

Mosquito control  
starts just below  
the surface...



# Altosid<sup>®</sup>

mosquito larvicide



**A new, highly effective, reduced risk  
mosquito adulticide is coming.**



**Georgia Mosquito Control Association Conference**

**October 10-12, 2008**

**Charlie Pate**

**Bill Reynolds**

# Etofenprox Background

- ◆ Etofenprox molecule identified in the early '80s by Mitsui-Toatsu
- ◆ Developed for crop insects in Japan and Europe
- ◆ First US registrations were received in the early 2000's
- ◆ Registrations are primarily consumer products: dog & cat formulations, aerosols, and foggers



# Etofenprox Background

- ◆ **Unique molecule: non-organophosphate, non-carbamate and not a traditional pyrethroid**
- ◆ **Broad spectrum control**
- ◆ **Controls: fleas, ticks, moths, weevils, white flies, mosquitoes, roaches, and many other pests**
- ◆ **Use rates are comparable to currently available products**

# Etofenprox Background

- ◆ Central Life Sciences acquired the rights to Etofenprox in 2005
- ◆ Central Life Sciences has been marketing the consumer products
- ◆ Currently developing other product lines including a mosquito adulticide



**Zenivex**<sup>TM</sup>  
E20

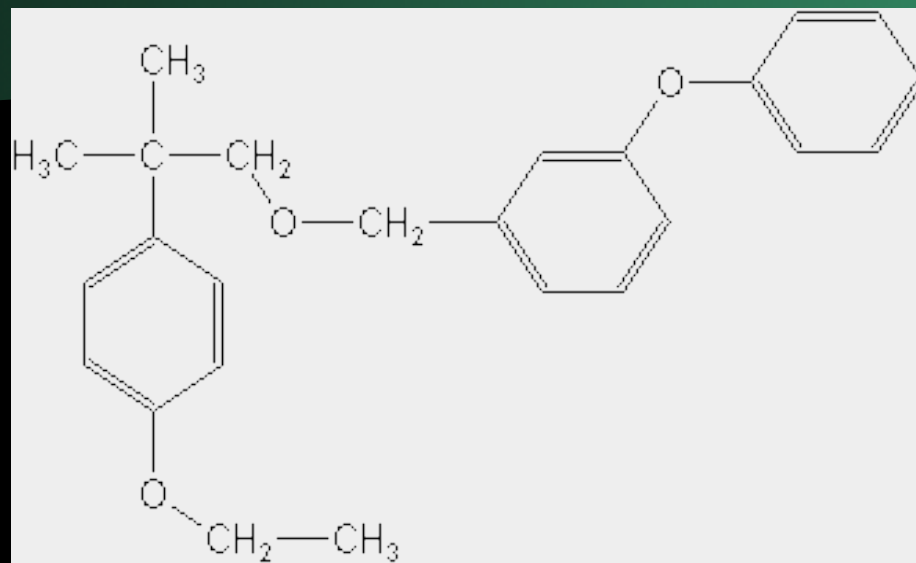


 **CENTRAL** *Life Sciences*

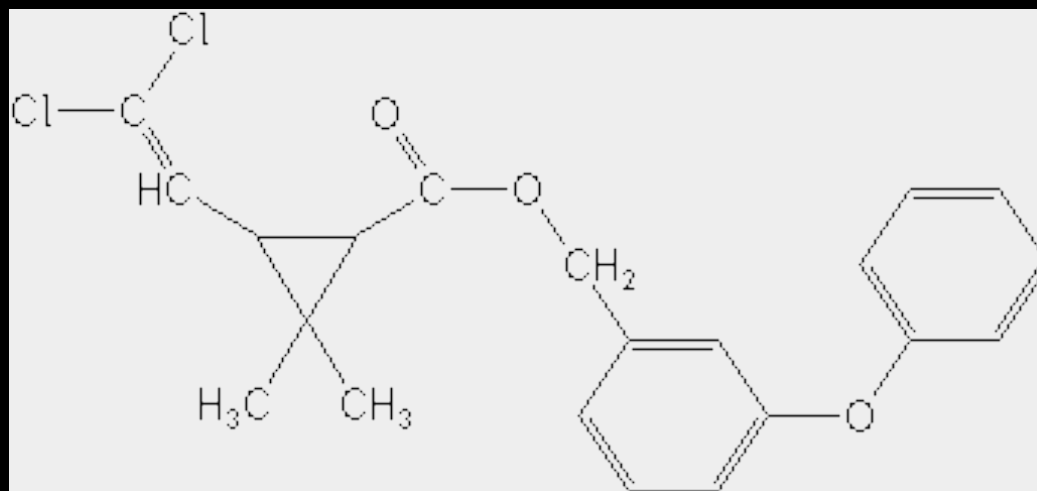
# Chemical Classification

- ◆ Currently, all commercially available pyrethroids are esters
- ◆ Zenivex is not an ester (it's an ether)
- ◆ The classification "non-ester" means it does not fall into current EPA review of pyrethroid chemistries
- ◆ Molecule contains only carbon, hydrogen, and oxygen

## ETO FENPROX



## PERMETHRIN





# Etofenprox

## Mode of action

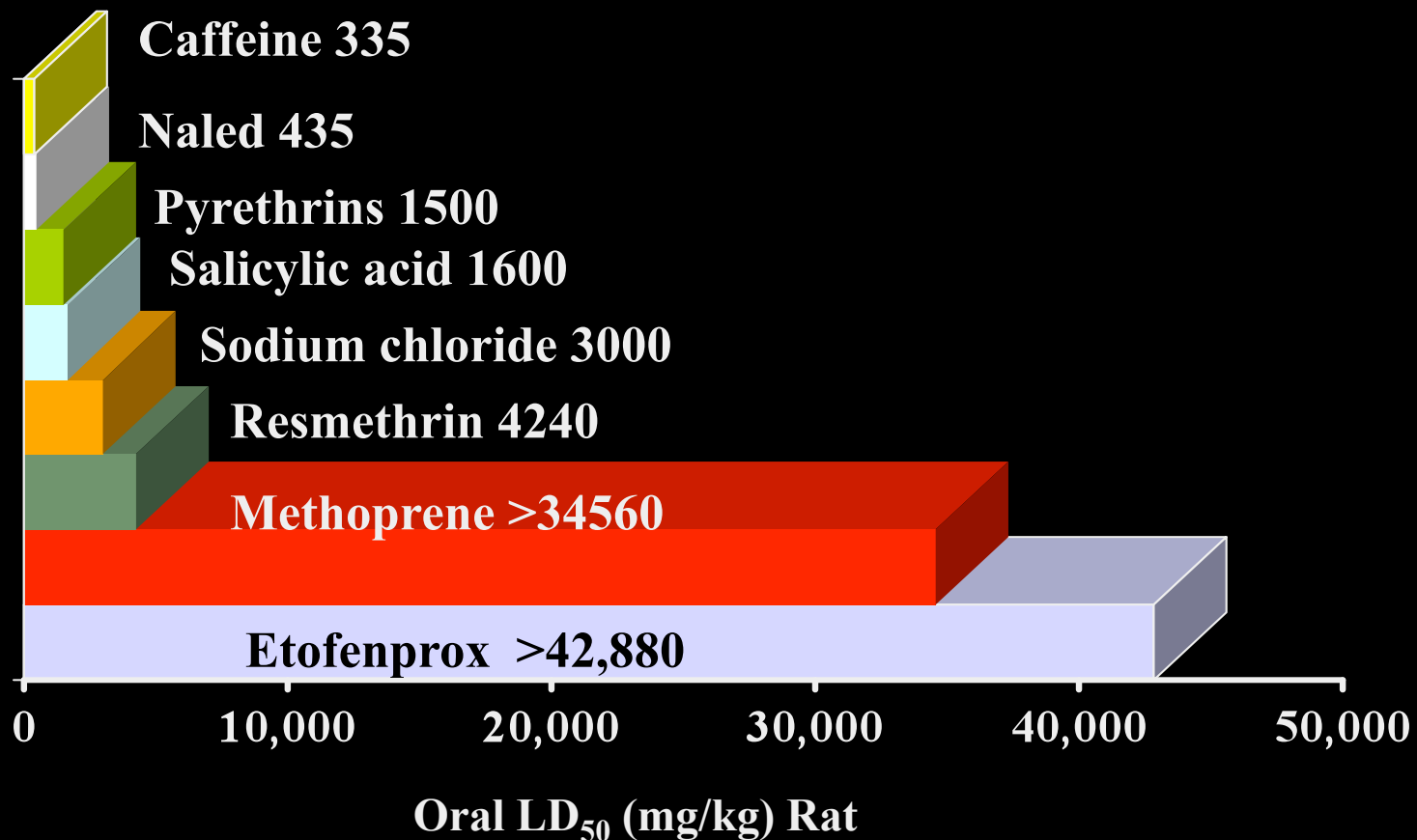
- ◆ Similar mode of action to traditional pyrethroids
- ◆ Sodium channel blocker
  - Hence the broad spectrum of activity
- ◆ Contact or ingestion toxicant
- ◆ Quick, permanent knockdown

# Etofenprox Toxicology

- ◆ Very low mammalian toxicity
- ◆ Low avian toxicity
- ◆ As with pyrethroids, mindful of fish and freshwater invertebrates
- ◆ EPA classifies it as reduced risk pesticide for mosquito control

# COMPARITIVE ACUTE TOXICITIES

Larger value = Less toxicity



# Zenivex formulation

- ◆ 1.5 lb. Etofenprox per gallon
- ◆ 20% Etofenprox by weight
- ◆ Oil based formulation for ULV: neat or diluted applications
- ◆ No synergist, that is, no PBO
- ◆ Packaging will be 2.5 and 30 gallon containers.
- ◆ 30's will be closed loop returnable/refillable

# Zenivex Label Highlights

- ◆ Application rates: 0.00175, 0.0035, 0.007 pounds etofenprox per acre
- ◆ Aerial, vehicle mounted ground, or hand applied applications
- ◆ Droplet range for ground is 10-30 microns
- ◆ Droplet range for aerial <60 microns
- ◆ No aquatic set backs
- ◆ Signal word: Caution



Now we can cover you  
from above with

**Zenivex**<sup>TM</sup>  
E20

 **CENTRAL** *Life Sciences*