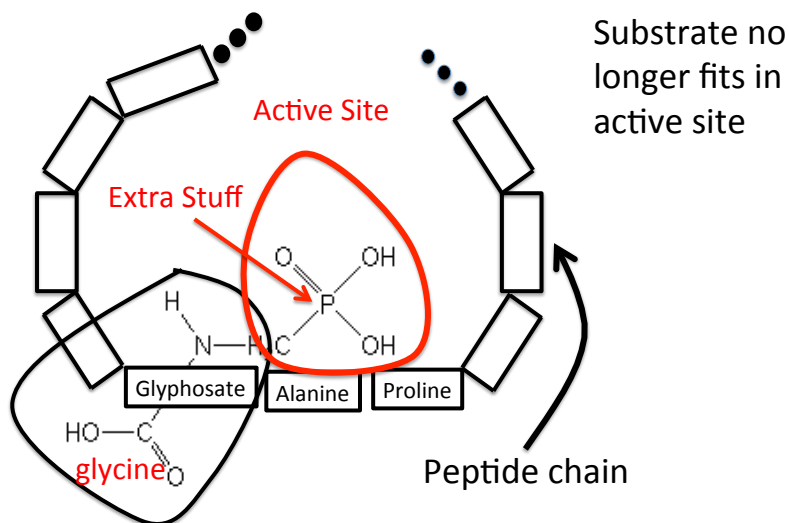
Any proteins with conserved glycine residues are likely to be affected in a major way

Glyphosate is a non-coding amino acid analogue of glycine

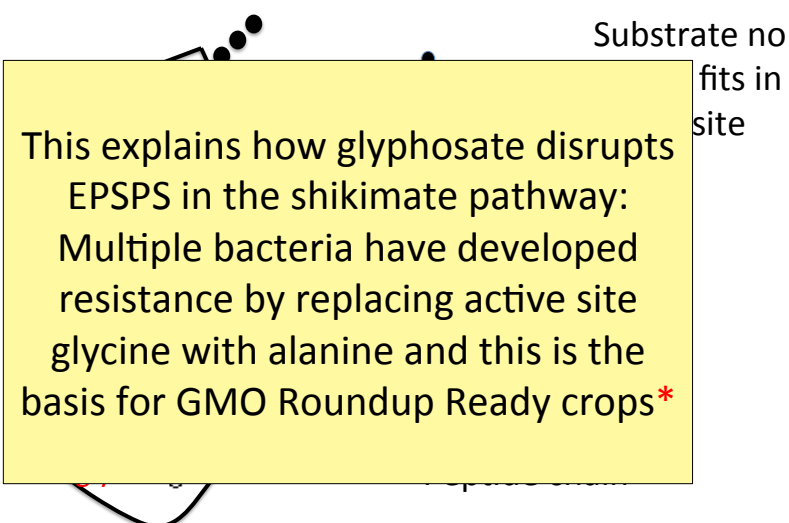


Glypinesate

Extra Piece Sticks Out at Active Site

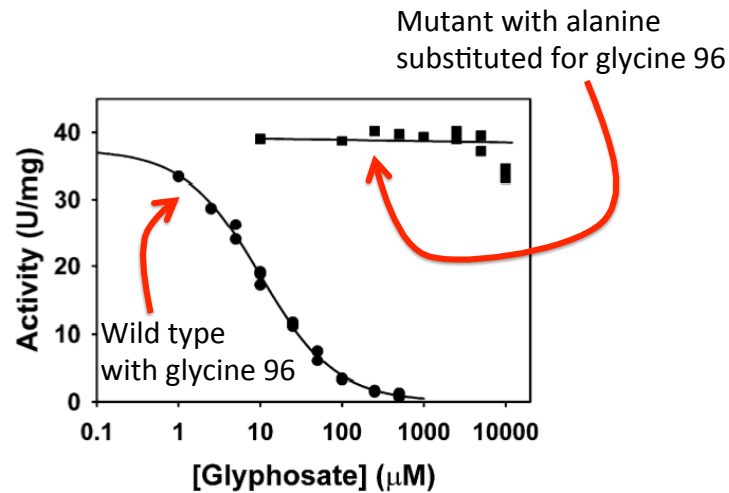


Extra Piece Sticks Out at Active Site



*T Funke et al., Molecular basis for the herbicide resistance of Roundup Ready crops. PNAS 2006;103(35):13010-13015.

Inhibition of EPSPs by glyphosate: Resistant E coli mutant*



*Figure 3, S Eschenburg et al. Planta 2002;216:129-135.

Some Predicted Consequences*

- Neurological diseases
- Autoimmune diseases
- Chronic fatigue syndrome
- Impaired collagen \rightarrow osteoarthritis
- Fatty liver disease
- Obesity and adrenal insufficiency
- Impaired iron homeostasis and kidney failure
- Insulin resistance and diabetes
- Cancer

*Samsel A and Seneff S. Journal of Biological Physics and Chemistry 2016;16:9-46.

Some Predicted Consequences*

- Neurological diseases
- Autoimmune diseases
- C
- I
- F
- Obesity and adrenal insufficiency
- Impaired iron homeostasis and kidney failure
- Insulin resistance and diabetes
- Cancer

All of these diseases can be linked to proteins that absolutely depend on glycine to function properly

*Samsel A and Seneff S. Journal of Biological Physics and Chemistry 2016;16:9-46.

Neurological Diseases

At least four neurological diseases related to misfolded proteins involve conserved glycine residues

Disease	Protein	Reference
Alzheimer's	Amyloid beta	Munter et al.
Parkinson's disease	Alpha synuclein	Du et al.
ALS	TDP-43	Pesiridis et al.
Prion diseases	Prion proteins	Harrison et al.

L-M Munter et al. The EMBO Journal 2007; 26: 1702-1712.

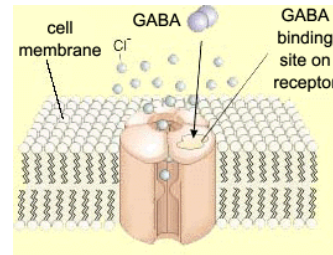
H-N Du et al., Biochemistry 2003; 42: 8870-8878.

S Pesiridis et al., Hum Mol Genet 2009; 18(R2): R156-R162.

CF Harrison et al., J Biol Chem 2010; 285(26): 20213-20223.

Impaired GABA Receptor Activity and Autism

- Autism has been linked to a weakened response of the inhibitory GABA receptor to stimuli*
- The GABA receptor has a conserved glycine at the entrance to the first membrane-spanning domain that is essential for its function**



*CD Robertson et al., Current Biology 2016;26: 80-85

**BX Carlson et al., Mol Pharmacol. 2000;57(3):474-84

Protein Phosphatase I and Autism

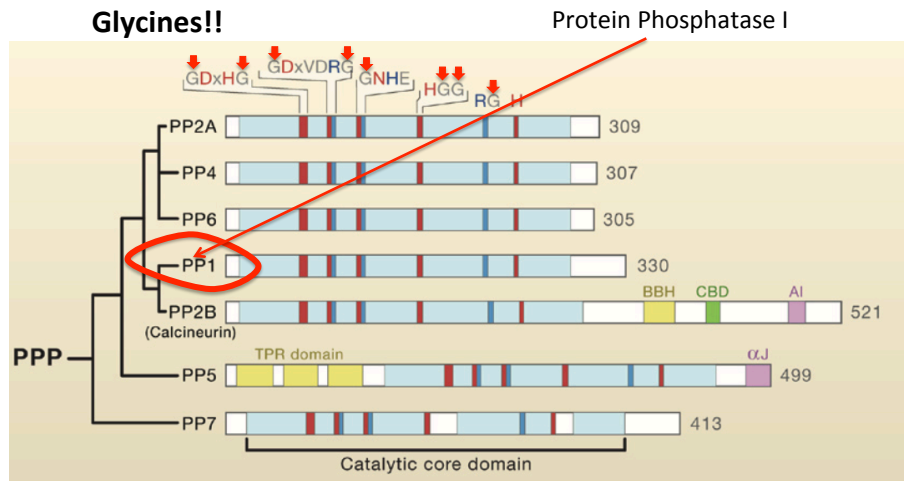
- Glyphosate exposure to rat dams led to thyroid deficiency in pups*
 - Attributed to suppressed release of thyroid stimulating hormone (TSH) from the dam's pituitary
- Thyroid deficiency in mom during pregnancy predicts significant increased risk to autism in child**
- Glyphosate link to impaired TSH due to disruption of protein phosphatase I***

*JS deSouza et al., Toxicology To Appear, 2017

**GC Román, Ann Neurol 2013;74(5):733-42.

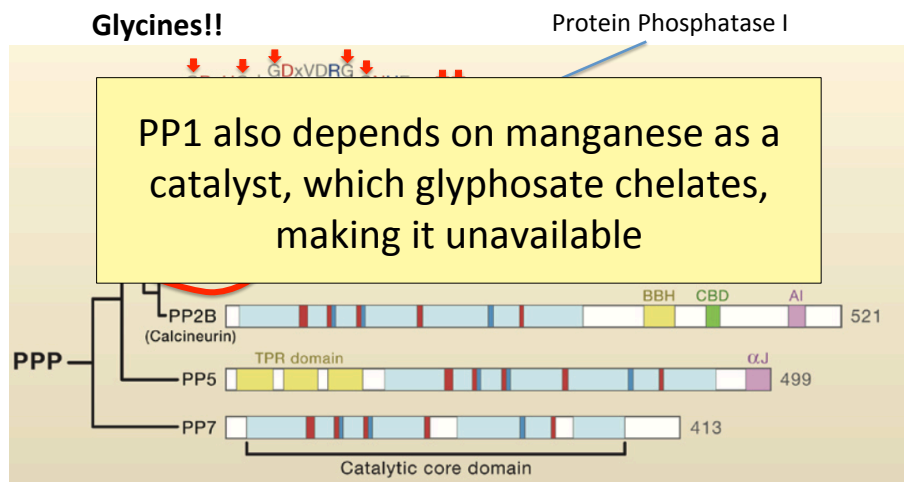
***JE Beecham and S Seneff. Journal of Autism 2016;3:1.

Protein Phosphatase 1 Has Many Highly Conserved Glycines!*



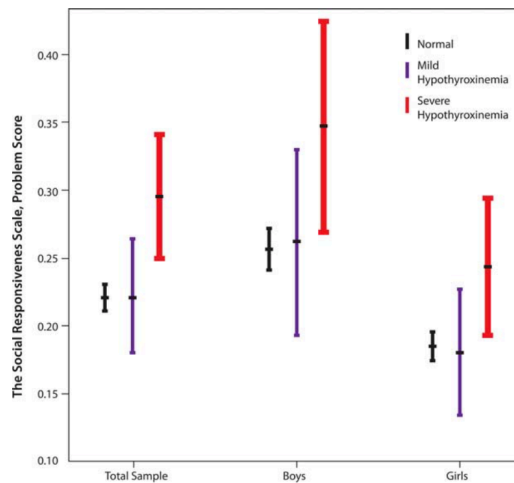
*Figure 1, Y. Shi, Cell 2009;139: 468-484.

Protein Phosphatase 1 Has Many Highly Conserved Glycines!*



*Figure 1, Y. Shi, Cell 2009;139: 468-484.

“Association of Gestational Maternal Hypothyroxinemia and Increased Autism Risk”*



*GC Román, Ann Neurol
2013;74(5):733-42.

FIGURE 2: Maternal hypothyroxinemia in early pregnancy and autistic symptoms in the children at age 6 years.

Recapitulation

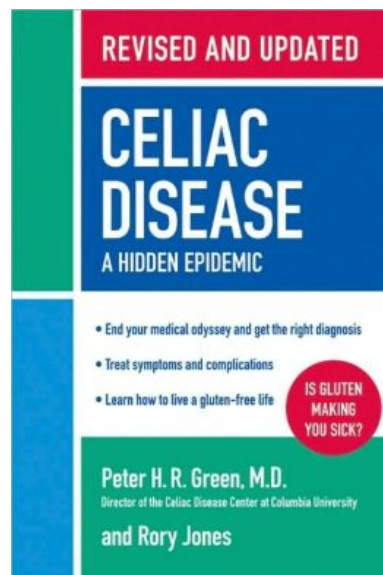
- Glyphosate may substitute for glycine by mistake during protein synthesis – coding error
 - This has huge consequences everywhere
 - Mutating to lose an active-site glycine is how the bacterial enzyme, EPSPS, gets protected from glyphosate suppression
 - This forms the basis of GMO Roundup Ready crops
- Nearly all of the strong correlations between glyphosate usage on core crops and the rapid rise in incidence of a number of debilitating diseases can be explained through protein disruption by glyphosate incorporation
- GABA receptor impairment in autism can be explained by glyphosate substituting for highly conserved glycine residue
- Protein phosphatase I inhibition by glyphosate can result in thyroid deficiency which is linked to autism in the fetus of an affected woman

Gluten Intolerance

Hypothesis

- Glyphosate exposure sets up a weakened immune system, a leaky gut barrier and a leaky brain barrier
- Glyphosate contamination in proteins makes them hard to break down
- Person develops overactive antibody response to foreign protein contaminated with glyphosate and, through molecular mimicry, this leads to autoimmune disease
- This easily explains gluten intolerance and other food allergies





Celiac Disease, Glyphosate and Non Hodgkin's Lymphoma

- Glyphosate preferentially kills bifidobacteria*
- Bifidobacteria are depleted in Celiac disease**
- Celiac disease is associated with increased risk to non Hodgkin's lymphoma***
- Glyphosate itself is also linked directly to non Hodgkin's lymphoma****

*A.A. Shehata et al., Curr Microbiol. 2013 Apr;66(4):350-8.

** M. Velasquez-Manoff, NY Times Sunday Review, Feb. 23, 2013.

*** C. Catassi et al., JAMA. 2002 Mar 20;287(11):1413-9.

**** M. Eriksson et al., Int J Cancer. 2008 Oct 1;123(7):1657-63.

“Herbicide Resistant Ryegrass Troubling for Wheat Growers”*

“If you see ryegrass at harvest following an Axial XL application, it may be resistant. And you can scatter seed all over the field with the combine.”

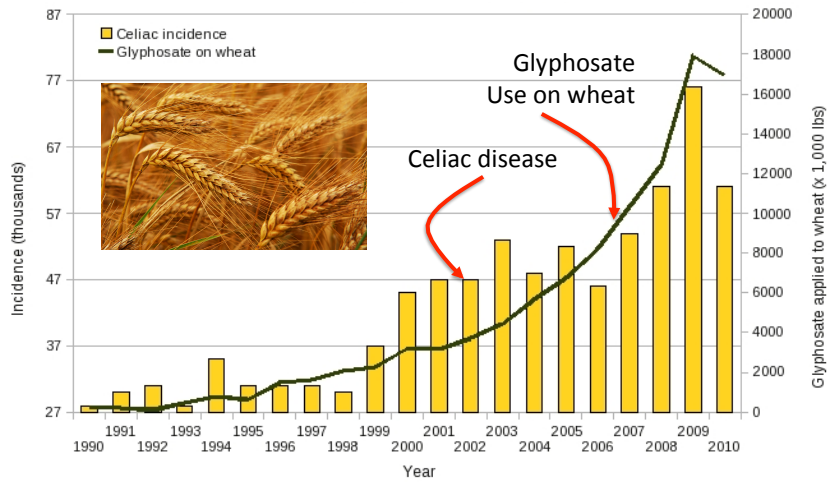
“A reduced-tillage approach, using a burndown herbicide ahead of planting in a stale seedbed, also holds promise for improved control.”

“ ‘We may be able to knock out 80% to 90% of the resistant ryegrass with glyphosate.’ ”

-- Jim Swart, integrated pest management specialist

*Ron Smith, Western Farm Press, Mar. 23, 2013

Glyphosate and Celiac Disease*



*Samsel and Seneff, Interdiscip Toxicol. 2013;6(4): 159–184.

MMR and Autism: The Evidence

Benefits of Infectious Diseases

- A large Japanese study found that a history of measles and mumps in childhood is significantly protective against deadly heart attacks and strokes during adulthood*
- Adults who had contracted chicken pox were 33% less likely to develop coronary heart disease
- Each additional contagious disease contracted during childhood, such as measles, mumps or rubella, increased the protective effect against acute coronary events by 14%**
- Tumor remissions after measles infection are well documented in the medical literature

*Y. Kubota et al., *Atherosclerosis* 2015;241(2):682-686.

** E. Pesonen et al., *Atherosclerosis* 2007;192(2): 370-375.

Some Adverse Reactions of MMR*

“A shortened version of the vaccine damage associated with the MMR vaccine includes vomiting, diarrhea, anaphylaxis, ear pain, nerve deafness, diabetes, arthritis, myalgia, encephalitis, febrile seizures, pneumonia, and death.”

*<https://vactruth.com/2016/06/23/japanese-government-bans-mmr-vaccine/>
http://www.merck.com/product/usa/pi_circulars/m/mmr_ii/mmr_ii_pi.pdf
http://www.merck.com/product/usa/pi_circulars...pdf

Dr. Andrew Wakefield

Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children

A J Wakefield, S J Murch, A Anthony, J Linnell, D M Casson, M Malik, M Berelowitz, A P Dhillon, M A Thomson, M Harvey, A V Savitine, S E Davies, J A Walker-Smith

Summary

Background We investigated a consecutive series of children with chronic enterocolitis and regressive developmental disorder.

Methods 12 children (mean age 6 years [range 3–10], 11 boys) were referred to a paediatric gastroenterology unit with a history of normal development followed by loss of acquired skills, including language, together with diarrhoea and abdominal pain. Children underwent gastroenterological, neurological, and developmental assessment and review of developmental records. Ileocolonoscopy and biopsy sampling, magnetic-resonance imaging (MRI), electroencephalography (EEG), and lumbar puncture were done under sedation. Biochemical, haematological, and immunological profiles were examined.

Findings Onset of behavioural symptoms was associated by the parents, with measles, mumps, and rubella vaccination in eight of the 12 children, with measles infection in one child, and otitis media in another. All 12 children had intestinal abnormalities, ranging from lymphoid nodular hyperplasia to atrophic colitis. Histology showed patchy chronic inflammation in 11 children and reactive ileal lymphoid hyperplasia in seven, but no granulomas. Behavioural disorders included regressive dyslexia (one), an identifiable encephalopathy (two). There were no laboratory abnormalities and EEG tests were normal. Abnormal laboratory results were significantly raised urinary ethylmalic acid compared with age-matched controls (p=0.03), low haemoglobin in four children, and low serum IgA in four children.

Interpretation We identified associated gastrointestinal disease and developmental regression in a group of previously normal children, which was generally associated in time with possible environmental triggers.

Lancet 1998; **351**: 637–41
See commentary page

Introduction

We saw several children who, after a period of apparent normality, lost acquired skills, including communication. They all had gastrointestinal symptoms, including abdominal pain, diarrhoea, and vomiting and, in some cases, food intolerance. We describe the clinical findings, and gastrointestinal features, of these children.

Patients and methods

12 children, consecutively referred to the department of paediatric gastroenterology, had a history of a pervasive developmental disorder after loss of acquired skills and intestinal symptoms, including abdominal pain, bloating and food intolerance), were investigated. All children were admitted to the ward for research, accompanied by their parents.

Clinical investigations

We took histories, including details of immunisations and exposure to infectious diseases, and assessed the children. In 11 cases, the history was obtained by the senior clinician (JW-S). Neurological and psychiatric assessments were done by consultant staff (PH, MB) with HMS-4 criteria. Developmental assessments included a review of prospective developmental records from parents, health visitors, and general practitioners. Four children did not undergo psychiatric assessment in hospital; all had been assessed professionally elsewhere, so these assessments were used as the basis for their behavioural diagnosis.

After bowel preparation, ileocolonoscopy was performed by SHM or MAT under sedation with midazolam and pethidine. Paired frozen and formalin-fixed mucosal biopsy samples were taken from the terminal ileum; ascending, transverse, descending, and sigmoid colons, and from the rectum. The procedure was recorded by video or still images, and were compared with images of the previous seven consecutive paediatric colonoscopies (four normal colonoscopies and three on children with ulcerative colitis), in which the physician reported normal appearances in the terminal ileum. Barium follow-through radiography was possible in some cases.

Also under sedation, cerebral magnetic-resonance imaging (MRI), electroencephalography (EEG) including visual, brain stem auditory, and sensory evoked potentials (where compliance made these possible), and lumbar puncture were done.

Laboratory investigations

Thyroid function, serum long-chain fatty acids, and cerebrospinal-fluid lactate were measured to exclude known causes of childhood neurodegenerative disease. Urinary

Dr. Andrew Wakefield

Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children

A J Wakefield, S J Murch, A Anthony, J Linnell, D M Casson, M Malik, M Berelowitz, A P Dhillon, M A Thomson, M Harvey, A V Savitine, S E Davies, J A Walker-Smith

“We have identified a chronic enterocolitis in children that may be related to neuropsychiatric dysfunction. In most cases, onset of symptoms was after measles, mumps, and rubella immunisation. Further investigations are needed to examine this syndrome and its possible relation to this vaccine.”

were normal. Abnormal laboratory results were significantly raised urinary ethylmalic acid compared with age-matched controls (p=0.03), low haemoglobin in four children, and low serum IgA in four children.

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“The Impact of the Gut Microbiota on Humoral Immunity to Pathogens and Vaccination in Early Infancy”*

- Gut microbiota are a dynamic community of intestinal bacteria, viruses, fungi, and archaea
 - They play an important role in activating the developing immune system and inducing protective antibody responses
- Germ-free mice have low antibody response to flu vaccine
- Bifidobacteria enhance oral vaccine efficacy
- Protective antibodies from mom’s milk interfere with vaccine response

* QN Nguyen et al., PLOS Pathogens 12(12): e1005997

“Inhibition of Vaccine Responses by Maternal Antibodies”*

“The only clinical solution to stimulating a protective B cell response in the presence of maternal antibodies is to immunize children repeatedly”

*Stefan Niewiesk, J Pediatr Inf 2013; 7: 157-61.

Probiotics and the immunological response to infant vaccinations: a prospective, placebo controlled pilot study*

- Oral probiotics given to infants during the period of immunization do not interfere with the immune response, and may improve sero-conversion rates.
- Probiotics may potentially reduce vaccine-related adverse effects in infants.

* I. Youngster et al., *Arch Dis Child* 2011;**96**:345–349.

“Probiotics and the immunological response to infant vaccinations: a prospective, placebo controlled pilot study”*

Table 2 Number of study participants failing to reach protective IgG antibody titres 3 months after vaccination for mumps, measles, rubella and varicella

	Placebo group	Probiotic group	p Value
Rubella IgG	3 (13%)	1 (4%)	0.226
Mumps IgG	2 (9%)	2 (8%)	0.392
Measles IgG	4 (18%)	2 (8%)	0.187
Varicella IgG	6 (27%)	3 (12%)	0.117
All measured IgG antibodies combined	15 (17%)	8 (8%)	0.052



Table 3 Number of study participants reporting vaccine related adverse events up to 10 days following vaccination for mumps, measles, rubella and varicella as reported by the parents during phone interview

	Placebo group	Probiotic group	p Value
Fever	5 (22.7%)	1 (4.0%)	0.072
Restlessness	4 (18.1%)	2 (8.0%)	0.286
Diarrhoea	2 (9.0%)	1 (4.0%)	0.484
Any reported adverse effect	11 (16.6%)	4 (5.3%)	0.051

* I Youngster et al.
Arch Dis Child 2011
96:345-349

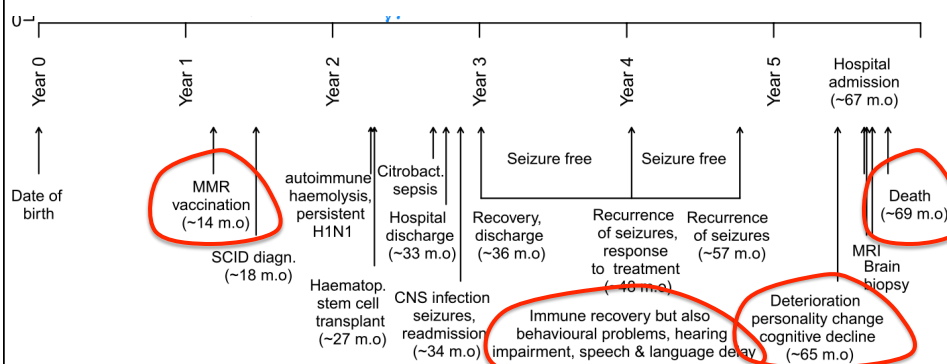
“Deep sequencing reveals persistence of cell-associated mumps vaccine virus in chronic encephalitis”*

- Child diagnosed with severe immune deficiency 4 months after MMR vaccine
- 10 months post-vaccine: rash, diarrhoea, lethargy and seizures, with evidence of encephalitis on magnetic resonance imaging (MRI)
- Deep sequencing of brain biopsy revealed match to *mumps* strain of MMR vaccine
- Common pathogenic process with measles encephalitis

*S Morfopoulou et al., Acta Neuropathol (2017) 133:139-147.

Summary: <http://www.greenmedinfo.com/blog/vaccine-did-it-mutated-mmr-mumps-virus-brain-child-caused-his-death-british-resea>

Time Chart*



*S Morfopoulou et al., Acta Neuropathol (2017) 133:139-147.

"Empirical Data Confirm Autism Symptoms Related to Aluminum and Acetaminophen Exposure"*

- We found a significant link between MMR and autism ($p = 0.007$)
 - We were puzzled, because it doesn't contain aluminum and it doesn't contain mercury
 - We blamed it on the acetaminophen
- We were partly right!
 - Glyphosate suppresses the liver CYP enzymes that are needed to metabolize acetaminophen



*S Seneff et al., Entropy 2012, 14, 2227-2253.

"Sulphation deficit in 'low-functioning' autistic children: a pilot study."*

- Specifically looked at ability to metabolize acetaminophen
- Found highly statistically significant result:
 - Autistic kids were unable to conjugate acetaminophen with *sulfate!* ($p < .00002$)
- Glyphosate disrupts multiple enzymes involved in sulfation pathway in E coli**

*AA Pirrone et al., Biol Psychiatry. 1999 Aug 1;46(3):420-4.

**W. Lu et al., Mol. BioSyst., 2013, 9, 522-530.

"A Population-Based Study of Measles, Mumps, and Rubella Vaccination and Autism"*

- Danish study, 2004 – claimed no relationship
- Flawed study:
 - The “not vaccinated” group are a biased group (not randomly selected)
 - They put all the autistic kids younger than 15 months into the “not vaccinated” group (should have thrown them out)
 - They divided up age groups such that the key date (15 months) was buried in the middle of the 0-3 age group.
- “not-vaccinated” group had substantially fewer autism cases in the 3-5 yr age group
 - 41% increased risk of autism in vaccinated group

*KM Madsen et al., N Engl J Med 2002;347:1477-1482.

Recapitulation

- Measles, mumps and rubella are childhood diseases that carry long-term benefit in protecting from heart disease and stroke
- MMR vaccine has an alarming list of adverse reactions
- Andrew Wakefield published a seminal paper in 1998 (later retracted) that linked MMR to autism in children with impaired gut microbiome
 - Gut microbiome plays important role in immune system maturation
- A case study showed indisputable link between mumps virus in MMR vaccine and an autoimmune encephalopathy leading to autism-like symptoms and premature death
- Acetaminophen administered following vaccination can be toxic when sulfation capacity is impaired
 - Glyphosate inhibits sulfation capacity
- A Danish study claiming MMR has no link to autism was flawed

Glyphosate IN MMR?

Glyphosate in Vaccines?

- For MMR, flu vaccine, and rabies vaccine, live virus is grown on *gelatin* derived from ligaments of pigs
 - Pigs are fed GMO Roundup-Ready corn and soy feed
- Gelatin (derived from collagen) contains significant amounts of both glycine and glutamate
 - These two neurotransmitters excite the NMDA receptors in the brain
 - Glyphosate substitution by mistake for glycine is a possibility!
- Glyphosate stimulation of NMDA receptors could cause neuronal burnout



2SSA16A

Glyphosate pathways to modern diseases VI: Prions, amyloidoses and autoimmune neurological diseases

Anthony Samsel¹ and Stephanie Seneff^{2,*}

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² Computer Science and Artificial Intelligence Laboratory, MIT, Cambridge, MA 02139, USA

Usage of the herbicide glyphosate on core crops in the USA has increased exponentially over the past two decades, in step with the exponential increase in autoimmune diseases including autism, multiple sclerosis, inflammatory bowel disease, type 1 diabetes, coeliac disease, neuromyelitis optica and many others. In this paper we explain how glyphosate, acting as a non-coding amino acid analogue of glycine, could erroneously be integrated with or incorporated into protein synthesis in place of glycine, producing a defective product that resists proteolysis. Whether produced by a microbe or present in a food source, such a peptide could lead to autoimmune disease through molecular mimicry. We discuss similarities in other naturally produced disease-causing amino acid analogues, such as the herbicide glufosinate and the insecticide L-canavanine, and provide multiple examples of glycine-containing short peptides linked to autoimmune disease, particularly with respect to multiple sclerosis. Most disturbing is the presence of glyphosate in many popular vaccines including the measles, mumps and rubella (MMR) vaccine, which we have verified here for the first time.

*A Samsel and S Seneff, Journal of Biological Physics and Chemistry 2017;17:8-32.

Glyphosate Contamination in Vaccines (Parts Per Billion)*

Merck	ZOSTAVAX	0.62	Shingles
Merck	MMR-II	3.74	Measles, Mumps and Rubella
Merck	VARIVAX	0.56	Varicella, Chicken Pox
MERCK	PNEUMOVAX	ND	Pneumococcal 18
MERCK	PROQUAD	0.66	Measles, Mumps, Rubella, Varicella
GSK	ENERGIX-B	0.34	Heptatitis B

*A Samsel and S Seneff, Journal of Biological Physics and Chemistry 2017;17:8-32.

The Purdue Vaccination Studies and Auto-antibodies*

“The Purdue studies also found that vaccinated dogs were developing autoantibodies to their own collagen”



*<http://www.dogsnaturallymagazine.com/purdue-vaccination-studies/>

Glyphosate and Glutamate*

- Acute exposure activates NMDA receptors and voltage-dependent calcium channels
 - Oxidative stress and neural cell death
 - Increased glutamate release into the synaptic cleft → *excessive extracellular glutamate levels*
 - Decreased glutathione content
 - Increased peroxidation of lipids (fats)



*<http://www.greenmedinfo.com/blog/roundup-weedkiller-brain-damaging-neurotoxin>

Symptoms of Adverse Reactions to MMR before and after 2002*

More Common Before 2002

Reaction	Count Before 2002	Count After 2002	p-value
joint pain	126	65	0.036

More Common After 2002

Reaction	Count Before 2002	Count After 2002	p-value
hospitalization	71	319	0.00037
seizures	203	462	0.0014
shortness of breath	100	216	0.010
hives	324	504	0.011
mumps	5	51	0.014
abscess	51	120	0.022
autism	69	143	0.024
eczema	4	36	0.026
ear infection	16	56	0.031
anaphylactic shock	16	54	0.034
facial swelling	45	95	0.040
swelling	860	1018	0.048

*Data analyzed from the VAERS database

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These are all characteristic symptoms of allergies to MSG

*Data analyzed from the VAERS database

Measles Virus and Hemagglutinin*

- The measles virus synthesizes the protein hemagglutinin
 - Antibodies to hemagglutinin are essential following MMR vaccination to induce immunity
- Hemagglutinin bears a sequence resemblance to myelin basic protein (MBP) → potential for autoimmune reaction
- MBP is essential for the formation of the myelin sheath surrounding nerve fibers
 - Children with a rare genetic defect involving deletion of MBP can suffer from microcephaly**
- Autoantibodies to MBP along with excessive levels of antibodies to measles hemagglutinin are linked to autism***

*Oldstone, MBA, Ed. Molecular mimicry: Infection inducing autoimmune disease. Springer Berlin Heidelberg; January 9, 2006.


**AD Kline et al., Am J. Hum. Genet. 1993;52:895-906.

***VK Singh et al., J Biomed Sci 2002;9(4):359-64.

Autism and Measles Hemagglutinin*

- 125 autistic children and 92 control children
- 60% of the children with autism had high levels of antibodies to measles hemagglutinin specific to the MMR vaccine
 - 90% of these had autoantibodies to myelin basic protein (MBP)
- 0% of the control children had high antibody titers to either hemagglutinin or MBP
- There were no elevations in antibodies detected against any proteins in the mumps or rubella viruses

*VK Singh et al., J Biomed Sci 2002;9(4):359-64.



Journal of Developing Drugs
ISSN: 2328-6851

Arumugham, J Develop Drugs 2015, 4:4
<http://dx.doi.org/10.4172/2329-6631.1000137>

Case Report **Open Access**

Evidence that Food Proteins in Vaccines Cause the Development of Food Allergies and Its Implications for Vaccine Policy

Vinu Arumugham*
San Jose, CA, USA

Abstract

Nobel Laureate Charles Richet demonstrated over a hundred years ago that injecting a protein into animals or humans causes immune system sensitization to that protein. Subsequent exposure to the protein can result in allergic reactions or anaphylaxis. This fact has since been demonstrated over and over again in humans and animal models.

Large Proteins in Vaccines: Allergenic*

“Vaccines clog our lymphatic system and lymph nodes with *large protein molecules* which have not been adequately broken down by our digestive processes, since *vaccines bypass digestion* with injections. This is why vaccines are linked to *allergies*, because they contain large proteins which as circulating immune complexes (CICs) or 'klinkers' cause our body to become allergic.”

*Dave Mihalovic, ND, http://whale.to/v/vaccines_cause_allergies.ht

Precedent: Glyphosate in Drugs?*

- Trasylol (aprotinin) is a protein derived from *bovine lung* used to reduce bleeding during open heart surgery
- Rare acute reaction to Trasylol involves precipitous drop in blood pressure, acute kidney failure, and sudden death
 - Piglets injected with glyphosate salts had similar acute reaction with high mortality rate
- Cows fed GMO Roundup-Ready feed had highest residue levels of glyphosate in lungs

*S Seneff et al., Agricultural Sciences 2015; 6:1472-1501.

Recapitulation

- Glyphosate has been detected in multiple vaccines, with highest concentrations in MMR
 - Many vaccines include gelatin and fetal bovine serum as ingredients, both of which are contaminated with glyphosate
- Glyphosate incorporated into a virus protein can lead to resistance to breakdown and autoimmune disease through molecular mimicry
- A causal link between MMR and autism can be explained through autoimmune attack on myelin basic protein through molecular mimicry with measles hemagglutinin
- Multiple large proteins found in vaccines are allergenic
- Glyphosate is likely also present in certain biological drugs and may explain rare bizarre life-threatening adverse reactions

Political Developments

Robert F. Kennedy may head a new commission to study vaccine safety





RFK, Jr. on Mercury & Vaccines

“I’ve spent my life working on energy issues, environmental issues, and global warming, but I’ve taken a hiatus to do just this issue because I cannot stand by and watch these children being poisoned —an entire generation of kids that is being poisoned now by government policies and greed. We’re going to take them on and beat them.”

Robert F. Kennedy, Jr.
Vaccines Revealed



Robert F. Kennedy, Jr. announces the World Mercury Project's \$100,000 challenge

FOR IMMEDIATE RELEASE

CONTACT:

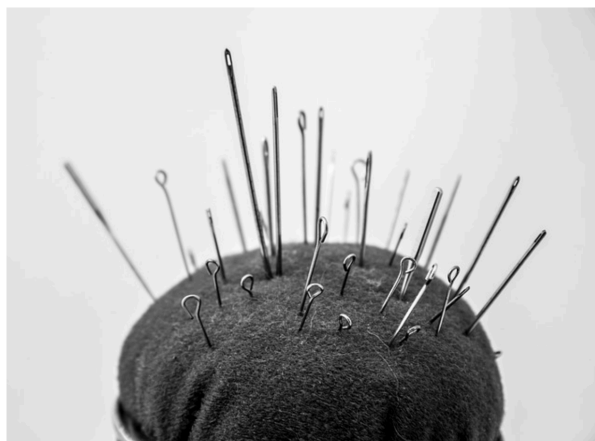
Laura.Bono@WorldMercuryProject.org, 202-854-1310

Robert F. Kennedy, Jr. announces the World Mercury Project's \$100,000 challenge with goal of stopping use of highly toxic mercury in vaccines.

WASHINGTON, Feb. 15, 2017 – Robert F. Kennedy Jr., Chairman of the World Mercury Project (WMP), announced a \$100,000 challenge today aimed at putting an end to including mercury, a neurotoxin that is 100 times more poisonous than lead, in vaccines administered in the U.S and globally.

Thimerosal, a mercury-containing preservative, is still in 48 million U.S. flu vaccines each year, tetanus toxoid, meningococcal vaccines and, in massive doses, in the pediatric vaccines given to 100 million children across the developing world. A Centers for Disease Control (CDC) [review published last month](#) found that the ethylmercury in thimerosal is as profoundly neurotoxic as the heavily regulated methylmercury in fish.

GreenMedInfo Research Articles Search 10,000+ Health Topics
 Posted on: Tuesday, January 17, 2017 at 10:45 am
 Written By: [Ginger Taylor, MS](#)



Examining RFK Jr.'s claim that the CDC "Owns over 20 vaccine patents."

Mr. Kennedy is in very safe territory by reporting that the CDC has over 20 patents that create vast, undisclosed conflicts of interests in vaccine safety.

*Ginger Taylor, MS, GreenMedInfo, Jan 17, 2017

Some Examples of CDC Vaccine Patents*

- CDC patents applicable to vaccines for Flu, Rotavirus, Hepatitis A, HIV, Anthrax, Rabies, Dengue fever, West Nile virus, Group A Strep, Pneumococcal disease, Meningococcal disease, RSV, Gastroenteritis, Japanese encephalitis, SARS, Rift Valley Fever, and chlamydomphila pneumoniae.
- Nucleic acid vaccines for prevention of flavivirus infection, which has applications in vaccines for Zika, West Nile virus, Dengue fever, tick-borne encephalitis virus, yellow fever, Palm Creek virus, and Parramatta River virus.
- Several patents for administering various “shots” via aerosol delivery systems for vaccines.

*greenmedinfo.com/blog/examining-rfk-jrs-claim-cdc-owns-over-20-vaccine-patents

Jeffrey Dach, MD, on Autism and Vaccines*

- Autism is a Public Health Issue
- The Science is NOT Settled
- Vaccine Makers are Exempt from Liability
- Vaccines Should Be Regulated Like Any Other Drug
- Some Vaccines Work, Others Are not Worth the Risks



*jeffreydachmd.com/2017/01/donald-trump-autism-vaccination-and-robert-kennedy-jr/

Dr. Jeffrey Dach on Autism and Vaccines*

“Authoritarian rulers typically enforce discipline by making an example of dissenters, who are accused of being ‘enemies of the state’ and summarily executed. Such an example was made of Dr. Wakefield whose career was destroyed after his research came up with the ‘wrong findings.’ Perhaps this weighs heavily on the minds of academics thinking of studying autism.”

*jeffreydachmd.com/2017/01/donald-trump-autism-vaccination-and-robert-kennedy-jr/



VaxXed Movie Story Line

- In 2013, William Thompson, PhD called Dr. Brian Hooker, autism parent, because he was wracked with guilt about his participation in a falsified CDC study on MMR and autism
- In African-American boys, autism was *3.4 times* as common in children who received the MMR before 3 years than in children who received it after 3 years.
- Among children who had been developing normally up to 1 year old, those who regressed into autism were more than *7 times* as likely to have had MMR before the age of 3.
- *All the children in the study had been given the MMR vaccine*

Dr. Thompson: Whistle Blower

- Metropolitan Atlanta Developmental Disabilities Surveillance Program (MADDPSP) Study - conducted in US in response to Wakefield's Lancet paper*
 - Allegedly claimed no link between MMR and autism
- The race effect problem (particularly black boys)
 - statistical significance was huge
- All authors met in 2002 and decided not to report any race effects
- A big garbage can was brought into the room, and documents containing the evidence were discarded (Thompson kept a copy)
- Added requirement for in-state birth certificate to get rid of over half the data on the black boys



*AJ Wakefield et al., Lancet. 1998 Feb 28;351(9103):637-41

Brian Hooker's Article

[Transl Neurodegener.](#) 2014; 3: 16. PMID: PMC4128611
 Published online 2014 Aug 8. doi: [10.1186/2047-9158-3-16](https://doi.org/10.1186/2047-9158-3-16)



This article has been retracted.

Retraction in: [Transl Neurodegener.](#) 2014; 3: 22. See also: [PMC Retraction Policy](#)

Measles-mumps-rubella vaccination timing and autism among young african american boys: a reanalysis of CDC data

Brian S Hooker^{1†}

[Author information](#) [Article notes](#) [Copyright and License information](#)

An expression of concern has been published for this article. See [Transl Neurodegener.](#) 2014; 3: 18.

This article has been retracted. See [Transl Neurodegener.](#) 2014; 3: 22.

This article has been cited by other articles in PMC.

Abstract

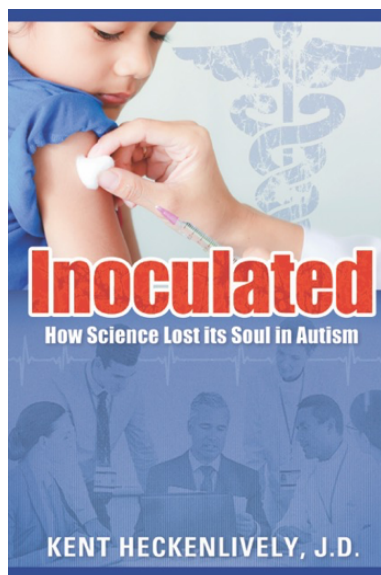
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Background

A significant number of children diagnosed with autism spectrum disorder suffer a loss of previously-acquired skills, suggesting neurodegeneration or a type of progressive encephalopathy with an etiological basis occurring after birth. The purpose of this study is to investigate the effect of the age at which children got their first Measles-Mumps-Rubella (MMR) vaccine on autism incidence. This is a reanalysis of the data set, obtained from the U.S. Centers for Disease Control and Protection (CDC), used for the Destefano et al. 2004 publication on the timing of the first MMR vaccine and autism diagnoses.

Methods

The author embarked on the present study to evaluate whether a relationship exists between child age when the first MMR vaccine was administered among cases diagnosed with autism and controls born between 1986 through 1993 among school children in metropolitan Atlanta. The Pearson's chi-squared method was used to assess relative risks of receiving an autism diagnosis within the total cohort as well as among different race and gender categories.



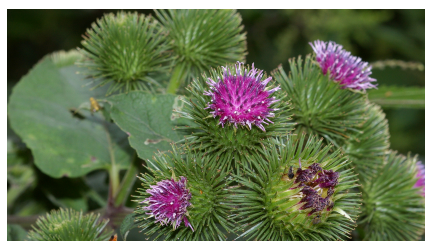
Recapitulation

- The CDC found a statistically significant link between MMR and autism in black males, but chose to bury that information
 - This cover-up has come to light through revelations by Dr. Thompson of the CDC
- The CDC owns many patents related to vaccines that constitute a conflict of interest
- Vaccines are not treated with as much scrutiny as drugs, in large part because the industry is protected from lawsuits
- Dr. Wakefield's career was destroyed because he discovered a plausible link between MMR and autism
 - A new verb has emerged in the vernacular: "to get Wakefielded"
 - Research advances on autism have been set back severely

How to Safeguard Yourself and Your Family

Extracts from Common Plants Can Treat Glyphosate Poisoning*

- Roundup is toxic to hepatic and embryonic cells at doses far below those used in agriculture and at residue levels present in some GM food.
- Extracts from common plants such as dandelions, barberry, and burdock can protect from damage, especially if administered prior to exposure.



*C Gasnier et al. Journal of Occupational Medicine and Toxicology 2011, 6:3

Treating Glyphosate Poisoning in Animals (e.g., cows) *

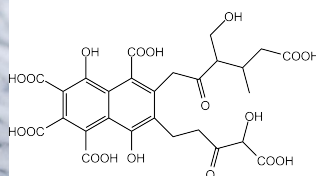


Sauerkraut Juice

Activated charcoal, bentonite clay, humic and fulvic acids, and sauerkraut juice have been shown to be effective in reducing urinary levels of glyphosate and improving animal health



Bentonite Clay



Fulvic Acid



Activated Charcoal

*H Gerlach et al., J Environ Anal Toxicol 2014, 5:2

Some Important Nutrients

- Curcumin
- Garlic
- Vitamin C
- Probiotics
- Methyl tetrahydrofolate
- Cobalamin
- Glutathione
- Taurine
- Epsom salt baths





- Sauerkraut and apple cider vinegar contain acetobacter, one of the very few microbes that can metabolize glyphosate
- Yogurt and kimchi probably do too



Kefir: Natural Probiotics*

- Kefir is a fermented milk product originating in the Caucasus mountains centuries ago
- Can be made from milk from cows, sheep and goats
- Slightly sour and carbonated
- One of the most potent probiotic foods available



*<https://chriskresser.com/kefir-the-not-quite-paleo-superfood/>

Summary

- MMR vaccine in collaboration with glyphosate is a major player in the autism epidemic
 - Autoimmune disease induced by glyphosate-contaminated viral proteins
 - Leaky brain barrier due to chronic glyphosate exposure in food
- Glyphosate's likely ability to get into proteins by mistake in place of glycine can explain the strong correlations we are seeing between glyphosate usage and a long list of debilitating autoimmune diseases
 - Celiac disease, rheumatoid arthritis, Alzheimer's, Parkinson's, diabetes, ALS, non Hodgkin lymphoma, etc.
- Switching to an organic high-sulfur diet and probiotic foods are simple steps to improve your family's health