

Zika Virus - DDT Or DEET To Stop Zika Virus !?! - Florida To Embrace  
Insecticides Way More Toxic Than DDT - 2016 03 08 & 2016 08 11



**DDT Or DEET**  
**To Stop Zika Virus !?!**  
**NOT So Obvious**

March 8th, 2016

Dr Josh Bloom

American Council On Science And Health

Selected And Adapted Excerpts



The American Council On Science And Health ( ACSH ) is a non-profit organization founded in 1978 by Dr Elizabeth M Whelan that produces peer-reviewed reports on issues related to food, nutrition, chemicals, pharmaceuticals, life-style, the environment, and health.

<http://pesticidetruths.com/toc/7556-2/>

#### BACKGROUND INFORMATION —

Zika Virus is transmitted by daytime-active Aedes mosquitoes. In January 2016, the U.S. Centers for Disease Control and Prevention ( CDC ) issued travel guidance on affected countries, including the use of enhanced precautions, and guidelines for pregnant women including considering postponing travel. Other governments or health agencies soon issued similar travel warnings, while Colombia, the Dominican Republic, Ecuador, El Salvador, and Jamaica advised women to postpone getting pregnant until more is known about the risks.

The surest way to avoid worrying about getting the Zika Virus is avoid being bitten by a mosquito transmitting it.

That means sales of REPELLENTs are very likely to boom.

Almost all products to keep mosquitoes away contain the active ingredient N,N-diethyl-meta-toluamide, commonly called DEET.

Even the U.S. Centers for Disease Control and Prevention ( CDC ) recommends it.

It is NOT perfect, though.

For one thing, DEET is a REPELLENT, NOT a pest control product.

Some say we should kill bugs so that they never harm anyone, and they have asked why we shouldn't reconsider an insecticide like DDT.

( The Environmental Protection Agency [ [US EPA](#) ] PROHIBITS DDT in the United States, but U.S. officials show developing countries with vector-borne diseases how to spray DDT inside homes. )

DDT works to stop bugs from spreading malaria, so it will stop Zika Virus if need be.

What about people who think they can lead a « *chemical-free* » life !?!?

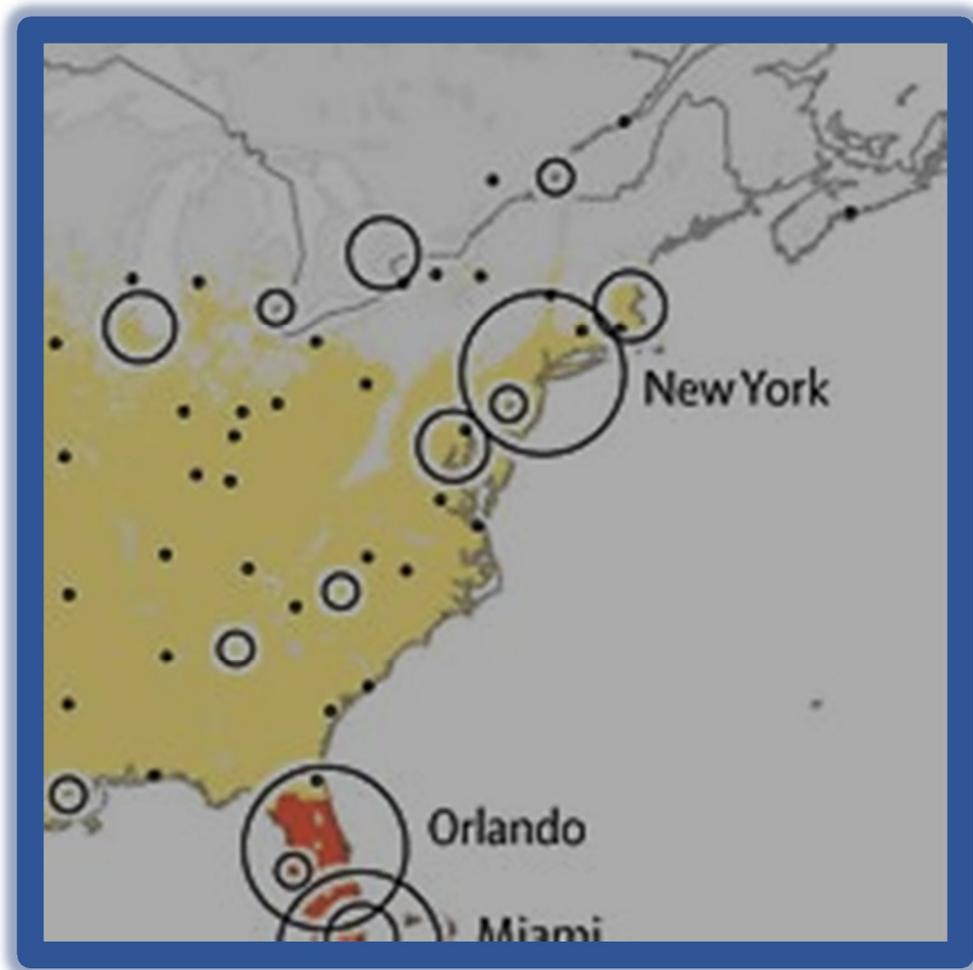
They're out of luck with either, as they always have been, because such a life-style has never been more than an IGNORANT FANTASY.

Yet, if they are really worried about chemical exposure, there are reasons they might actually prefer DDT.

It needs to be discussed all over the nation because even though mosquito season is still months away for much of the country, THE ZIKA VIRUS INFECTION HAS BEEN FOUND TO BE TRANSMISSIBLE BY COMMON CULEX MOSQUITOES, at least in a lab setting — which means A WHOLE LOT OF PEOPLE IN THE NORTH COULD BE AT RISK AS WELL.

A new vector would make it necessary for many of us to think about choices IF THE INFECTION BECOMES COMMON OUTSIDE OF THE SOUTH.

Below is a model of which areas in the U.S. could be at risk.



Source — The Lancet.

Since 90 PER CENT OF MOSQUITO REPELLENTS USE DEET, I thought it might be worthwhile to write about what is DEET, some of its properties, and then to contrast it with DDT, a chemical with a far worse reputation.

They are quite different, but NOT how you might expect.

What is especially interesting about DEET is NOT that it is toxic ( quite the opposite, really ) but that IT HAS THE ABILITY TO PENETRATE SKIN RATHER EASILY.

Depending on a number of factors ( species, test method, type of skin, other the presence of solvents ) BETWEEN 8 AND 80 PER CENT OF DEET THAT IS APPLIED TO SKIN WILL END UP IN THE BLOODSTREAM.

That's a lot.

But after that, it behaves just like most other chemicals or drugs — it is metabolized by the liver, and excreted, mostly in the urine.

DEET does REPEL mosquitoes, though with MIXED RESULTS.

DDT is, of course, an insecticide, and used to CONTROL [ i.e. KILL ] mosquitoes.

DDT also acts as a REPELLENT when sprayed on surfaces.

Although its use is PROHIBITED in the U.S. over 40 years ago by the EPA, the WORLD HEALTH ORGANIZATION RECOMMENDS DDT IN MALARIA-INFESTED AREAS SUCH AS AFRICA.

So why does DDT have such a terrible reputation in the U.S. !?!

It has little to do with actual toxicity.

This table contains some properties of both chemicals —

	DEET	DDT
Physical properties	Oily liquid	White solid, faint odor
Function	Repellent	Insecticide and repellent, delousing agent
Use	Direct application to skin	Sprayed indoors, on mosquito netting
Human toxicity (acute)	Low	Slight to moderate <sup>a</sup>
Human fatal dose <sup>b,c</sup>	140 grams (5 ounces)	35 grams (1.2 ounces)
Symptoms of exposure	On skin: Irritation, redness, rash, and swelling. Swallowed: Stomach upset, vomiting, and nausea seizures (very rare) <sup>c</sup>	Nausea, diarrhea, increased liver enzyme activity, irritation (eyes, nose or throat), disturbed gait, malaise and excitability; at higher doses, tremors and convulsions possible <sup>d</sup>
Skin penetration	High	Negligible
Carcinogenicity	None	Liver tumors in rodents, "unlikely to be an important carcinogen for man..." <sup>e</sup>
Bioaccumulation	No	Yes, but no evidence of human harm
Metabolism	Fast, metabolites excreted	Very slow, metabolites stored in fat
Persists in environment?	No	Yes
References		
	a) <a href="http://npic.orst.edu/factsheets/ddtgen.pdf">http://npic.orst.edu/factsheets/ddtgen.pdf</a>	
	b) <a href="https://www.beyondpesticides.org/assets/media/documents/pesticides/factsheets/deet.pdf">https://www.beyondpesticides.org/assets/media/documents/pesticides/factsheets/deet.pdf</a>	
	c) <a href="http://www.cdc.gov/niosh/idlh/50293.html">http://www.cdc.gov/niosh/idlh/50293.html</a>	
	d) ATSDR/US Public Health Service, Tox. Profile for 4,4'-DDT, 4,4'-DDE, 4, 4'-DDD (Update). 1994	
	e) IARC Sci Publ 1985;(65):107-17	

One comforting thing is that DEET has a VERY LOW TOXICITY.

DEET is NOT even a suspected carcinogen in a world where the International Agency for Research on Cancer ( IARC ) can call anything a carcinogen — even sausage.

We can say DEET is a safe chemical when used properly.

But, it is still NOT RECOMMENDED FOR USE ON CHILDREN YOUNGER THAN TWO MONTHS, and products containing 30 per cent DEET or more are NOT RECOMMENDED FOR CHILDREN AT ALL.

That means the ability of using DEET as a REPELLENT alone to protect our most vulnerable population is LIMITED.

Mosquitoes don't care about age.

DDT, on the other hand, is a REPELLENT that also CONTROL [ i.e. KILL ] mosquitoes.

And as I've written before it isn't even remotely as harmful as its perception suggests.

THE PROHIBITION OF DDT WAS NOT EVEN BASED ON HUMAN HEALTH.

Despite everything that you've heard about it, DDT WAS PROHIBITED BECAUSE OF ENVIRONMENTAL CONCERNS, which I won't go into here.

Despite all the cancer and other various scares, DDT's toxicology profile reads much like that of a typical chemical or drug.

And, of course, it has one big advantage for people worried about exposure to chemicals — it is sprayed on bugs rather than kids.

There are other REPELLENTs and insecticides out there.

And maybe Zika Virus will be out there too, at which point some complicated, hard choices will have to be made.

Some dark humor in the immunology community during the Ebola scare in 2014 was whether anti-vaccine parents were going to be first in line with bags of cash asking for a shot for their kids.

Likewise, it may be that the loudest calls for more pest control products may come from CHEMOPHOBIC HYPOCRITES, who don't mind exposing a child to a disease as long it is NOT their child.

So, DDT or DEET !?!

Or something else !?!

What is the best choice !?!

We don't know yet.

It still depends on what happens in a few months.

Stay tuned.

**Organophosphates**

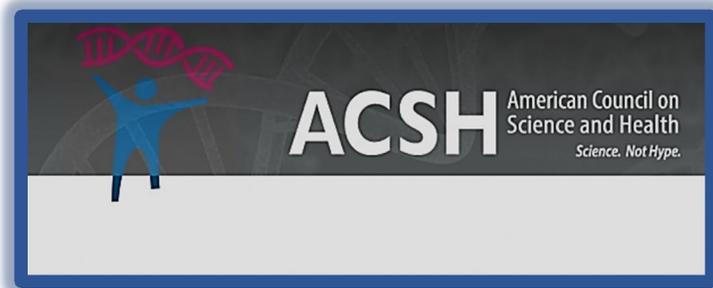
# Zika Virus Caused Florida To Embrace Insecticides Way More Toxic Than DDT

August 11th, 2016

Dr Josh Bloom

American Council On Science And Health

Selected And Adapted Excerpts



The American Council On Science And Health ( ACSH ) is a non-profit organization founded in 1978 by Dr Elizabeth M Whelan that produces peer-reviewed reports on issues related to food, nutrition, chemicals, pharmaceuticals, life-style, the environment, and health.

<http://pesticidetruths.com/toc/7556-2/>

## BACKGROUND INFORMATION —

Zika Virus is transmitted by daytime-active Aedes mosquitoes. In January 2016, the U.S. Centers for Disease Control and Prevention ( CDC ) issued travel guidance on affected countries, including the use of enhanced precautions, and guidelines for

pregnant women including considering postponing travel. Other governments or health agencies soon issued similar travel warnings, while Colombia, the Dominican Republic, Ecuador, El Salvador, and Jamaica advised women to postpone getting pregnant until more is known about the risks.



A ( very ) dead mosquito.

Most of the time when there is a chemical scare in the news, it turns out to be a whole lot of noise about nothing.

The list is long — traces of formaldehyde in shampoo, miniscule amounts of chemicals that are used to make plastics, preservatives, and aspartame.

This list, which seems to grow every time you turn your head, also includes the insecticide phenothrin ( Anvil ), which is, in fact, so safe that you can eat it. ( 1 )

But, right now in Florida, they CANNOT afford to take chances.

NOT when there are at least 20 mosquito transmitted Zika Virus infections in one small area of Miami, and maybe even a case in Palm Beach — 70 miles away.

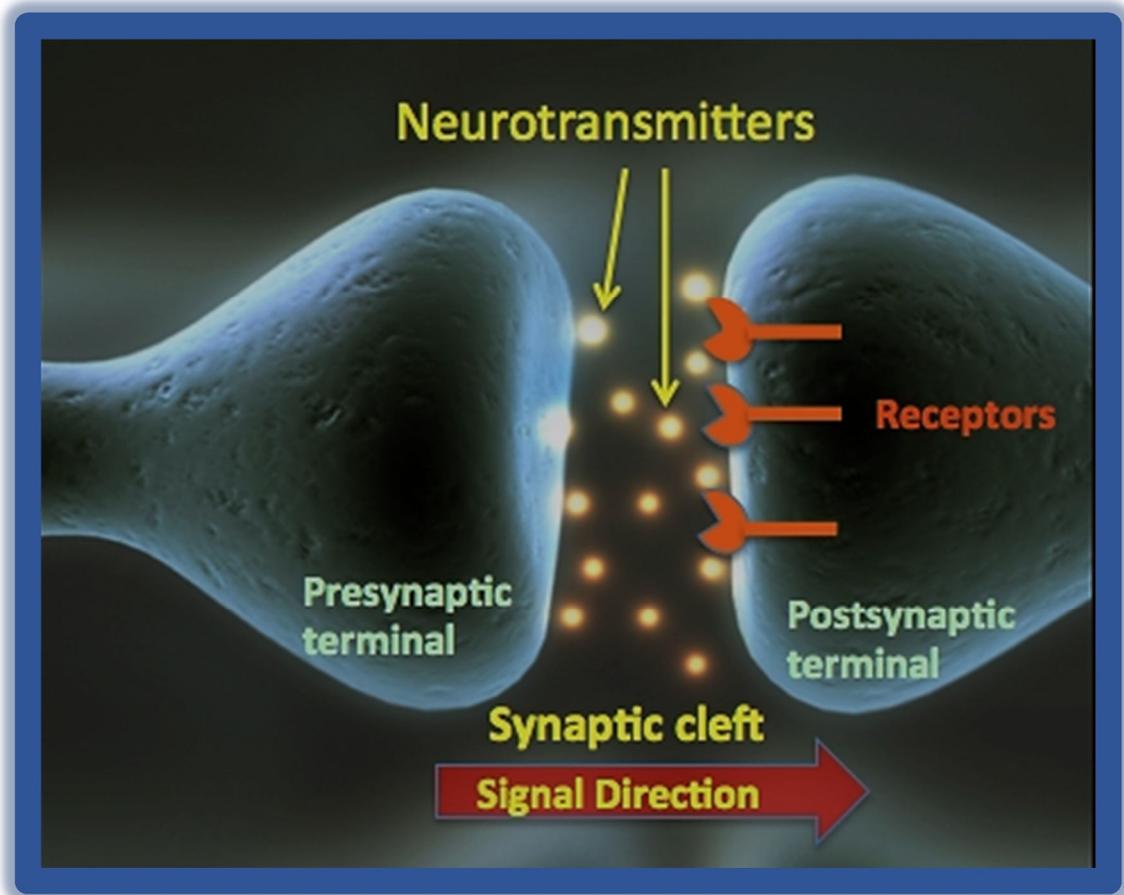
Fortunately, they are NOT fooling around.

Health officials brought out the big guns — ORGANOPHOSPHATES.

One of them is Naled, and it is far from harmless.

It is a pretty good poison, which works by short-circuiting nervous systems of mosquitoes, and just about everything else that is alive.

Here's how Naled works — See photo below.



Picture a nerve as a long wire with a large number of tiny gaps in it.

These gaps are called synapses, and when they are empty, no current can flow.

But when there is something to fill the gap ( just like an on-off light switch ), current can flow and the nerve fires.

In nerves, the switches are chemicals, which are called neuro-transmitters.

The on-off process is governed by simple biochemistry within the synapse.

But, chemistry can also disable the mechanism that keeps the nerve from firing all the time — something you do NOT want to have happen to you.

Nor do the mosquitoes.

The diagram above gives a simplified picture of the process —

1. The end of the synapse that is closest to the source of stimulation is called the presynaptic terminal. This is one side of the switch.
2. The presynaptic terminal receives a signal from part of the nerve behind it and releases a neuro-transmitter into the synaptic cleft.
3. Once in the cleft, the neuro-transmitter attaches itself to receptors on the postsynaptic terminal — the other side of the switch.
4. This makes the nerve fire, sending a signal along the next section of the nerve.
5. The signal reaches the next synapse, which releases more neuro-transmitter.
6. Repeat many times.
7. Then, there has to be a way for the neuro-transmitter to be removed so the switch can continue to turn on and off.

If that last step DOES NOT take place, then the neuro-transmitter stays in the synapse.

Then, bad things happen. ( 2 )

This is why organophosphates are poisonous, and also why they are effective insecticides. ( 3 )

Organophosphates shut down acetylcholinesterase — the enzyme that deactivates the neuro-transmitter acetylcholine.

If acetylcholinesterase isn't working properly, the nerve keeps firing, and all kinds of bad things happen.

Here are a few — vomiting, diarrhea, seizures, paralysis, coma, and death.

And, this is all caused by messing with a single hydroxyl ( OH ) group, which is a tiny, but critical portion ( the « *business end* » ) of acetylcholinesterase.

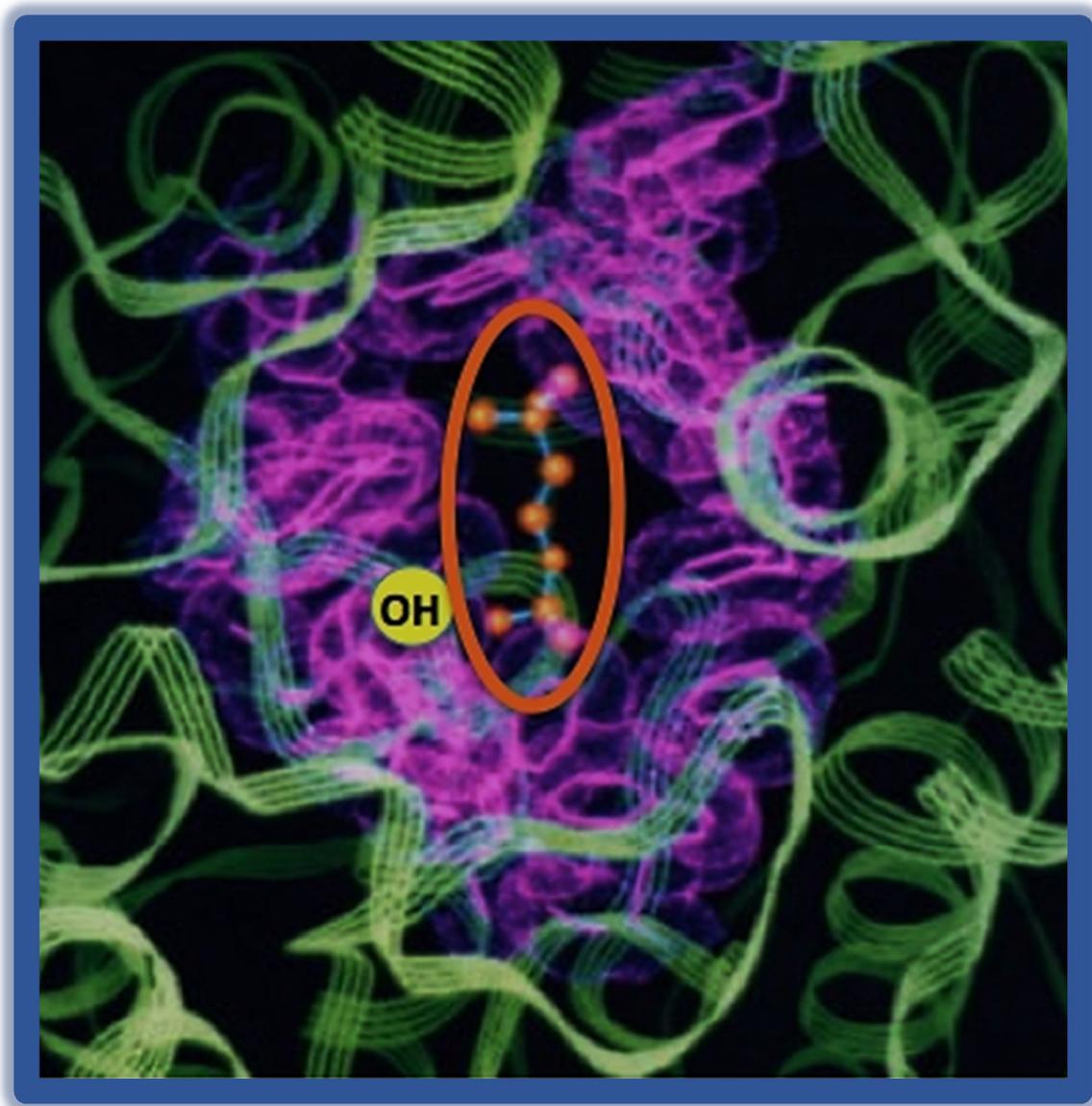
( Enzymes are proteins, which are made up of amino acids. The hydroxyl group in question is a part of the amino acid serine. )

The graphic below shows how this works.

The hydroxyl group ( yellow circle with the OH inside ) has one job — to catalyze ( promote ) the reaction that chemically breaks down ( inactivates ) the acetylcholine.

Note that the acetylcholine ( orange oval ) is sitting in just the right position so that the hydroxyl group ( yellow circle ) can reach it.

The distance between the two is critical.



This simple reaction ( also called ester hydrolysis ) is responsible for the inactivation step that turns the switch from on to off, by degrading acetylcholine.

If the hydroxyl group of acetylcholinesterase is tied up and NOT available to do its normal job, then the enzyme CANNOT function, and the synapse will remain full of acetylcholine.

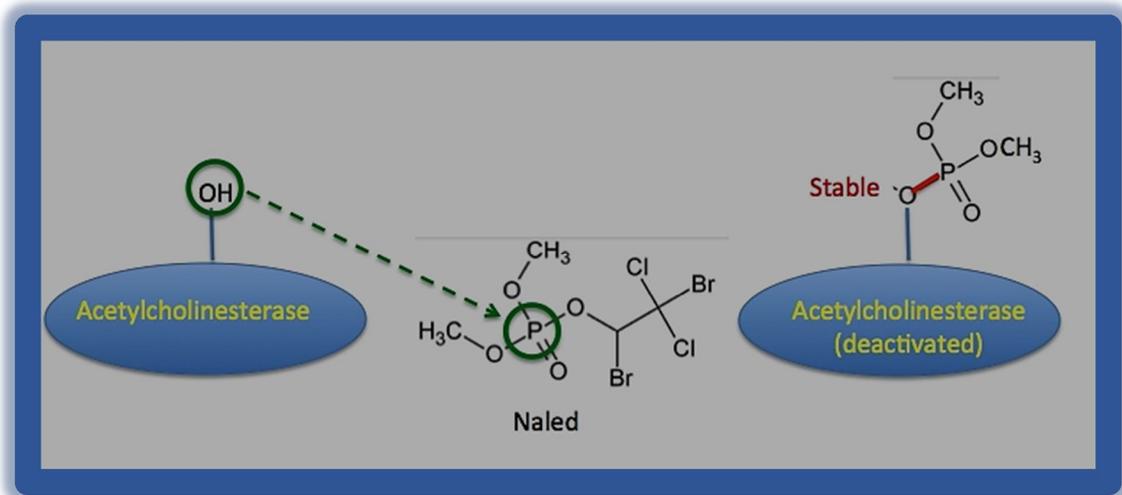
The off switch won't work.

What ties the hydroxyl group up ?!?!

Organophosphates sure can.

This is why they are potent neurotoxins — because of the love affair between phosphorus and oxygen.

Those bad boys really like to hang out together. ( 4 )



Deactivation of acetylcholinesterase by an organophosphate.  
New bond is shown in red.

Once Naled « *finds* » the acetylcholinesterase, a « *coupling* » takes place between the two atoms in the green circles.

The phosphorous atom in Naled reacts with, and forms a chemical bond with, the hydroxyl group of the acetylcholinesterase.

( The new bond is shown in red. )

And it doesn't let go.

The enzyme is now altered such that it no longer has the required hydroxyl group.

No free hydroxyl = no breakdown.

No breakdown = death.

One very simple chemical reaction that screws up an entire neurological pathway.

Pretty cool chemistry, and it's SMART that Florida public health officials have NOT caved to [ pesticide-hating fanatics ] and forced people to buy citronella candles or bracelets with essential oils.

FLORIDA PUBLIC HEALTH OFFICIALS ARE USING SOMETHING THAT ACTUALLY WORKS.

There are times where there are simply no great choices.

This is one of them.

Naled is more toxic than other mosquito sprays, but given what is now going on with Zika Virus in Puerto Rico ( 5 ) allowing the virus to spread in Florida is worse.

This is no time to fool around. ( 6 )

Notes —

( 1 ) Anvil ( phenothrin ), which is commonly used to kill adult mosquitoes, has such a good safety profile that it is NOT even possible to find a lethal dose in rats. The chemical is less toxic to humans than everyday drugs and chemicals. This is NOT true for cats. They unusually susceptible to Anvil toxicity.

( 2 ) Inhibition of the removal of the neuro-transmitter from synapses can be beneficial as well. The class of antidepressants called SSRIs are thought to work by blocking the reabsorption of serotonin into the presynaptic terminal, thus increasing serotonin levels in the brain. Reabsorption is a different method that is used by the body to clear the synaptic cleft.

( 3 ) The chemical weapons Sarin and VX gas work in an identical way. But they are FAR MORE POISONOUS than Naled.

( 4 ) This is less scientific way of saying that phosphorous-oxygen bonds are strong.

( 5 ) It was recently estimated that one-quarter of Puerto Rico could become infected.

( 6 ) Although Naled is toxic to insects and mammals, it takes far less to kill insects. This is why it can be used ( carefully ) around people. Toxicity is directly related to dose.

HERO Who SPEAKS OUT  
Against Anti-Pesticide Terrorism



Dr Josh BLOOM

FORCE OF NATURE | THE WHOLE TRUTH FROM AN INDEPENDENT PERSPECTIVE from  
National Organization Responding Against HUJE that seek to harm the Green Space Industry (NORAHG)

**Background Information**

## **Dr Bloom — He Speaks The Truth !**

Dr Josh Bloom is among several LEADING EXPERTS who have recognized expertise, training and background in matters concerning pest control products.

He is among several LEADING EXPERTS who have recognized expertise, training and background in matters concerning pest control products.

Dr Bloom is among GREATLY RESPECTED and HIGHLY RATED EXPERTS who promote ENVIRONMENTAL REALISM and PESTICIDE TRUTHS.

<http://wp.me/p1jq40-8DV>

He has 27 years of experience in the field of toxicology and metabolism, as well as safety concerning these products.

Dr Josh Bloom is a Doctorate-Level Expert, Organic Chemist, and Leading Scientific Expert on pest control products.

Dr Bloom is the Associate Director of the American Council on Science and Health ( ACSH ). <http://wp.me/P1jq40-1XS>

He is an Organic Chemist, and has worked in the Pharmaceutical Industry.

Dr Bloom is a 27-year veteran of Biomedical Research with expertise in toxicology and metabolism.

He is also one of the nation's MOST PROMINENT AND KNOWLEDGEABLE SPOKESMEN on the subject of pest control products.

Throughout North America, Dr Bloom has effectively and consistently spoken out against environmental and pesticide-hating fanatics on a regular basis.

Dr Bloom SPEAKS THE TRUTH — and deserves CONGRATULATION.

### **Background Information**

## **Link & Web-Page Where Dr Bloom Speaks The Truth !**

BLOOM -- AMERICAN COUNCIL ON SCIENCE AND HEALTH ( ACSH ) ( [Link To Web-Site](#) )

<http://acsh.org/>

BLOOM -- THE WISDOM OF WHELAN, DR ELIZABETH M -- AMERICAN COUNCIL ON SCIENCE AND HEALTH ( ACSH ) ( [Web-Page](#) )

<http://pesticidetruths.com/toc/7556-2/>

## **Background Information**

### **The Whole Truth About ZIKA VIRUS Can Be Explored Through The Following Links ...**

FORCE OF NATURE -- DDT AND POLITICIZED SCIENCE -- 2016 02 29 -- ZIKA GONE WITH THREE LETTERS ( [Blog](#) )

<http://pesticidetruths.com/2016/03/02/ddt-zika-virus-will-be-defeated-with-three-letters-d-d-t-2016-02-29/>

THE REBEL -- DDT AND POLITICIZED SCIENCE -- 2016 02 12 -- SAVE THE BIRDS, KILL THE BABIES -- ZIKA VIRUS EPIDEMIC REVEALS WARPED PRIORITIES OF ECO-LEFT ... AGAIN -- SHEILA GUNN REID ( Report With [Video Recording](#) )

[http://www.therebel.media/save\\_the\\_birds\\_kill\\_the\\_babies\\_zika](http://www.therebel.media/save_the_birds_kill_the_babies_zika)

FORCE OF NATURE -- DDT AND POLITICIZED SCIENCE -- 2016 02 02 -- STOPPING ZIKA VIRUS IN ITS TRACKS -- DR GILBERT L ROSS -- ACSH ( [Blog](#) )

<http://pesticidetruths.com/2016/02/08/ddt-stopping-zika-virus-in-its-tracks-by-unleashing-ddt-insecticide-dr-gilbert-l-ross-american-council-on-science-and-health-acsh-2016-02-02/#more-35417>

No Other Products Were As Efficient Or As Safe As DDT

**How Do You Spell  
The Solution To  
The Potential Zika  
Virus Pandemic ?!?!**

**D-D-T**

FORCE OF NATURE | DARING TO DEFY WITH THE WHOLE TRUTH FROM AN INDEPENDENT PERSPECTIVE  
National Organization Responding Against HUNE that seek to harm the Green Space and other industries (NDRAHG)