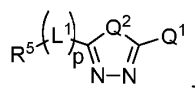


CLAIMS

What is claimed is:

1. A method of disrupting odor sensing behavior in an organism having an ORco ion channel, comprising exposing the organism to a composition comprising:

(a) a first compound having the structure:



wherein R^5 is optionally substituted aryl or optionally substituted ($\leq \text{C}6$) heteroaryl;

wherein L^1 is a divalent organic groups having from 1 to 8 non-hydrogen members;

wherein p is 0 or 1;

wherein Q^1 is hydrogen, OR^{20} , SR^{20} , or $\text{NR}^{21a}\text{R}^{21b}$,

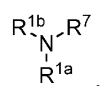
wherein R^{20} is hydrogen, methyl, ethyl, propyl, isopropyl, cyclopropyl, butyl, i-butyl, s-butyl, t-butyl, or CH_2 -isopropyl;

wherein each of R^{21a} and R^{21b} is independently hydrogen, methyl, ethyl, propyl, isopropyl, cyclopropyl, butyl, i-butyl, s-butyl, t-butyl, or CH_2 -isopropyl;

wherein Q^2 is O, S, or NR^4

wherein R^4 is hydrogen or alkyl($\text{C}_{\leq 5}$); and

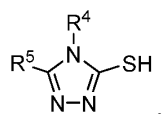
(b) a second compound having the structure:



wherein each of R^{1a} and R^{1b} is independently hydrogen, optionally substituted C1-C4 alkyl, or an alkyloxy carbonyl group; and

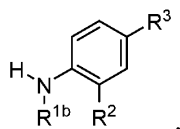
wherein R^7 is optionally substituted and selected from monocyclic aryl, bicyclic aryl, monocyclic heteroaryl, bicyclic heteroaryl, and tricyclic heteroaryl.

2. The method of claim [0011], wherein the organism is an insect.
3. The method of claim [0011], wherein the first compound has the structure:



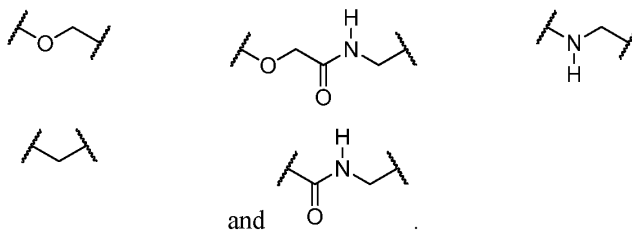
wherein R^4 is methyl, ethyl, isopropyl, or cyclopropyl.

4. The method of claim [0011], wherein the second compound has the structure:

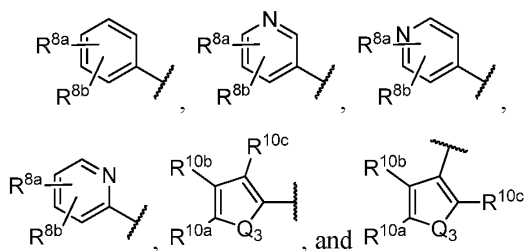


wherein R^{1b} is hydrogen or optionally substituted C1-C4 alkyl; wherein R^2 is hydrogen or methyl; and wherein R^3 is hydrogen, halo, hydroxy, nitro, halo, cyclopropyl, $\text{alkyl}_{(C \leq 5)}$, substituted $\text{alkyl}_{(C \leq 5)}$, $\text{alkenyl}_{(C \leq 5)}$, or substituted $\text{alkenyl}_{(C \leq 5)}$.

5. The method of claim [0011], wherein each of R^{1a} and R^{1b} is hydrogen.
 6. The method of claim [0011], wherein R^2 is hydrogen or methyl.
 7. The method of claim [0011], wherein R^3 is methyl, ethyl, *n*-propyl, or isopropyl.
 8. The method of claim [0011], wherein R^3 is vinyl.
 9. The method of claim [0011], wherein R^4 is hydrogen, methyl, ethyl, propyl, isopropyl, or cyclopropyl.
 10. The method of claim [0011], wherein L^1 is selected from:



11. The method of claim [0011], wherein R^5 is selected from:

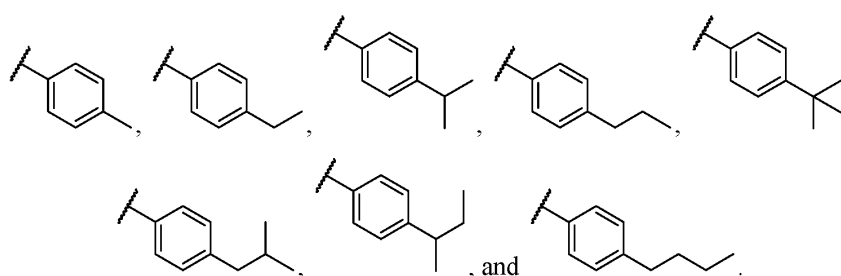


wherein Q^3 is -O-, -S-, or -NR⁹;

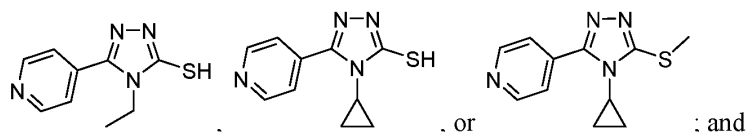
wherein R^9 is optionally substituted and selected from (C1-C5) alkyl, (C1-C5) alkenyl, (C6-C10) aryl, ($\leq$ C10) aralkyl, ($\leq$ C8) heteroaryl, and ($\leq$ C8) heteroaralkyl; and

wherein each of R^{8a} , R^{8b} , R^{10a} , R^{10b} , and R^{10c} is independently selected from hydrogen, hydroxy, nitro, halo, optionally substituted (C1-C5) alkyl, or optionally substituted (C1-C5) alkenyl; or R^{8a} and R^{8b} are positioned on adjacent carbons and are taken together to be optionally substituted (C1-C4) alkanediyl or optionally substituted (C1-C4) alkenediyl; or any two of R^{10a} , R^{10b} , and R^{10c} are positioned on adjacent carbons and are taken together to be optionally substituted (C1-C4) alkanediyl or optionally substituted (C1-C4) alkenediyl.

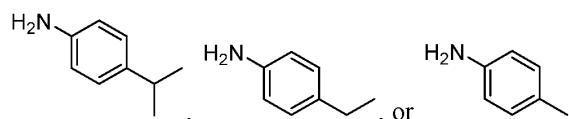
12. The method of claim [0011], wherein R^7 comprises a structure represented by a formula selected from:



13. The method of claim [0011], wherein the first compound has the structure:



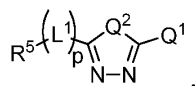
the second compound has the structure:



14. The method of claim [0011], wherein the composition is formed as a water-soluble tablet.
 15. The method of claim [0011], wherein the composition is formulated as an aerosol.
 16. The method of claim [0011], wherein the composition is formulated as a sprayable liquid.
 17. The method of claim [0011], wherein the composition inhibits insect host-sensing.
 18. The method of claim [0011], wherein the composition further comprises an insect repellent.
 19. The method of claim [0011], wherein a compound that binds to and/or modulates ORX is substantially absent from the composition.
 20. The method of claim [0011], wherein the composition is volatilized.

21. A method of agonizing an ORco ion channel, comprising exposing the ORco ion channel to a composition comprising:

(a) a first compound having the structure:



wherein R^5 is optionally substituted aryl or optionally substituted ($\leq \text{C}6$) heteroaryl;

wherein L^1 is a divalent organic groups having from 1 to 8 non-hydrogen members;

wherein p is 0 or 1;

wherein Q^1 is hydrogen, OR^{20} , SR^{20} , or $\text{NR}^{21a}\text{R}^{21b}$,

wherein R^{20} is hydrogen, methyl, ethyl, propyl, isopropyl, cyclopropyl, butyl, i-butyl, s-butyl, t-butyl, or CH_2 -isopropyl;

wherein each of R^{21a} and R^{21b} is independently hydrogen, methyl, ethyl, propyl, isopropyl, cyclopropyl, butyl, i-butyl, s-butyl, t-butyl, or CH_2 -isopropyl;

wherein Q^2 is O, S, or NR^4

wherein R^4 is hydrogen or alkyl($\text{C}_{\leq 5}$); and

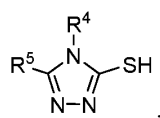
(b) a second compound having the structure:



wherein each of R^{1a} and R^{1b} is independently hydrogen, optionally substituted C1-C4 alkyl, or an alkyloxy carbonyl group; and

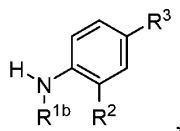
wherein R^7 is optionally substituted and selected from monocyclic aryl, bicyclic aryl, monocyclic heteroaryl, bicyclic heteroaryl, and tricyclic heteroaryl.

22. The method of claim 21, wherein the first compound has the structure:



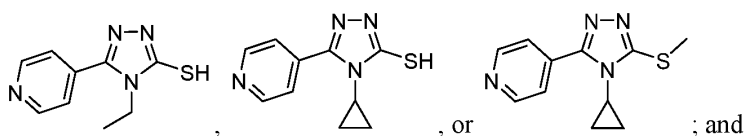
wherein R^4 is methyl, ethyl, isopropyl, or cyclopropyl.

23. The method of claim 21, wherein the second compound has the structure:

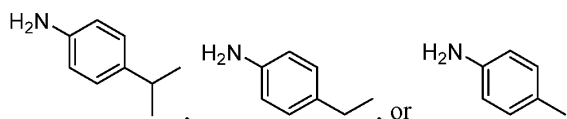


wherein R^{1b} is hydrogen or optionally substituted C1-C4 alkyl; wherein R^2 is hydrogen or methyl; and wherein R^3 is hydrogen, halo, hydroxy, nitro, halo, cyclopropyl, alkyl_(C≤5), substituted alkyl_(C≤5), alkenyl_(C≤5), or substituted alkenyl_(C≤5).

24. The method of claim 21, wherein the first compound has the structure:

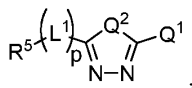


the second compound has the structure:



25. A composition for disrupting odorant sensing comprising

(c) a first compound having the structure:



wherein R^5 is optionally substituted aryl or optionally substituted ($\leq C6$) heteroaryl;

wherein L^1 is a divalent organic groups having from 1 to 8 non-hydrogen members;

wherein p is 0 or 1;

wherein Q^1 is hydrogen, OR^{20} , SR^{20} , or $NR^{21a}R^{21b}$,

wherein R^{20} is hydrogen, methyl, ethyl, propyl, isopropyl, cyclopropyl, butyl, i-butyl, s-butyl, t-butyl, or CH_2 -isopropyl;

wherein each of R^{21a} and R^{21b} is independently hydrogen, methyl, ethyl, propyl, isopropyl, cyclopropyl, butyl, i-butyl, s-butyl, t-butyl, or CH_2 -isopropyl;

wherein Q^2 is O, S, or NR^4

wherein R^4 is hydrogen or alkyl_(C≤5); and

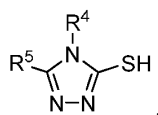
- (d) a second compound having the structure:



wherein each of R^{1a} and R^{1b} is independently hydrogen, optionally substituted C1-C4 alkyl, or an alkyloxy carbonyl group; and

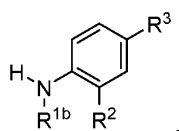
wherein R^7 is optionally substituted and selected from monocyclic aryl, bicyclic aryl, monocyclic heteroaryl, bicyclic heteroaryl, and tricyclic heteroaryl.

26. The composition of claim 25, wherein the first compound has the structure:



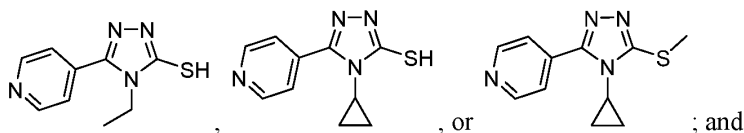
wherein R^4 is methyl, ethyl, isopropyl, or cyclopropyl.

27. The composition of claim 25, wherein the second compound has the structure:

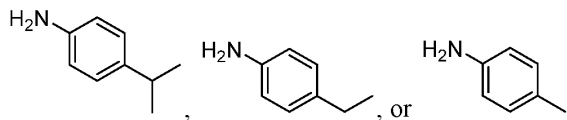


wherein R^{1b} is hydrogen or optionally substituted C1-C4 alkyl; wherein R^2 is hydrogen or methyl; and wherein R^3 is hydrogen, halo, hydroxy, nitro, halo, cyclopropyl, alkyl_(C≤5), substituted alkyl_(C≤5), alkenyl_(C≤5), or substituted alkenyl_(C≤5).

28. The composition of claim 25, wherein the first compound has the structure:



the second compound has the structure:



29. The composition of claim 25, formed as a water-soluble tablet.
 30. The composition of claim 25, formulated as an aerosol.
 31. The composition of claim 25, formulated as a sprayable liquid.
 32. The composition of claim 25, wherein the composition inhibits insect host-sensing.

- 33. The composition of claim 25, further comprising an insect repellant.
- 34. The composition of claim 25, wherein a compound that binds to and/or modulates ORX is substantially absent from the composition.
- 35. The composition of claim 25, wherein the composition is volatilized.
- 36. An article comprising the composition of claim 25.
- 37. The article of claim 36, formed as clothing or netting.
- 38. The article of claim 36, formed as clothing.
- 39. The article of claim 36, formed as netting.
- 40. The article of claim 36, formed as an insect trap.