We claim:

1. A fatty amine made from a metathesis-derived C_{10}-C_{17} monounsaturated acid, octadecene-1,18-dioic acid, or their ester derivatives.

2. A derivative made by one or more of sulfonating, sulfitating, or oxidizing the fatty amine of claim **1**.

3. The fatty amine of claim **1** wherein the acid or ester derivative reactant has at least 1 mole % of *trans*-Δ^9 unsaturation.

4. The fatty amine of claim **1** made by reacting the metathesis-derived acid or ester derivative with ammonia or a primary or secondary amine, followed by reduction of the resulting fatty amide.

5. The fatty amine of claim **4** wherein the secondary amine is selected from the group consisting of N,N-dimethylamine, N,N-diethylamine, and N,N-diisopropylamine.

6. The fatty amine of claim **1** made by reducing the metathesis-derived acid or ester derivative to give a fatty alcohol, followed by amination of the fatty alcohol.

7. The fatty amine of claim **6** wherein the amination is performed in a single step by reacting the fatty alcohol with ammonia or a primary or secondary amine in the presence of an amination catalyst.

8. The fatty amine of claim **1** having the formula:

$$R^2(R^3)NR^1$$

wherein R^1 is $-C_{10}H_{18}$-R^4 or $-C_{18}H_{34}$-NR^2R^3; each of R^2 and R^3 is independently substituted or unsubstituted alkyl, aryl, alkenyl, oxyalkylene, or polyoxyalkylene; and R^4 is hydrogen or C_1-C_7 alkyl.

9. The fatty amine of claim **1** wherein the ester derivative is a modified triglyceride made by self-metathesis of a natural oil.

10. The fatty amine of claim **9** wherein the natural oil is selected from the group consisting of soybean oil, palm oil, rapeseed oil, algal oil, and mixtures thereof.

11. The fatty amine of claim **1** wherein the ester derivative is an unsaturated triglyceride made by cross-metathesis of a natural oil with an olefin.

12. The fatty amine of claim **11** wherein the natural oil is selected from the group consisting of soybean oil, palm oil, rapeseed oil, algal oil, and mixtures thereof, and the olefin is a C_2-C_8 α-olefin or a C_4-C_9 internal olefin.

13. A fatty amidoamine comprising a reaction product of a metathesis-derived C_{10}-C_{17} monounsaturated acid, octadecene-1,18-dioic acid, or their ester derivatives and an aminoalkyl-substituted tertiary amine.

14. A derivative made by one or more of sulfonating, sulfitating, or oxidizing the amidoamine of claim **13**.

15. The amidoamine of claim **13** wherein the acid or ester derivative reactant has at least 1 mole % of *trans*-Δ^9 unsaturation.

16. The amidoamine of claim **13** wherein the aminoalkyl-substituted tertiary amine is selected from the group consisting of N,N-dimethyl-1,3-propanediamine (DMAPA), N,N-diethyl-1,3-propanediamine, N,N-dimethyl-1,2-ethanediamine, and N,N-dimethyl-1,4-butanediamine.

17. The amidoamine of claim **13** having the formula:

$$R^3(R^2)N(CH_2)_nNH(CO)R^1$$

wherein R^1 is $-C_9H_{16}$-R^4 or $-C_{16}H_{30}$-$(CO)NH(CH_2)_nN(R^2)R^3$; each of R^2 and R^3 is independently substituted or unsubstituted alkyl, aryl, alkenyl, oxyalkylene, or polyoxyalkylene; R^4 is hydrogen or C_1-C_7 alkyl; and n=2-8.

18. The amidoamine of claim **13** wherein the ester derivative is a modified triglyceride made by self-metathesis of a natural oil.

19. The amidoamine of claim **18** wherein the natural oil is selected from the group consisting of soybean oil, palm oil, rapeseed oil, algal oil, and mixtures thereof.

20. The amidoamine of claim **13** wherein the ester derivative is an unsaturated triglyceride made by cross-metathesis of a natural oil with an olefin.

21. The amidoamine of claim **20** wherein the natural oil is selected from the group consisting of soybean oil, palm oil, rapeseed oil, algal oil, and mixtures thereof, and the olefin is a C_2-C_8 α-olefin or a C_4-C_9 internal olefin.

22. The amidoamine of claim **13** wherein the C_{10}-C_{17} monounsaturated acid or ester derivative comprises a C_{10} and a C_{12} monounsaturated acid or ester derivative.

23. The amidoamine of claim **13** wherein the C_{10}-C_{17} monounsaturated acid or ester derivative comprises a C_{10} and a C_{16} monounsaturated acid or ester derivative.

24. A glyphosate formulation comprising the fatty amine of claim **1**.

25. A glyphosate formulation comprising the fatty amine derivative of claim **2**.

26. A glyphosate formulation comprising the fatty amidoamine of claim **13**.

27. A glyphosate formulation comprising the fatty amidoamine derivative of claim **14**.

28. A water-soluble herbicide composition comprising the fatty amine of claim **1**.

29. A water-soluble herbicide composition comprising the fatty amine derivative of claim **2**.

30. A water-soluble herbicide composition comprising the fatty amidoamine of claim **13**.

31. A water-soluble herbicide composition comprising the fatty amidoamine derivative of claim **14**.

32. A hard-surface cleaner comprising the fatty amine of claim **1**.

33. A hard-surface cleaner comprising the fatty amine derivative of claim **2**.

34. A hard-surface cleaner comprising the fatty amidoamine of claim **13**.

35. A hard-surface cleaner comprising the fatty amidoamine of claim **14**.

36. A laundry detergent formulation comprising the fatty amine of claim **1**.

37. A laundry detergent formulation comprising the fatty amine derivative of claim **2**.

38. A laundry detergent formulation comprising the fatty amidoamine of claim **13**.

39. A laundry detergent formulation comprising the fatty amidoamine derivative of claim **14**.

40. A personal cleanser or handsoap comprising the fatty amine of claim **1**.

41. A personal cleanser or handsoap comprising the fatty amine derivative of claim **2**.

42. A personal cleanser or handsoap comprising the fatty amidoamine of claim **13**.

43. A personal cleanser or handsoap comprising the fatty amidoamine of claim **14**.

44. A paraffin dispersant for use in oilfield applications comprising the fatty amine of claim **1**.

45. A paraffin dispersant for use in oilfield applications comprising the fatty amine derivative of claim **2**.

46. A paraffin dispersant for use in oilfield applications comprising the fatty amidoamine of claim **13**.

47. A paraffin dispersant for use in oilfield applications comprising the fatty amidoamine derivative of claim **14**.

48. A gas well foamer for use in oilfield applications comprising the fatty amine of claim **1**.

49. A gas well foamer for use in oilfield applications comprising the fatty amine derivative of claim **2**

50. A gas well foamer for use in oilfield applications comprising the fatty amidoamine of claim **13**.

51. A gas well foamer for use in oilfield applications comprising the fatty amidoamine derivative of claim **14**.

52. A paint or coating additive composition comprising the fatty amine of claim **1**.

53. A paint or coating additive composition comprising the fatty amine derivative of claim **2**.

54. A paint or coating additive composition comprising the fatty amidoamine of claim **13**.

55. A paint or coating additive composition comprising the fatty amidoamine derivative of claim **14**.

56. A foamer, foam additive, or dispersant for use in gypsum, concrete, or firefighting applications comprising the fatty amine of claim **1**.

57. A foamer, foam additive, or dispersant for use in gypsum, concrete, or firefighting applications comprising the fatty amine derivative of claim **2**.

58. A foamer, foam additive, or dispersant for use in gypsum, concrete, or firefighting applications comprising the fatty amidoamine of claim **13**.

59. A foamer, foam additive, or dispersant for use in gypsum, concrete, or firefighting applications comprising the fatty amidoamine derivative of claim **14**.

60. An agricultural solvent comprising the fatty amine of claim **1**.

61. An agricultural solvent comprising the fatty amine derivative of claim **2**.

62. An agricultural solvent comprising the fatty amidoamine of claim **13**.

63. An agricultural solvent comprising the fatty amidoamine derivative of claim **14**.

64. An anionic emulsifier for agricultural compositions comprising the fatty amine of claim **1**.

65. An anionic emulsifier for agricultural compositions comprising the fatty amine derivative of claim **2**.

66. An anionic emulsifier for agricultural compositions comprising the fatty amidoamine of claim **13**.

67. An anionic emulsifier for agricultural compositions comprising the fatty amidoamine derivative of claim **14**.

68. A corrosion inhibitor for use in oilfield applications comprising the fatty amine of claim **1**.

69. A corrosion inhibitor for use in oilfield applications comprising the fatty amine derivative of claim **2**.

70. A corrosion inhibitor for use in oilfield applications comprising the fatty amidoamine of claim **13**.

71. A corrosion inhibitor for use in oilfield applications comprising the fatty amidoamine derivative of claim **14**.

We claim:

1. A fatty amine having the formula:

$$R^2(R^3)NR^1$$

wherein R^1 is $-(CH_2)_8-CH=CHR^4$ or $-(CH_2)_8-CH=CH-(CH_2)_8-NR^2R^3$; each of R^2 and R^3 is independently substituted or unsubstituted alkyl, aryl, alkenyl, oxyalkylene, or polyoxyalkylene; and R^4 is hydrogen or C_1-C_7 alkyl, wherein when R^4 is C_1-C_7 alkyl, the fatty amine has at least 1 mole % of *trans*-Δ^9 unsaturation.

2. A fatty amidoamine having the formula:

$$R^3(R^2)N(CH_2)_nNH(CO)R^1$$

wherein (i) R^1 is $-(CH_2)_7-CH=CHR^4$; each of R^2 and R^3 is independently unsubstituted alkyl, substituted or unsubstituted aryl, alkenyl, oxyalkylene, or polyoxyalkylene; R^4 is hydrogen or C_1-C_7 alkyl; and n=2-8, or (ii) R^1 is $-(CH_2)_7-CH=CH-(CH_2)_7-(CO)NH(CH_2)_nN(R^2)R^3$; each of R^2 and R^3 is independently substituted or unsubstituted alkyl, aryl, alkenyl, oxyalkylene, or polyoxyalkylene; R^4 is hydrogen or C_1-C_7 alkyl; and n=2-8, wherein when R^4 is C_1-C_7 alkyl, the fatty amidoamine has at least 1 mole % of *trans*-Δ^9 unsaturation.

3. A sulfonated, sulfitated, and/or oxidized derivative of the fatty amine of claim **1** or the fatty amidoamine of claim **2**.

4. The fatty amine of claim **1** or the fatty amidoamine of claim **2** having at least 50 mole % of *trans*-Δ^9 unsaturation.

5. The fatty amidoamine of claim **2** wherein (i) R^2 and R^3 are methyl, and n is 3; (ii) R^2 and R^3 are ethyl, and n is 3; (iii) R^2 and R^3 are methyl, and n is 2; or (iv) R^2 and R^3 are methyl, and n is 4.

6. A glyphosate formulation, a water-soluble herbicide composition, an agricultural solvent, or an anionic emulsifier for agricultural compositions each comprising the fatty amine of claim **1**, the fatty amidoamine of claim **2**, or the derivative of claim **3**.

7. A hard-surface cleaner, a laundry detergent formulation, or a personal cleanser or handsoap each comprising the fatty amine of claim **1**, the fatty amidoamine of claim **2**, or the derivative of claim **3**.

8. A paraffin dispersant for use in oilfield applications, a gas well foamer for use in oilfield applications, or a corrosion inhibitor for use in oilfield applications each comprising the fatty amine of claim **1**, the fatty amidoamine of claim **2**, or the derivative of claim **3**.

9. A paint or coating additive composition comprising the fatty amine of claim **1**, the fatty amidoamine of claim **2**, or the derivative of claim **3**.

10. A foamer, foam additive, or dispersant for use in gypsum, concrete, or firefighting applications comprising the fatty amine of claim **1**, the fatty amidoamine of claim **2**, or the derivative of claim **3**.

11. Use of a composition comprising the fatty amine of claim **1**, the fatty amidoamine of claim **2**, or the derivative of claim **3** as surfactant, emulsifier, skin-feel agent, film former, rheological modifier, biocide, biocide potentiator, solvent, release agent, conditioner, personal care product, household product, industrial or institutional cleaner, as wetting agent or dispersant, as inert ingredient in pesticides, as adjuvant for delivery of pesticides for crop protection, home and garden, and professional applications, in oil field applications, as foam moderator or dispersant for the manufacture of gypsum, cement wall board, concrete additives and firefighting foams, as coalescent for paints and coatings, or as polyurethane-based adhesives.