

## Nerve & Muscle Targets

1. Acetylcholinesterase (AChE) inhibitors  
1A: Carbamates  
1B: Organophosphates
2. GABA-gated chloride channel blockers  
2A: Cyclodiene Organochlorines  
2B: Phenylpyrazoles
3. Sodium channel modulators  
3A: Pyrethrins, Pyrethroids
4. Nicotinic acetylcholine receptor (nAChR) competitive modulators  
4A: Neonicotinoids  
4F: Pyridylidenes
5. Nicotinic acetylcholine receptor (nAChR) allosteric modulators Site I  
Spinosyns
6. Glutamate-gated chloride channel (GluCl) allosteric modulators  
Avermectins, Milbemycins
14. Nicotinic acetylcholine receptor (nAChR) channel blockers  
Nereistoxin analogues
22. Voltage-dependent sodium channel blockers  
22A: Oxadiazines  
22B: Semicarbazones
28. Ryanodine receptor modulators  
Diamides
30. GABA-gated chloride channel allosteric modulators  
Isoxazolines, Meta-diamides
32. Nicotinic acetylcholine receptor (nAChR) allosteric modulators Site II  
GS-omega/kappa HXTX-HV1a Peptide
37. Vesicular acetylcholine transporter (VAChT) inhibitor  
Oxazosulfyl

## Lepidoptera - Mode of Action Classification by Target Site



## Unknown or uncertain MoA

Azadirachtin, Pyridalyl, Beauveria bassiana, Burkholderia spp, Paecilomyces fumosoroseus

## Respiration Targets

13. Uncouplers of oxidative phosphorylation via disruption of the proton gradient  
Pyrrroles
21. Mitochondrial complex I electron transport inhibitors  
21A: METI acaricides and insecticides (Tolfenpyrad)
34. Mitochondrial complex III electron transport inhibitors – Qi site  
Flometoquin

## Midgut Targets

11. Microbial disruptors of insect midgut membranes  
11A: Bacillus thuringiensis,  
11B: Bacillus sphaericus
31. Baculoviruses  
Host-specific occluded pathogenic viruses  
Granuloviruses,  
Nucleopolyhedroviruses

## Growth & Development Targets

7. Juvenile hormone receptor modulators  
7A: Juvenile hormone analogues (Hydroprene)  
7B: Fenoxycarb
15. Inhibitors of chitin biosynthesis affecting CHS1  
Benzoylureas
18. Ecdysone receptor agonists  
Diacylhydrazines

