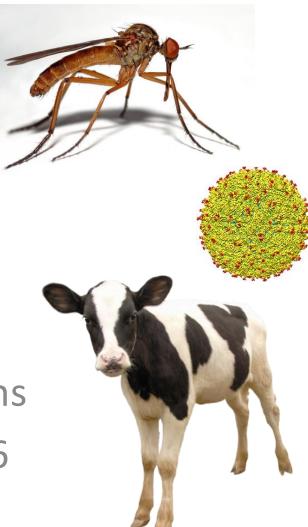
## Microcephaly in Brazil: Is it Really Just Zika?







Stephanie Seneff WAPF Wise Traditions November 12, 2016

"The single most important issue in this election must be to prevent the purposeful disabling of our emerging human progeny. For without healthy, functioning children to carry us forward, we have nothing. No other issue in this election carries greater significance. You should too... Every awakened individual has a part to play in defeating this evil." Eileen Dannemann, Director DC corruption

National Coalition of Organized Women

## Outline

#### Part I

- Introduction: Zika Hype
- Vaccines and Autoimmunity
- Glyphosate as a Glycine Analogue
- Beriberi (Thiamine Deficiency)
- Role for Vaccines in Microcephaly?

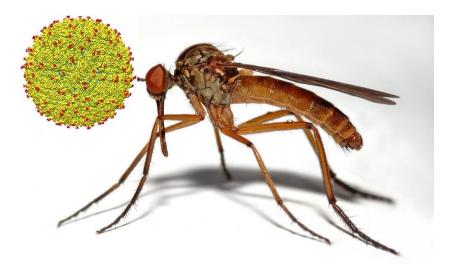
#### Part II

- Role for Herbicides in Microcephaly?
- Fighting Zika: Is the Cure Worse than the Disease?
- Summary

Introduction: Zika Hype

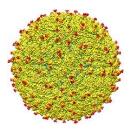
#### Zika Virus and Microcephaly: Could there be something more to the story?

# Zika has been around since the mid 1900's and it has never been known to cause microcephaly





#### Zika Causes Microcephaly: There's No Doubt!\*



"Zika Virus Causes Birth Defects, Health Officials Confirm." New York Times

"CDC Confirms Zika Virus Causes Microcephaly, Other Birth Defects" Washington Post

"Zika Definitely Causes Birth Defects, U.S. Officials Announce" TIME magazine

"It's Official: Zika Virus Causes Birth Defects" NBC News.



\*SA Rasmussen et al. N Engl J Med 2016; 374:1981-1987.

#### **Quote from a Comment by "Marie"**\*

"When it comes to autism, the 'slogan' of the medical system and the CDC is that 'correlation does not equal causation' (meaning that if a child gets an MMR shot and regresses into autism, that doesn't prove it was the vaccine that caused autism)."

"Why is it a different story when it comes to the Zika virus and microcephaly?"

\*http://www.thevaccinereaction.org/2016/09/ cdc-bets-farm-on-zika-based-on-conclusion-of-rasmussen-jamieson-honein-petersen-paper/

#### **CBS 60 Minutes Segment Last Sunday\***

- Showed how Zika has spread out of Africa, first to SE Asia and then on to the Americas
- Two pregnant women infected by Zika showcased in the segment - both of them appeared to have healthy babies
- Interviewed Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases
  - Fauci portrayed no doubt that there was anything else going on with respect to microcephaly besides Zika
  - Emphasized urgency for US government to fund vaccine development
  - Promoted plasmid DNA Zika vaccine under development
- Congress has just approved \$1.1 Billion to fight Zika

\*Dr. John LaPook,

www.cbsnews.com/news/60-minutes-zika-in-the-united-states-mosquito-disease

#### The Situation in Brazil\*

"The Brazilian government, unlike the CDC, may finally be waking up to the likely possibility of environmental factors being the cause. Brazil's northeast region is the fastest economically developing area of the country. Enforcement of environmental regulations—when they exist at all—is lax. Lots of industrial and agricultural chemicals are used. Lots of pesticides, larvicides, and herbicides, including the highly toxic Agent Orange."

\*http://www.thevaccinereaction.org/2016/09/ cdc-bets-farm-on-zika-based-on-conclusion-of-rasmussen-jamieson-honein-petersen-paper/

#### "Brazil opens probe as cases of Zika babies defy predicted patterns"\*

"Initial analysis makes it clear the women with affected fetuses have a clear 'profile.' Some 77 per cent of them are black or mixed-race (the national figure is 52 per cent), and the great majority are poor... Most of the mothers are young (between 14 and 24) whereas typically birth defects affect older women."

> \*http://www.theglobeandmail.com/news/world/ brazil-opens-probe-as-cases-of-zika-babies-defy-predicted-patterns/ article31268428/%20%c2%a0/

#### **Odd Distribution in Brazil\***

"Scientists in Brazil have been puzzled by the fact that cases of congenital Zika syndrome have clustered in the northeast part of the country, and that the expected surge in cases elsewhere in the country has not happened. ...

Of the 1749 confirmed cases of microcephaly or other central nervous system birth defects, 85% were concentrated in the northeast."

\*Collucci C. Brazil to investigate if other factors act with Zika to cause congenital defects. *The BMJ* Aug. 11, 2016.

#### **Dr. Sherri Tenpenny's Interpretation\***

**Problem:** Oops. We created a vaccine-induced disaster, using the MMR and toxic pertussis vaccines together in young women who were pre-pregnant and pregnant. Coupled with Monsanto's pesticides in the water, we have to find something to blame. ...

**Reaction:** How about blaming a common mostly-benign virus! We've done that before, and it works. ...

**Solution:** Let's get General Director Margaret Chan at the WHO to declare Zika Infection to be an international emergency. ...

\*https://truthkings.com/zika-virus-fools/

#### A (satirical) catalog of major injuries that result from Zika infection\*

"It will include most if not all injuries that result from vaccines, pesticides, GMO food, pharmaceutical drugs, the high-carbohydrate low-fat standard American diet, and anything else that might lead to a successful lawsuit against Big Pharma or Big Chem. Zika might just become the standard defense for suit against corporations. It wasn't our product that harmed this little baby, it was Zika!' "

\*John P Thomas, Health Impact News, August 29, 2016

"The recent outbreak of Zika-presumed microcephaly in Brazil and other regions is a sobering example of how our 'kill the enemy' approach to health and medicine may be fundamentally flawed. Worse yet, it serves as a prime example of how political and economic forces are overriding our common humanity and usurping medical science."

- Dr. Chandler Marrs

## Brazil, Zika and Microcephaly\*

- Up to 5,000 cases reported, but only 404 cases confirmed – 0.003% of the live births
- 25,000 cases of microcephaly have been reported in the US: 0.006% of live births
- Only 17 of the 404 confirmed cases in Brazil have been directly linked to Zika

\* https://www.hormonesmatter.com/zika-microcephaly/

#### Zika and Microcephaly in Colombia\*

- 65,726 cases of Zika infection reported, including in 11,944 pregnant women as of April 2, 2016.
- None of the 1850 monitored patients gave birth to a child with microcephaly
- 92% of 50 microcephaly cases examined had no evidence of Zika infection.
- The 4 cases who tested positive for Zika had had no symptoms of infection.

Conclusion:

 "Preliminary surveillance data in Colombia suggest that maternal infection with the Zika virus during the third trimester of pregnancy is not linked to structural abnormalities in the fetus."

\*O Pacheco et al. NEJM Epub ahead of print, June 16, 2016.

#### **Other Possibilities?\***

- Glyphosate in the food (Roundup)
- The larvicide, Pyriproxifen, in the water supply
- The Tdap vaccine, administered in the third trimester (since 2014)
- Poverty/malnutrition: particularly thiamine deficiency
  - The very poor get whole cell DPT vaccine instead of the more expensive Tdap

\* https://www.hormonesmatter.com/zika-microcephaly/

#### **Some Other Potential Factors**

- Pesticides: GMO Roundup-Ready crops plus a new GMO resistance gene to glufosinate
- Synergistic toxicity of glyphosate & (aluminum, mercury, glutamate) in Tdap and flu vaccines
- Measles outbreak in NE Brazil; aggressive MMR booster campaign?
- GMO mosquito introduced into same area where microcephaly is highest
  - Supposed to reduce mosquito burden: fewer mosquitoes = more infection??

#### Brazil is Agrochemical Capital of the World\*

- 70% of Brazil's food is contaminated by pesticides
   Highest per-capita consumption rate in the world
- 1/3 of agrochemicals used in Brazil have been banned in the EU and US due to impacts on human health and the environment
- Brazilian lawmakers support the interests of powerful agriculture lobby groups
  - A bill has been introduced that would replace the word "pesticide" with "plant health protection."
- 29% of 1,665 samples of food showed residues that either exceeded allowable levels or contained unapproved chemicals.

\*www.globalresearch.ca/

seventy-percent-of-brazilian-food-contaminated-by-agrochemicals/5531682

#### **Anecdotal Evidence**

- Feb 8 PBS Evening News segment on Zika: interviewed young mother of a child with microcephaly
- The closing remark was that the mother would have to quit her job as an agricultural worker to tend to the child

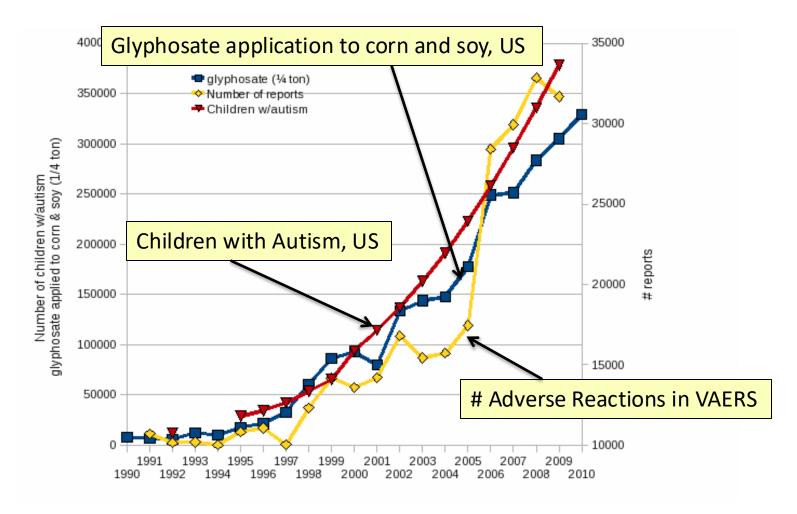
#### Both Macrocephaly and Microcephaly are linked to Autism\*

- 126 autistic children studied
- 16.7% diagnosed with macrocephaly
- 15.1% diagnosed with microcephaly
- Both of these numbers are abnormally high, compared to the general population

These abnormal brain developmental features are milder forms of the more severe defects associated with neural tube disorders

\*E Fombonne et al., J Autism Dev Disord 1999;29(2):113-9.

#### Autism, Glyphosate, Vaccine Reactions\*

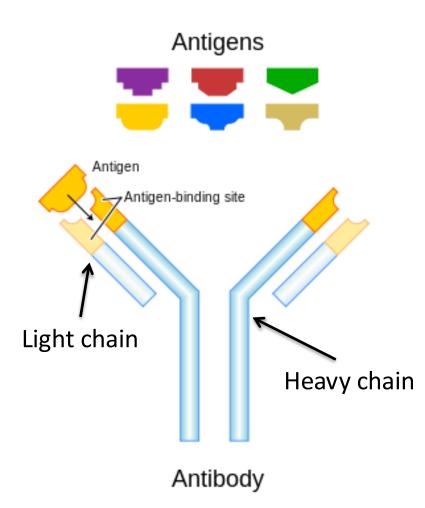


\*Collaboration with Dr. Nancy Swanson

# Vaccines and Autoimmunity

## **Brief Introduction to Antibodies**

- Antigens are foreign molecules, usually proteins
- A complex process takes place in the thymus gland early in life to create DNA codes for a large number of antibodies, each sensitive to specific protein patterns
- Each antibody has two heavy chains and two light chains
- Each immune B cell produces unique antibodies
- Antibodies bind to antigens to mark them for clearance



#### **Brief Introduction to Antibodies**

 Antigens are foreign molecules, usually proteins

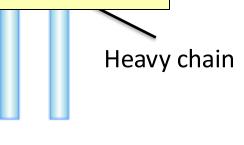
Antigens

Autoimmune disease develops when antibodies recognize self proteins as if they were foreign

Light chain



- Each immune B cell produces unique antibodies
- Antibodies bind to antigens to mark them for clearance



Antibody

#### Autoimmune Disease and Molecular Mimicry\*

- A peptide sequence in a foreign protein resembles a sequence in a human protein
- The immune system develops antibodies to the foreign protein and then these act as *autoantibodies* and attack the human protein that looks similar

- This is how you get *autoimmune disease* 

 The foreign protein could be from a virus in a vaccine or from a live infection or it could be from a food source like wheat gluten

\*MF Cusick et al., Clin Rev Allergy Immunol. 2012; 42(1): 102–111.

#### **Autoimmune Disease Statistics\***

- Autoimmune Disease (AD) is a major health problem
- Annual direct health care costs for AD in US estimated to be ~\$100 billion



- At least 23.5 million Americans
   suffer from one or more autoimmune diseases
- Among the top-10 causes of death in females under 64 years old
- Immunosuppressant treatments have devastating side effects

\*https://www.aarda.org/autoimmune-information/autoimmune-statistics/

# Why do we have an epidemic in autoimmune disease in America today?

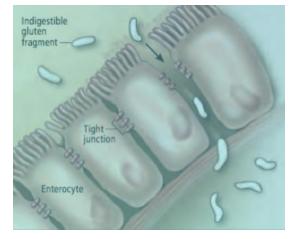
## Hypothesis

- Cumulative glyphosate exposure sets up a weakened immune system, a leaky gut barrier and a leaky brain barrier
- Proteins in foods like gluten and casein are contaminated with glyphosate, and this makes them resistant to digestion
- Vaccines introduce foreign proteins that may contain glyphosate as a contaminant
- Child develops overactive antibody response to foreign protein contaminated with glyphosate and, through molecular mimicry, this leads to autoimmune disease

#### **How Vaccines Work**

- The goal of a vaccine is to fool your immune system into "thinking" that cellular-based immunity is impaired, so that specific memory antibodies to the antigen will develop
- This is done by adding "adjuvants" like aluminum, LPS, and unmethylated CpG DNA
- Whenever you develop specific antibodies there is a danger that they will become autoantibodies

"If the inside lining of the gastrointestinal tract (the mucosa) is attacked by auto-antibodies, you can develop leaky gut syndrome.



Crohn's disease and colitis are also caused by auto-antibody attack of the GI tract itself. If the islet (insulin producing) cells of the pancreas are attacked by auto-antibodies, you develop insulin dependent (juvenile) diabetes."\*

\*Rebecca Carley, MD, https://vaccinesbytheoutliers.wordpress.com/2016/08/18/ i-just-never-knew-auto-antibodies-were-such-a-drag/

"If you develop auto-antibodies against the very DNA in the nucleus of all cells, you develop systemic Lupus (thus, the autoimmune potential of DNA vaccines being developed now is self-evident.)" "The brain and spinal cord can also be attacked with auto-antibodies (vaccine induced encephalitis)."\*

\*Rebecca Carley, MD, https://vaccinesbytheoutliers.wordpress.com/2016/08/18/ i-just-never-knew-auto-antibodies-were-such-a-drag/

# Quantifying the possible cross-reactivity risk of an HPV16 vaccine (Gardasil) \*

"The number of viral matches and their locations make the occurrence of side autoimmune crossreactions in the human host following HPV16-based vaccination *almost unavoidable*."

\*D. Kanduc. J Exp Ther Oncol. 2009;8(1):65-76.

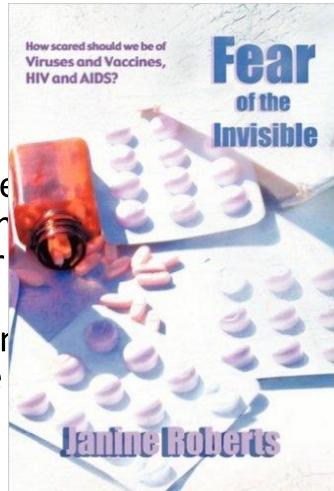
#### Antiphospholipid Syndrome (APS)\*

- Phospholipids are mistakenly viewed as foreign substances
  - Sufferers are mostly women and many have experienced multiple pregnancy losses
  - Diverse symptoms including blindness, deep vein thrombosis, pulmonary embolism, headaches and migraines, miscarriages, cognitive dysfunction, multiple sclerosis
- Tetanus vaccine implicated
  - Autoimmune attack on plasma protein beta-2glycoprotein-I (β2GPI) due to molecular mimicry with tetanus toxoid (antigen in tetanus vaccine)

\*M Blank M and Y. Shoenfeld. Clin Immunol. 2004 Aug;112(2):190-9.

"In other words, the vaccines we give our children are liquids filled with a host of unknown particles, most of which came from the cells of non-humans: from chickens, monkeys and even from cancer cells. Truly we do not know what we are doing or what are the long-term consequences. All that is known for sure is that vaccines are a very cheap form of public medicine ofter provided by governments to assure the public that they really do care for the safety of our children."

- -- Janine Roberts
- Fear of the Invisible.



#### The FDA says:

"It is not possible for a manufacturer of live viral vaccines to validate the process for clearance of adventitious agents" \*

\*http://www.fda.gov/BiologicsBloodVaccines/

GuidanceComplianceRegulatoryInformation/Guida nces/default.htm.

### Human Immunodeficiency with Microcephaly\*

 Mutations in several genes involved in DNA repair mechanisms lead to a severe condition characterized by both immune deficiency and

autoimmune disease, along with microcephaly at birth and developmental delay

• Profound defects observed in neuronal proliferation



• These genes are crucial for the development of the memory B and T cells early in life

\*D Buck et al., Cell 2006;124: 287-299.

#### Human Immunodeficiency with Microcephaly\*

• Mutations in several genes involved in DNA

Immune system development, DNA repair following oxidative damage or UV exposure and neuronal cell proliferation are all intimately linked together

the memory B and T cells early in life

•

\*D Buck et al., Cell 2006;124: 287-299.

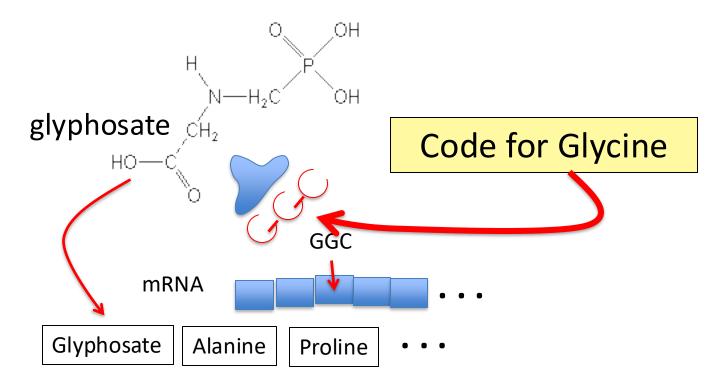
### Recapitulation

- Antibodies to foreign protein can become autoantibodies and attack native proteins, causing disease through molecular mimicry
- The peptides in vaccines such as HPV and tetanus resemble human peptides and cause autoimmune disease
- Vaccines contain many toxic excipients like aluminum, mercury, formaldehyde
- It is not possible to make vaccines that are free of unanticipated contaminants: toxic chemicals, human DNA and other viruses are all possibilities
  - Most worrisome is the potential for glyphosate to get into viral proteins and cause resistance to breakdown followed by autoimmune disease
- Immune system development, DNA repair and neuronal propagation are intimately connected → microcephaly



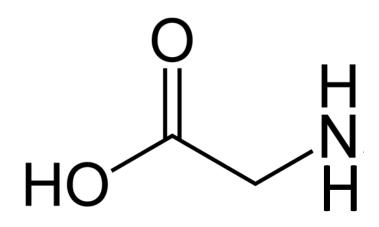
# **Glyphosate as a Glycine Analogue**

#### What If Glyphosate Could Insert Itself Into Protein Synthesis???



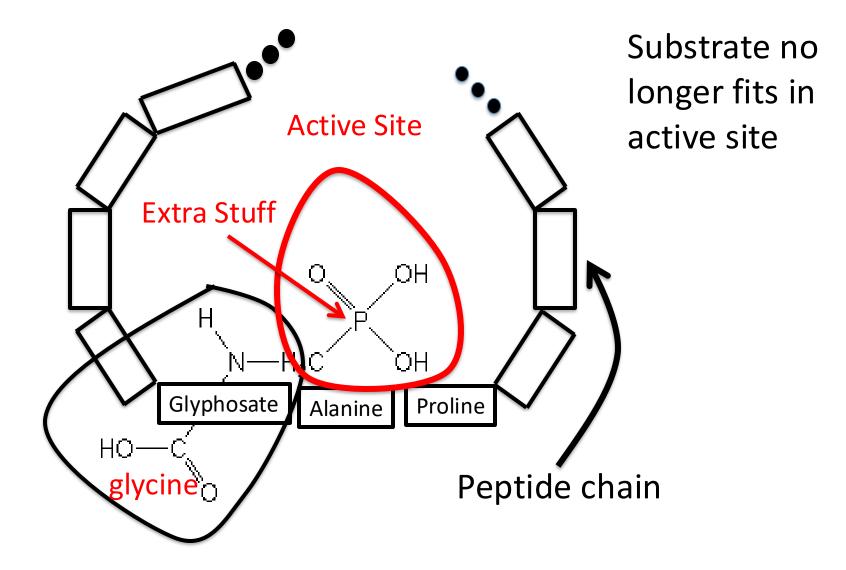
-- Any proteins with conserved glycine residues are likely to be affected in a major way

# Glyphosate is a non-coding amino acid analogue of glycine

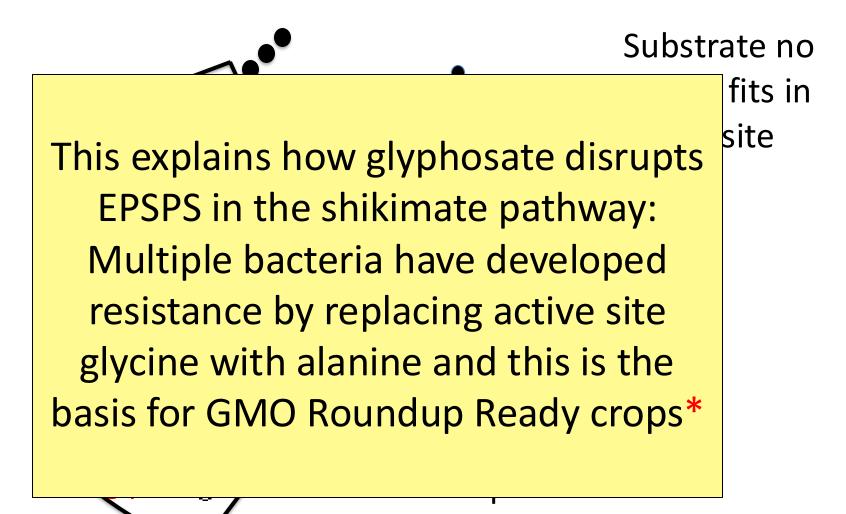


**Glypihe**sate

#### **Extra Piece Invades the Active Site**

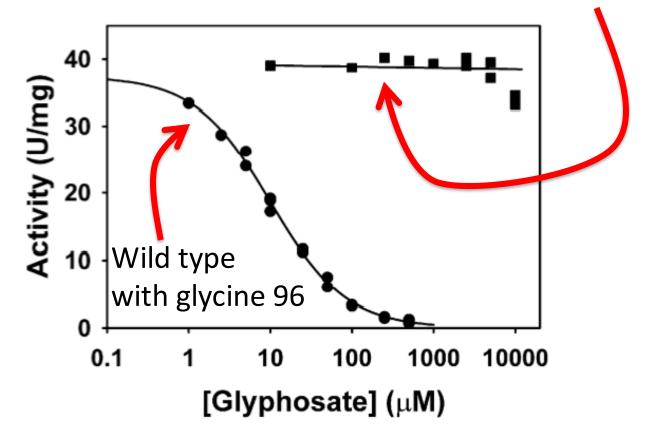


#### **Extra Piece Invades the Active Site**



#### Inhibition of EPSPS by glyphosate: Resistant E coli mutant\*

Mutant with alanine substituted for glycine 96



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

### **Some Predicted Consequences**

- Neural tube defects
- Autism
- Impaired collagen  $\rightarrow$  osteoarthritis
- Steatohepatitis (fatty liver disease)
- Obesity and adrenal insufficiency
- Hypothyroidism
- Impaired iron homeostasis and kidney failure
- Insulin resistance and diabetes
- Cancer

### An Analogy: ALS in Guam

- An epidemic in ALS in Guam was traced to a natural toxin found in cycads
- BMAA is a non-coding amino acid that gets inserted by mistake in place of serine



- Defective versions of a glutamate transporter have been linked to ALS\*
- The transporter has an essential serine-rich region in its sequence\*\*

\*Antioxidants & Redox Signaling 2009;11: 1587-1602. \*\*DJ Slotboom et al., PNAS 1999; 96(25): 14282-14287.

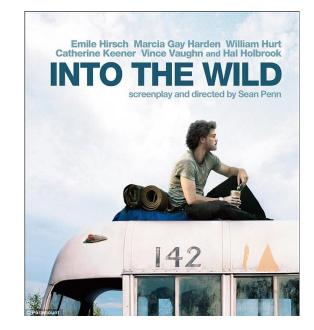
### Another Analogy: MS & Sugar Beets\*

- Sugar beets contain an analogue of proline called Aze
- Remarkable correlation between MS frequency and proximity to sugar beet agriculture
- Myelin basic protein contains a concentration of proline residues that are absolutely essential for its proper function

\*E. Rubenstein, J Neuropathol Exp Neurol 2008;67(11): 1035-1040.

### Into The Wild\*

- Chris McCandless died in the Alaskan wilderness in 1992
- A staple of McCandless' diet was seeds from a wild potato plant which contained L-canavanine, a non-coding amino acid analogue of L-arginine
- Author Jon Krakauer determined that McCandless was slowly poisoned by L-canavanine



\*J Krakauer et al., Wilderness & Environmental Medicine 2015; 26: 36-42.

#### **Vulnerable Proteins: Resulting Pathologies**

Conserved Glycines	Disease Profile
Hormone-sensitive Lipase	Obesity
Insulin Receptor	Diabetes
Amyloid Beta Plaque	Alzheimer's Disease
OGG1	DNA Damage $\rightarrow$ Cancer
Glycine decarboxylase	Neural tube defects
ACTH	Adrenal Insufficiency
Cytochrome C Oxidase	Mitochondrial Disease
Alpha Synuclein	Parkinson's Disease
TDP-43	ALS

#### **Vulnerable Proteins: Resulting Pathologies**

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Alpha Synuclein	Parkinson's Disease
TDP-43	ALS

### Glycine decarboxylase deficiency causes neural tube defects and features of nonketotic hyperglycinemia in mice\*

- Fascinating article about mice with a deficiency in a protein involved in generating methyl groups from glycine → methylfolate deficiency
- These mice have very high rate of neural tube defects
- Those that are viable have swollen ventricles (a feature of autism) and delayed development
- Methylation pathway impairment is a common feature of autism

\*YJ Pai et al., Nature Communications 2015; 6:6388

### Glycine decarboxylase deficiency causes neural tube defects and features of nonketotic hyperglycinemia in mice\*

• Fascinating article about mice with a deficiency in

Glycine decarboxylase has a glycine-rich region that maintains shape and flexibility of active site\*\*

- Those that are viable have swollen ventricles (a feature of autism) and delayed development
- Methylation pathway impairment is a common feature of autism

**\*\***A Kume et al., JBC 1991; 266(5): 3323-3329

### Recapitulation

- Glyphosate, acting as a glycine analogue, may get into proteins by mistake in place of glycine
  - This has devastating consequences on any protein with highly conserved glycines
  - It is the best explanation available for how glyphosate disrupts the shikimate pathway in weeds to kill them
- There are multiple examples of natural non-coding amino acid analogues that cause diseases such as ALS and multiple sclerosis
- Glyphosate substituting for glycine in glycine decarboxylase would be a direct path to neural tube defects and autism due to impaired methylation capacity

Beriberi (Thiamine Deficiency)

### **Beriberi in NE Brazil\***

- Epidemic of beriberi in Maranhão state, NE Brazil since May, 2006
  - Thiamine deficiency syndrome
  - 1028 cases with 32 deaths
- Suggest fungus growth in "yellow" rice as cause (mycotoxin)
- Rice is a staple of the impoverished population

\*CAR Rosa et al., Food Additives and Contaminants 2010;27(2):241-248.

#### Impaired thiamine pyrophosphate transport\*

 A human genetic defect in a gene that transports TPP into the mitochondria leads to severe microcephaly

- *Glycine* at residue 177 replaced with alanine

 TPP is essential for proper mitochondrial function (generation of ATP for cellular energy supplies)

\*MJ Lindhurst et al., PNAS 2006 103(43):15927-15932.

#### Impaired thiamine pyrophosphate transport\*

• A human genetic defect in a gene that

Glyphosate substitution for glycine at 177 would have even more drastic effects

function (generation of ATP for cellular energy supplies)

\*MJ Lindhurst et al., PNAS 2006 103(43):15927-15932.

# Thiamine & Microcephaly\*

- Slc25a19 mutation: glycine at residue 177 substituted by alanine → Amish lethal microcephaly (MCPHA)
- Defective transport of thiamine pyrophosphate (TPP) into mitochondria
- This inhibits activity of alpha-keto glutarate (AKG) dehydrogenase → high urinary AKG
- Mouse model showed severe defects in development of head region of neurotube, anemia, and embryonic lethality

\*ML Lindhurst et al. PNAS 2006; 103(43): 15927-15932.

# Polioencephalomalacia (PEM)\*

- Neurological disease in cows characterized by decay of neurons in the cerebral cortex
- Contributes to substantial economic loss to livestock industry



- Thiamine deficiency and sulfur toxicity have been well recognized as major factors.
- High dietary S may increase the metabolic demand for thiamine pyrophosphate (TPP)
  - Sulfite destroys thiamine

\*S Amat et al. Research in Veterinary Science 2013;95: 1081-1087.

### Polioencephalomalacia (PEM)\*

 Neurological disease in cows characterized by decay of

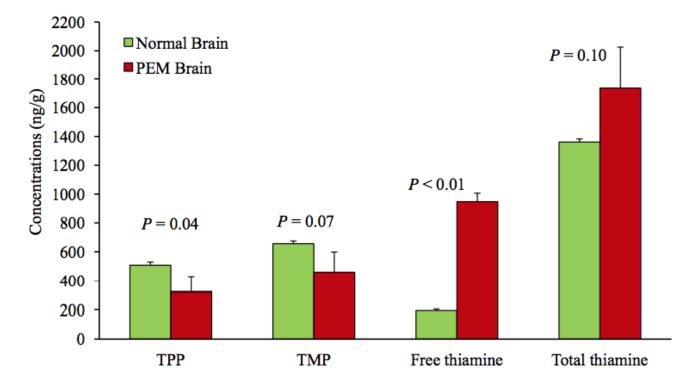


Sulfite oxidase converts sulfite to sulfate and depends on molybdenum as a cofactor.

Molybdenum is chelated by glyphosate, making it unavailable.

\*S Amat et al. Research in Veterinary Science 2013;95: 1081-1087.

### Sulfur and Thiamine Deficiency\*



**Fig. 3.** Comparison of brain thiamine and its phosphate esters between normal (n = 8) and sulfur-induced PEM affected (n = 4) cattle (ng/g, wet wt).

\*S Amat et al. Research in Veterinary Science 2013;95: 1081-1087.

"it can be inferred that systemic failure to synthesize metabolically requisite levels of TPP in the brain may be at the core of biochemical lesions in the pathogenesis of PEM associated with excess dietary S intake."\*

\*S Amat et al., Research in Veterinary Science 2013;95:1081-1087.

### Sulfur Supplementation in Cows\*

Cows benefit from sulfur supplements when they're grazing on grass, but sulfur stunts growth once they switch to the GMO Roundup Ready corn/soy feed for finishing

\*EL Richter. The effect of dietary sulfur on performance, mineral status, rumen hydrogen sulfide, and rumen microbial populations in yearling beef steers. Graduate thesis. Iowa State University. 2011.

# **Bird Paralysis in Europe**\*

- Multiple species of birds in northern Europe are suffering (since 1982) from a severe deficiency in thiamine leading to disease and depopulation.
- Idiopathic paralytic disease



- Inability to fly, inability to walk, and death
- Tremor and seizures
- Breeding failure

\*L. Balk et al., PNAS 2009;106(29):12001-12006.

### Recapitulation

- Epidemic in beriberi (thiamine deficiency) in NE Brazil since 2006
  - Attributed to mycotoxin in fungus growing in rice
- Impaired thiamine pyrophosphate transport causes microcephaly
  - Genetic defect: substitution of alanine for glycine 177
  - Cause of "Amish Lethal Microcephaly"
  - Glyphosate substitution could cause a similar disease profile
- Polioencephalomalacia (PEM) is a disease in cows causing severe loss to herds
  - Attributed to thiamine deficiency due to toxicity of sulfite
- Sulfur supplementation is beneficial to grazing cows but toxic to cows being fed GMO Roundup-Ready feed
- An epidemic in bird paralysis due to thiamine deficiency is decimating multiple bird species in Northern Europe.
  - Disease first appeared in 1982, when glyphosate was first marketed

Role for Vaccines In Microcephaly?

#### Tdap Vaccinations for All Pregnant Women in Brazil Mandated in Late 2014\*

- Growing incidence of pertussis (whooping cough) in Brazil from 2007 to 2014.
- Brazil recommended Tdap (adult DtAP) for all pregnant women beginning in 2014
- Used UK GSK Boostrix Tdap vaccine
  - It contains aluminum, formaldehyde, polysorbate 80, glycine, bovine casein, bovine extract
- According to GSK, neither the safety nor effectiveness of Boostrix have been established in pregnant women.

\*http://www.thevaccinereaction.org/2016/02/

tdap-vaccinations-for-all-pregnant-women-in-brazil-mandated-in-late-2014/

#### Tdap Vaccinations for All Pregnant Women in Brazil Mandated in Late 2014\*

 Growing incidence of pertussis (whooping cough) in Brazil from 2007 to 2014.

Infants are especially vulnerable to pertussis because their mom's vaccine-based immunity has worn off

effectiveness of Boostrix have been established in pregnant women.

\*http://www.thevaccinereaction.org/2016/02/ tdap-vaccinations-for-all-pregnant-women-in-brazil-mandated-in-late-2014/ J Pediatr Neurol 2014; 12(03): 167-170 DOI: 10.3233/JPN-140659

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#### **Case Report**

Georg Thieme Verlag KG Stuttgart – New York

#### Atypical vanishing white matter disease with microcephaly and hepatosplenomegaly provoked after diphtheria pertussis tetanus vaccination

Vykuntaraju K. Gowda<sup>a</sup>, Sukanya Vignesh<sup>b</sup>, Bhaskar V. Madivala<sup>c</sup>, Dr. Mamatha<sup>b</sup>, Prahalad Kumar<sup>b</sup>, Premalatha Ramaswamy<sup>b</sup>, Sarala H. Gowda<sup>d</sup>

## Vanishing White Matter Disease\*

- Originally called "childhood ataxia with central nervous system hypomyelinating"
- White matter in brain replaced by cerebrospinal fluid
- Regression of milestones after trauma or infection
- Case Study:
  - 1 1/2 year old girl suffered fever and convulsions following booster dose of DPT vaccine
  - Head size 3 standard deviations below norm

\*VK Gowda et al., Journal of Pediatric Neurology 2014;12:167-170.

### Glyphosate and Aluminum: Partners in Crime\*

- Tdap vaccine contains aluminum as adjuvant
- Glyphosate *cages* aluminum to promote entry
- Glyphosate promotes *calcium uptake* by voltageactivated channels

– Aluminum gains entry as calcium mimetic

- Glyphosate induces pathogens like C. difficile in gut, leading to *leaky gut syndrome*
  - C. diff produces *p-cresol* which promotes aluminum uptake by cells
  - p-Cresol is a known biomarker for autism
  - p-Cresol is an important factor in kidney failure which leads to aluminum retention in tissues → dementia

\*S Seneff et al., Agricultural Sciences 2015;6:42-70

### "Measles Reemergence in Ceará, Northeast Brazil, 15 Years after Elimination"\*

- CDC post: 21(9), September 2015
- Measles "eliminated" in Brazil in 2000 w/ massive vaccination campaign
- From December 2, 2013, through December 31, 2014, in the state of Ceará, NE Brazil, 681 measles cases were reported

- 19% were patients aged 20 to 29

• Either measles infection or MMR vaccine could be a factor

\*http://wwwnc.cdc.gov/eid/article/21/9/15-0391\_article

# **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

### 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 Contamination in Vaccines (Parts Per Billion)\*

- Merck ZOSTAVAX 0.42 Shingles
- Merck MMR-II 2.90 Measles, Mumps and Rubella
- Merck VARIVAX 0.41 Varicella, Chicken Pox
- MERCK PNEUMOVAX ND Pneumococcal 18
- MERCK PROQUAD 0.43 Measles, Mumps, Rubella, Varicella
- GSK ENERGIX-B 0.33 Heptatitis B

\*http://www.tonu.org/2016/08/31/vaccine-glyphosate-link/

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Merck ZOSTAVAX 0.42 Shingles

Interview: Anthony Samsel with Tony Mitra <u>https://www.youtube.com/watch?v=k33iFXHIOnY</u>

MERCK PNEUMOVAX ND Pneumococcal 18

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GSK ENERGIX-B 0.33 Heptatitis B

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# Glyphosate and Glutamate\*\*\*

- Acute exposure to glyphosate 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
\*\*D Cattani et al., Toxicology 2014; 320: 34-45.



### "Food allergy to *gelatin* in children with systemic immediate type reactions, including anaphylaxis, to vaccines"\*

- 26 children with acute reactions (e.g., anaphylaxis)
- 24/26 children tested positive for anti-gelatin IgE



- 7 were allergic to foods containing gelatin
- 26 control children had no antibodies

\* M Sakaguchi et al., J Allergy Clin Immunol 1996 Dec;98(6 Pt 1):1058-61.

# Symptoms of Adverse Reactions to MMR before and after 2002\*

More Common Before 2002

Reaction	Count Before 2002	Count After 2002	<i>p</i> -value
joint pain	126	65	0.036

#### More Common After 2002

Reaction	Count Before 2002	Count After 2002	<i>p</i> -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	f16	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					
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\*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
- Hemagglutin 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

# **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

- Tdap mandated during pregnancy in Brazil since 2014
  - Pertussis toxin in vaccine can cause vanishing white matter disease
- Measles epidemic in NE Brazil has motivated MMR booster shot in young adults
- MMR has been found to be contaminated with glyphosate
  - Measles live virus grown on gelatin derived from collagen of pigs and cows
  - Gelatin contains large amounts of glycine  $\rightarrow$  glyphosate
  - Glyphosate and glutamate are synergistically toxic to cause neuronal burn-out through excessive NMDA receptor activity
- Dogs have been shown to develop allergies to their own collagen following vaccination
- Aluminum (in Tdap) and glyphosate are synergistically toxic

# Summary

- There has been too much hype regarding the idea that Zika virus may cause an epidemic in microcephaly in US
- Microcephaly "epidemic" in Brazil is localized to NE Brazil, where there is a toxic soup of other chemicals that can cause microcephaly
- The new practice of routinely vaccinating pregnant women may be a contributing factor
- Thiamine deficiency is another likely factor, and this is particularly relevant for children in poverty

# What's coming in Part II

- A Role for Herbicides?
  - Glyphosate
  - Glufosinate (Liberty Herbicide)
- Fighting Zika: Is the Cure Worse than the Disease?
  - Controlling mosquitoes with pesticides
  - GMO mosquitoes and molecular mimicry
  - A viral infection in cows
  - Zika vaccine development
- Summary