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

4C: Sulfoximines

4D: Butenolides

4E: Mesoionics

4F: Pvridvlidenes

9. Chordotonal organ TRPV channel modulators 9B: Pyridine azomethine derivatives 9D: Pyropenes

- 22. Voltage-dependent sodium channel blockers 22A: Oxadiazines
- 28. Ryanodine receptor modulators Diamides (Cyantraniliprole)
- 29. Chordotonal organ nicotinamidase inhibitors Flonicamid
- 30. GABA-gated chloride channel allosteric modulators Isoxazolines
- 32. Nicotinic acetylcholine receptor (nAChR) allosteric modulators Site II GS-omega/kappa HXTX-HV1a Peptide
- 36. Chordotonal modulators undefined target site Pyridazine pyrazolecarboxamides
- 37. Vesicular acetylcholine transporter (VAChT) inhibitor Oxazosulfvl

Aphids, Whiteflies, Planthoppers and Leafhoppers - Mode of Action **Classification by Target Site**







MoA Group	Aphids	Whiteflies	Planthoppers Leafhoppers
1A	Х	Х	Х
1B	Х	Х	Х
2A	Х	Х	Х
2B			Х
3A	Х	Х	Х
4A	Х	Х	Х
4C	Х	Х	Х
4D	Х	Х	Х
4E			Х
4F			Х
7A	Х	Х	
7C		Х	
9B	Х	Х	Х
9D	Х	Х	Х
12A	Х	Х	
15		Х	
16		Х	Х
21A		Х	
22A			Х
23	Х	Х	
28	Х	Х	Х
29	Х	Х	Х
30		Х	
32	Х	Х	
34		Х	
36	Х	Х	Х
37			Х

Respiration Targets

- 12. Inhibitors of mitochondrial ATP synthesis 12A: Difenthiuron
- 21. Mitochondrial complex I electron transport inhibitors 21A: METI acaracides and insecticides (Pyridaben, Tolfenpyrad)
- 34. Mitochondrial complex III electron transport inhibitors - Qi site Flometoquin

Growth & Development Targets

7. Juvenile hormone receptor modulators

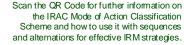
> 7A: Kinoprene 7C: Pyriproxyfen

- 15. Inhibitors of chitin biosynthesis, affecting CHS1 Benzoylureas
- 16. Inhibitors of chitin biosynthesis, type 1 Buprofezin
- 23. Inhibitors of acetyl-CoA carboxylase Tetronic & Tetramic acid derivatives

The table lists the main mode of action groups for the control of aphids, whiteflies and hoppers. However, the availability may differ regionally due to registration status.

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