concentration, until the drug gets excreted through the kidneys or through other metabolic routes (e.g., hepatic). As a result, IV drugs may cause unwanted side effects. Drugs administered via the IV route are significantly diluted in the venous blood volume and lungs before reaching the cardiac circulation.

[0011] Injecting a drug to the heart directly is usually a last-resort taken by a cardiologist as a life saving measure in an emergency. The doses of the drugs injected directly into the heart in this manner are usually less than their IV and/or oral doses.

[0012] In some cases, an unplanned surgery is necessary to save the patient's life. Of course, unplanned surgeries are expensive and risky to the patient.

[0013] Cardiac arrhythmias are associated with disabling symptoms like tightness around the chest, palpitations, feeling tired, shortness of breath, and sometimes chest pain.

[0014] In view of the above, arrhythmias frequently result in emergency room (ER) visits, where intravenous drugs are administered, sometimes necessitating an extended stay in the hospital and in some cases also leading to unplanned invasive procedures. Pipeline Insights: Antiarrhythmics, Datamonitor (06/2006); and TWISS et al., "Efficacy of Calcium Channel Blockers as Maintenance Therapy for Asthma," British J of Clinical Pharmacology (November 2001).

[0015] There remains, however, a need for improved compositions and methods for treating heart conditions. Accordingly, there also remains a need for methods of making these compositions.

SUMMARY

[0015a] In an aspect of the present disclosure, there is provided a kit, comprising:

(1) a pharmaceutical composition that comprises:

(a) a salt of flecainide,

(b) a cyclodextrin, and

(c) an acid;

(2) a receptacle containing said pharmaceutical composition; and

(3) instructions for use of a nebulizer to inhalationally administer a dose of said pharmaceutical composition in aerosol to a subject, wherein said dose contains from about 50 mg to about 250 mg of said salt of flecainide, and said aerosol of said pharmaceutical composition has droplets that have a mass median aerodynamic diameter of less than 10 μm; and

wherein said pharmaceutical composition is in the form of a liquid solution that has:

(i) said salt of flecainide at a concentration of from about 65 mg/mL to about 95 mg/mL;

(ii) said cyclodextrin at a concentration of from about 10% (w/v) to about 30% (w/v) of said liquid solution;

(iii) said acid at a concentration of from about 2 mM to about 10 mM; and

(iv) a pH of from about 5.5 to about 6.5 when said pH is measured at room temperature.

[0015b] In another aspect of the present disclosure, there is provided a pharmaceutical composition, comprising:

(1) a therapeutically effective amount of a salt of flecainide,

(2) a cyclodextrin, and

(3) an acid,

wherein said pharmaceutical composition is in the form of a liquid solution that has said salt of flecainide at a concentration above 60 mg/mL, said cyclodextrin at a concentration of from about 5% (w/v) to about 50% (w/v) of said liquid solution, said acid at a concentration of 2 mM to 10 mM, and a pH above 5.5 when measured at room temperature.

[0015c] In a further aspect of the present disclosure, there is provided a unit dose of a pharmaceutical composition that comprises: a salt of flecainide, a cyclodextrin, and an acid, wherein said pharmaceutical composition is in the form of a liquid solution that has said salt of flecainide at a concentration above 60 mg/mL, said cyclodextrin at a concentration of from about 5% (w/v) to about 50% (w/v) of said liquid solution, said acid at a concentration of 2 mM to 10 mM, and a pH above 5.5 when measured at room temperature, and

wherein said unit dose comprises from about 50 mg to about 350 mg of said salt of flecainide.

[0016] Described herein, in some ~~aspect~~examples, is a pharmaceutical composition, comprising: a therapeutically effective amount of a salt of flecainide, wherein the pharmaceutical composition is in the form of a liquid solution that has the salt of flecainide at a concentration above 60 mg/mL.

[0017] In some cases, the pharmaceutical composition further comprises a cyclodextrin. In some cases, a pH of the solution is above 5.5 when the pH is measured at room temperature. In some cases, a pH of the solution is from about 5.5 to about 6.5 when the pH is measured at room temperature. In some cases, the pharmaceutical composition further comprises a cyclodextrin, and wherein a pH of the solution is above 5.5 when the pH is measured at room temperature. In some cases, the cyclodextrin is selected from the group consisting of: α-cyclodextrin, β-cyclodextrin, γ-cyclodextrin, derivatized α -cyclodextrins, derivatized β-cyclodextrins, and derivatized γ-cyclodextrins. In some cases, the cyclodextrin is selected from the group consisting of: α-cyclodextrin, β-cyclodextrin, γ-cyclodextrin, hydroxypropyl-β-cyclodextrin,

[0022] Described herein, in some ~~aspect~~examples, is a unit dose of any pharmaceutical composition provided herein, comprising from about 50 mg to about 350 mg of the salt of flecainide.

[0023] In some cases, the unit dose comprises about 60 mg to about 150 mg of the salt of flecainide. In some cases, the unit dose comprises about 75 mg to about 125 mg of the salt of flecainide. In some cases, the unit dose comprises from about 250 mg to about 350 mg of the salt of flecainide. In some cases, the unit dose comprises from about 100 mg to about 250 mg of the salt of flecainide. In some cases, the unit dose comprises about 315 mg of the salt of flecainide. In some cases, the unit dose comprises about 260 mg of the salt of flecainide. In some cases, the unit dose comprises about 230 mg of the salt of flecainide. In some cases, the unit dose comprises about 200 mg of the salt of flecainide.

[0024] Described herein, in some ~~aspect~~examples, is a kit, comprising: any pharmaceutical composition or any unit dose described herein and instructions for use of the pharmaceutical composition for treatment of a heart condition. In some cases, the heart condition comprises atrial fibrillation. In some cases, the atrial fibrillation comprises tachycardia. In some cases, the atrial arrhythmia is selected from the group consisting of: supraventricular tachycardia, paroxysmal supraventricular tachycardia, atrial fibrillation, paroxysmal atrial fibrillation, acute episodes in persistent and permanent atrial fibrillation, atrial flutter, paroxysmal atrial flutter, or lone atrial fibrillation. In some cases, the kit further comprises a container containing the pharmaceutical composition. In some cases, the container is selected from the group consisting of: a vial, a syringe, a capsule, a blow fill seal, a blister, a cartridge, and an ampoule.

[0025] Described herein, in some ~~aspect~~examples, is a system, comprising: any pharmaceutical composition provided herein and a nebulizer. In some cases, the system further comprises instructions for use of the nebulizer and the pharmaceutical composition for treatment of a heart condition. In some cases, the pharmaceutical composition is formulated for administration via the nebulizer, wherein the nebulizer is selected from the group consisting of a breath-actuated jet nebulizer, a vibrating mesh nebulizer, and a ultrasonic nebulizer. In some cases, the nebulizer selected from the group consisting of: a breath-actuated jet nebulizer, a vibrating mesh nebulizer, and a ultrasonic nebulizer. In some cases, the system further comprises instructions for use of the nebulizer and the pharmaceutical composition for treatment of atrial arrhythmia. In some cases, the system further comprises instructions for use of a nebulizer to inhalationally administer a dose of the pharmaceutical composition in aerosol to a subject. In some cases, the atrial arrhythmia comprises tachycardia. In some cases, the atrial arrhythmia is selected from the group consisting of: supraventricular tachycardia, paroxysmal supraventricular tachycardia, atrial fibrillation, paroxysmal atrial fibrillation, acute episodes in persistent and permanent atrial

fibrillation, atrial flutter, paroxysmal atrial flutter, or lone atrial fibrillation. In some cases, the nebulizer is configured to deliver the dose of the pharmaceutical composition in aerosol, wherein the aerosol of the pharmaceutical composition has droplets that have a mass median aerodynamic diameter of less than 10 μm. In some cases, the nebulizer is a breath-actuated nebulizer. In some cases, the nebulizer is a jet nebulizer. In some cases, the instructions contain instructions for use of the nebulizer to inhalationally administer the dose of the pharmaceutical composition in aerosol to a subject, wherein the dose contains from about 50 mg to about 150 mg of the salt of flecainide. In some cases, the pharmaceutical composition is in the form of a liquid solution that has: (i) the salt of flecainide at a concentration of from about 65 mg/mL to about 95 mg/mL; (ii) the cyclodextrin at a concentration of from about 10% (w/v) to about 30% (w/v) of the solution; and (iii) a pH of from about 5.5 to about 6.5 when the pH is measured at room temperature. In some cases, the concentration of the salt of flecainide is from about 65 mg/mL to about 95 mg/mL. In some cases, the concentration of the salt of flecainide is from about 70 mg/mL to about 80 mg/mL. In some cases, the instructions contain instructions for use of the nebulizer to deliver the pharmaceutical composition in an aerosolized dose that contains about 90 mg of the salt of flecainide. In some cases, the instructions contain instructions for use of the nebulizer to deliver the pharmaceutical composition in an aerosolized dose that contains about 120 mg of the salt of flecainide.

[0026] Described herein, in some ~~aspect~~examples, is a system, comprising: a pharmaceutical composition that comprises a salt of flecainide, a cyclodextrin, and an acid; a nebulizer configured to deliver the pharmaceutical composition as droplets having a mass median aerodynamic diameter of less than 10 μm; and instructions for use of the nebulizer to deliver the pharmaceutical composition in an aerosolized dose that contains from about 50 mg to about 250 mg of the salt of flecainide, wherein the pharmaceutical composition is in the form of a liquid solution that has (i) the salt of flecainide at a concentration of between 65 mg/mL and 100 mg/mL, (ii) the cyclodextrin at a concentration of from about 10% (w/v) to about 30% (w/v) of the solution; and (iii) a pH of from about 5.5 to about 6.5 when the pH is measured at room temperature. In some ~~embodiment~~examples, the system further comprises a nose clip. A nose clip can be used to hinder passage of air through a nose of a subject during inhalation and increase the proportion of a total inhaled volume that is the aerosol issued by the nebulizer. In some ~~embodiment~~examples, the dose contains from about 150 mg to about 250 mg of the salt of flecainide. In some ~~embodiment~~examples, the dose contains about 200 mg of the salt of flecainide.

[0027] Described herein, in some ~~aspect~~examples, is a method of treating a subject suffering from a heart condition, comprising: administering to the subject via inhalation a pharmaceutical composition

in the form of a liquid solution, wherein the pharmaceutical composition comprises a therapeutically effective amount of a salt of flecainide, and wherein a concentration of the salt of flecainide in the pharmaceutical composition is above 60 mg/mL. In some cases, the pharmaceutical composition further comprises a cyclodextrin. In some cases, a pH of the solution is above 5.5 when the pH is measured at room temperature.

[0028] Described herein, in some ~~aspect~~example<u></u>s, is a method of treating a human subject suffering from a heart condition, comprising administering to the subject via inhalation within about 10 min a pharmaceutical composition in the form of a liquid solution, wherein the pharmaceutical composition comprises a therapeutically effective amount of a salt of flecainide, and wherein the administration results in a peak plasma concentration (C_{max}) of the salt of flecainide in the subject that is at least 200 ng/mL. In some cases, a concentration of the salt of flecainide in the pharmaceutical composition is above 60 mg/mL of the solution. In some cases, the pharmaceutical composition further comprises a cyclodextrin. In some cases, the administration of the pharmaceutical composition results in a peak plasma concentration (C_{max}) of the salt of flecainide in the subject that is at least 200 ng/mL. In some cases, the administration of the pharmaceutical composition results in a peak plasma concentration (C_{max}) of the salt of flecainide in the subject that is at least 250 ng/mL. In some cases, the C_{max} is from about 250 ng/mL and about 1000 ng/mL. In some cases, the C_{max} is from about 300 ng/mL and about 700 ng/mL. In some cases, the C_{max} is from about 400 ng/mL and about 600 ng/mL. In some cases, the administration of the pharmaceutical composition is performed within about 10 min. In some cases, the administration of the pharmaceutical composition is performed within about 5 min. In some cases, the administration of the pharmaceutical composition is performed via one or two inhalations. In some cases, the administration of the pharmaceutical composition is performed via two inhalations that are separated by a break for from about 10 seconds to about 1 minute. In some cases, the administration is performed via a nebulizer. In some cases, the nebulizer is a breath-actuated nebulizer. In some cases, the nebulizer is a jet nebulizer. In some cases, the nebulizer is a vibrating mesh nebulizer. In some cases, the nebulizer is an ultrasonic nebulizer.

[0029] In some cases, from about 50 mg to about 150 mg of the salt of flecainide is administered to the subject via inhalation. In some cases, from about 75 mg to about 125 mg of the salt of flecainide is administered to the subject via inhalation. In some cases, from about 250 mg to about 350 mg of the salt of flecainide is administered to the subject via inhalation. In some cases, from about 150 mg to about 250 mg of the salt of flecainide is administered to the subject via inhalation. In some cases, about 90 mg of the salt of flecainide is administered to the subject via inhalation. In some cases, about 120 mg of the salt of flecainide is administered to the subject via

concentration of the cyclodextrin is at most about 23% (w/v) of the solution. In some cases, the concentration of the cyclodextrin is at most about 22.5% (w/v) of the solution. In some cases, the concentration of the salt of flecainide is at most about 200 mg/mL. In some cases, the concentration of the salt of flecainide is from about 65 mg/mL to about 130 mg/mL. In some cases, the concentration of the salt of flecainide is about 65 mg/mL to about 95 mg/mL. In some cases, the concentration of the salt of flecainide is from about 70 mg/mL to about 115 mg/mL. In some cases, the concentration of the salt of flecainide is about 100 mg/mL. In some cases, the concentration of the salt of flecainide is about 75 mg/mL. In some cases, the salt of flecainide is selected from the group consisting of: flecainide acetate, flecainide hydrochloride, flecainide citrate, flecainide phosphate, and flecainide nitrate. In some cases, the salt of flecainide comprises flecainide acetate. In some cases, the salt of flecainide comprises flecainide hydrochloride. In some cases, the pharmaceutical composition further comprises an acid. In some cases, the acid is selected from the group consisting of: acetic acid, citric acid, nitric acid, hydrochloric acid, sulfuric acid, maleic acid, tartaric acid, phosphoric acid, aconitic acid, adipic acid, ascorbic acid, benzoic acid, caprylic acid, cholic acid, formic acid, glutamic acid, lactic acid, propionic acid, sorbic acid, stearic acid, and succinic acid. In some cases, the acid is selected from the group consisting of: acetic acid, citric acid, nitric acid, hydrochloric acid, and sulfuric acid. In some cases, a concentration of the acid in the pharmaceutical composition is from about 2 mM to about 200 mM. In some cases, a concentration of the acid in the pharmaceutical composition is about 2 mM to about 50 mM. In some cases, a concentration of the acid in the pharmaceutical composition is about 2 mM to about 10 mM. In some cases, the concentration of the acid is at most about 50 mM. In some cases, the concentration of the acid is about 20 mM. In some cases, the concentration of the acid is about 5 mM. In some cases, the acid comprises acetic acid. In some cases, the concentration of acetic acid is about 5 mM. In some ~~embodiment~~examples, the concentration of citric acid is 3.5 mM. In some cases, the acid comprises a mixture of acids selected from the group consisting of: acetic acid, citric acid, nitric acid, hydrochloric acid, and sulfuric acid. In some cases, the acid comprises hydrochloric acid. In some cases, the salt of flecainide comprises flecainide acetate, and wherein the acid comprises acetic acid. In some cases, the pH of the solution is from about 4.5 to about 6.5, from about 5 to about 6.5, from about 5 to about 6.2, or from about 5.2 to about 5.9. In some cases, the pH of the solution is at most about 6.5. In some cases, the pH of the solution is from about 5.5 to about 6.5. In some cases, the pH of the solution is about 5.9. In some cases, the pH of the solution is about 5.2. In some cases, the salt of flecainide comprises flecainide acetate. In some cases, the pharmaceutical composition further comprises a sweetener. In some cases, the artificial

sweetener is selected from the group consisting of: acesulfame potassium, aspartame, cyclamate, mogrosides, saccharin, stevia, sucralose, neotame, alcoholsneotame, mannitol, sorbitol, xylitol, lactitol, isomalt, maltitol, and pharmaceutically acceptable salts thereof. In some cases, the artificial sweetener comprises saccharin. In some cases, the artificial sweetener comprises a salt of saccharin. In some cases, the artificial sweetener comprises saccharin sodium. In some cases, a concentration of the sweetener in the pharmaceutical composition is from about 0.001% (w/v) to about 1% (w/v). In some cases, a concentration of the sweetener in the pharmaceutical composition is from about 0.001% (w/v) to about 0.05% (w/v). In some cases, a concentration of the sweetener in the pharmaceutical composition is from about 0.001% (w/v) to about 0.01% (w/v).

[0030] Disclosed herein, in some ~~aspect~~examples, is a method of manufacturing a liquid formulation for the treatment of treating a human subject suffering from a heart condition, the method comprising a therapeutically effective amount of a salt of flecainide for treating the: administering to the subject via inhalation a pharmaceutical composition described herein.

[0031] Disclosed herein, in some ~~aspect~~examples, is a method of treating a human subject suffering from a heart condition, wherein a concentration of the salt of the method comprising: administering to the subject via inhalation a unit dose described herein. In some cases, the heart condition comprises atrial fibrillation. In some cases, atrial fibrillation is recurrent atrial fibrillation. In some cases, the atrial fibrillation is paroxysmal atrial fibrillation. In some cases, the subject has a systolic blood pressure that is greater than about 90 mmHg. In some cases, the subject has a systolic blood pressure that is from about 100 mmHg to about 160 mmHg. In some cases, the subject has a ventricular rate that is no more than 170 BPM. In some cases, the subject has a ventricular rate that is from about 80 BPM to about 155 BPM. In some cases, the subject is no more than 85 years old. In some cases, the subject is from 18 years old to 85 years old. In some cases, the subject has undergone cardiac ablation no less than 3 months prior to the administering. In some cases, the subject has an ongoing prescription for oral flecainide or a pharmaceutically acceptable salt thereof. In some cases, the atrial fibrillation has an onset that occurred no more than about 48 hours prior to the administering. In some cases, the atrial fibrillation has an onset that occurred from about 1 hour to about 48 hours prior to the treating prior to the administering. In some cases, the subject does not exhibit a pathology comprising abnormal left ventricular ejection fraction within 6 months prior to the administering. In some cases, the subject does not exhibit a pathology comprising heart failure that is class 2 or greater as classified by New York Heart Association Functional Classification within 6 months prior to the administering. In some cases, the subject does not exhibit a pathology comprising

myocardial infarction or a history of myocardial infarction. In some cases, the subject does not exhibit a pathology comprising hemodynamic instability or cardiac instability. In some cases, subject does not exhibit a pathology comprising an episode of atrial flutter within 6 months prior to the administering. In some cases, the subject has not undergone cardiac surgery for the pathology within 6 months prior to the administering.

[0032] Disclosed herein, in some ~~aspect~~examples, is a method of preparing a liquid pharmaceutical composition, comprising combining: (a) water; (b) a pH adjusting agent; (c) flecainide in the formulation is aboveor a pharmaceutically acceptable salt thereof; and (d) a cyclodextrin. In some cases, (i) a concentration of the flecainide or a pharmaceutically acceptable salt thereof is from about 65 mg/mL to about 95 mg/mL in the pharmaceutical composition, (ii) a concentration of the cyclodextrin in the pharmaceutical composition is from about 10% (w/v) to about 30% (w/v); and (iii) a room-temperature pH in the pharmaceutical composition of from about 5.5 to about 6.5. In some cases, the combining comprises: (a) providing the water; (b) contacting the portion of water with the flecainide or pharmaceutically acceptable salt thereof, the cyclodextrin, and the pH adjusting agent in a vessel; and (c) adding a subsequent portion of the water to the vessel to provide the pharmaceutical composition, wherein: (i) a concentration of the flecainide or a pharmaceutically acceptable salt thereof is from about 65 mg/mL to about 95 mg/mL in the pharmaceutical composition, (ii) a concentration of the cyclodextrin in the pharmaceutical composition is from about 10% (w/v) to about 30% (w/v); and (iii) a room-temperature pH in the pharmaceutical composition of from about 5.5 to about 6.5. In some cases, the pH adjusting agent comprises an ion selected from the group consisting of: acetate, citrate, nitrate, chloride, sulfate, maleate, tartrate, phosphate, aconitate, adipate, ascorbate, benzoate, caprylate, cholate, formate, glutamate, lactate, propionate, sorbate, stearate, and succinate. In some cases, the pH adjusting agent is selected from the group consisting of: acetic acid, citric acid, nitric acid, hydrochloric acid, sulfuric acid, maleic acid, tartaric acid, phosphoric acid, aconitic acid, adipic acid, ascorbic acid, benzoic acid, caprylic acid, cholic acid, formic acid, glutamic acid, lactic acid, propionic acid, sorbic acid, stearic acid, and succinic acid. In some cases, the pH adjusting agent is selected from the group consisting of: acetic acid, citric acid, nitric acid, hydrochloric acid, and sulfuric acid. In some cases, the pH adjusting agent comprises a mixture of acids selected from the group consisting of: acetic acid, citric acid, nitric acid, hydrochloric acid, and sulfuric acid. In some cases, a concentration of the pH adjusting agent in the pharmaceutical composition is about 2 mM to about 50 mM. In some cases, a concentration of the pH adjusting agent in the pharmaceutical composition is about 2 mM to about 10 mM. In some cases, the pH adjusting agent comprises acetic acid. In some cases, the concentration in the pharmaceutical

CLAIMS

What is claimed is:

1. A pharmaceutical composition, comprising: a therapeutically effective amount of a salt of flecainide, wherein said pharmaceutical composition is in the form of a liquid solution that has said salt of flecainide at a concentration above 60 mg/mL.

2. The pharmaceutical composition of claim 1, further comprising a cyclodextrin.

3. The pharmaceutical composition of claim 1 or 2, wherein a pH of said solution is above 5.5 at room temperature.

4. The pharmaceutical composition of claim 2, wherein said cyclodextrin comprises hydroxypropyl-β-cyclodextrin.

5. The pharmaceutical composition of claim 2, wherein said concentration of said cyclodextrin is from about 15% (w/v) to about 25% (w/v) of said solution.

6. The pharmaceutical composition of claim 2, wherein said concentration of said cyclodextrin is at least about 10% (w/v) of said solution.

7. The pharmaceutical composition of claim 2, wherein said concentration of said cyclodextrin is about 20% (w/v) of said solution.

8. The pharmaceutical composition of claim 1, wherein said concentration of said salt of flecainide is about 65 mg/mL to about 130 mg/mL.

9. The pharmaceutical composition of claim 1, wherein said concentration of said salt of flecainide is about 75 mg/mL.

10. The pharmaceutical composition of claim 1, wherein said salt of flecainide is selected from the group consisting of: flecainide acetate, flecainide hydrochloride, flecainide citrate, flecainide phosphate, and flecainide nitrate.

~~11. The pharmaceutical composition of any prior claim, wherein said salt of flecainide comprises flecainide acetate.~~

~~12. The pharmaceutical composition of claim 1, further comprising an acid.~~

~~13. The pharmaceutical composition of claim 12, wherein said acid is selected from the group consisting of: acetic acid, citric acid, nitric acid, hydrochloric acid, sulfuric acid, maleic acid, tartaric acid, phosphoric acid, aconitic acid, adipic acid, ascorbic acid, benzoic acid, caprylic acid, cholic acid, formic acid, glutamic acid, lactic acid, propionic acid, sorbic acid, stearic acid, and succinic acid.~~

~~14. The pharmaceutical composition of claim 12, wherein a concentration of said acid in said pharmaceutical composition is about 2 mM to about 50 mM.~~

~~15. The pharmaceutical composition of claim 12, wherein said concentration of said acid is about 20 mM.~~

~~16. The pharmaceutical composition of claim 12, wherein said concentration of said acid is about 5 mM.~~

~~17. The pharmaceutical composition of claim 12, wherein said acid comprises acetic acid.~~

~~18. The pharmaceutical composition of claim 17, wherein a concentration of acetic acid is about 5 mM.~~

~~19. The pharmaceutical composition of claim 12, wherein said acid comprises citric acid.~~

~~20. The pharmaceutical composition of claim 19, wherein a concentration of citric acid is about 5 mM.~~

~~21. The pharmaceutical composition of claim 12, wherein said acid comprises a mixture of acids selected from the group consisting of: acetic acid, citric acid, nitric acid, hydrochloric acid, and sulfuric acid.~~

~~22. The pharmaceutical composition of claim 3, wherein said pH of said solution is from about 5.5 to about 6.5.~~

~~23. The pharmaceutical composition of claim 3, wherein said pH of said solution is about 5.9.~~

~~24. The pharmaceutical composition of claim 1, further comprising a sweetener.~~

~~25. The pharmaceutical composition of claim 24, wherein said sweetener comprises saccharin.~~

~~26. The pharmaceutical composition of claim 24, wherein said sweetener comprises saccharin sodium.~~

~~27. The pharmaceutical composition of any prior claim, wherein said pharmaceutical composition is formulated for administration via inhalation.~~

~~28. The pharmaceutical composition of any prior claim, wherein said pharmaceutical composition is a nebulized solution that comprises nebulized droplets having a mass median aerodynamic diameter of less than 10 μm.~~

~~29. A unit dose of said pharmaceutical composition of any prior claim, comprising about 50 mg to about 350 mg of said salt of flecainide.~~

~~30. The unit dose of claim 29, comprising about 60 mg to about 150 mg of said salt of flecainide.~~

~~31. The unit dose of claim 29, comprising about 100 mg to about 250 mg of said salt of flecainide.~~

~~32. The unit dose of claim 29, comprising about 90 mg of said salt of flecainide.~~

~~33. The unit dose of claim 29, comprising about 120 mg of said salt of flecainide.~~

~~34. The unit dose of claim 29, comprising about 200 mg of said salt of flecainide.~~

~~35. A kit, comprising: said pharmaceutical composition or said unit dose of any prior claim and instructions for use of said pharmaceutical composition for treatment of a heart condition.~~

~~36. The kit of claim 35, further comprising a container containing said pharmaceutical composition.~~

~~37. The kit of claim 36, wherein said container is selected from the group consisting of: a vial, a syringe, a capsule, a blow fill seal, a blister, a cartridge, and an ampoule.~~

~~38~~1. A kit, comprising:

(1) a pharmaceutical composition that comprises:

(a) a salt of flecainide,

(b) a cyclodextrin, and

(c) an acid;

(2) a receptacle containing said pharmaceutical composition; and

(3) instructions for use of a nebulizer to inhalationally administer a dose of said pharmaceutical composition in aerosol to a subject, wherein said dose contains from about 50 mg to about 250 mg of said salt of flecainide, and said aerosol of said pharmaceutical composition has droplets that have a mass median aerodynamic diameter of less than 10 μm; and

wherein said pharmaceutical composition is in the form of a liquid solution that has:

(i) said salt of flecainide at a concentration of from about 65 mg/mL to about 95 mg/mL;~~,~~

(ii) said cyclodextrin at a concentration of from about 10% (w/v) to about 30% (w/v) of said liquid solution;

(iii) said acid at a concentration of from about 2 mM to about 10 mM; and

(iv~~iii~~) a pH of from about 5.5 to about 6.5 when said pH is measured at room temperature.

2. The kit of claim 1, wherein said concentration of said salt of flecainide is from about 70 mg/mL to about 80 mg/mL.

3. The kit of claim 1, wherein said concentration of said salt of flecainide is about 75 mg/mL.

4. The kit of claim 1, wherein said salt of flecainide is selected from the group consisting of: flecainide acetate, flecainide hydrochloride, flecainide citrate, flecainide phosphate, and flecainide nitrate.

5. The kit of claim 1, wherein said salt of flecainide comprises flecainide acetate.

6. The kit of claim 1, wherein said acid is selected from the group consisting of: acetic acid, citric acid, nitric acid, hydrochloric acid, ascorbic acid, lactic acid, sulfuric acid, maleic acid, tartaric acid, phosphoric acid, aconitic acid, adipic acid, benzoic acid, caprylic acid, cholic acid, formic acid, glutamic acid, lactic acid, propionic acid, sorbic acid, stearic acid, and succinic acid.

7. The kit of claim 1, wherein said acid comprises acetic acid.

8. The kit of claim 1, wherein said acid comprises citric acid.

9. The kit of claim 1, wherein said concentration of said acid is about 5 mM.

10. The kit of claim 1, wherein said pH of said liquid solution is about 5.9 when measured at room temperature.

11. The kit of claim 1, wherein said cyclodextrin is selected from the group consisting of: α-cyclodextrin, β-cyclodextrin, γ-cyclodextrin, hydroxypropyl-β-cyclodextrin, hydroxyethyl-β-cyclodextrin, hydroxypropyl-γ-cyclodextrin, hydroxyethyl-γ-cyclodextrin, dihydroxypropyl-β-cyclodextrin, glucosyl-α-cyclodextrin, glucosyl-β-cyclodextrin, diglucosyl-β-cyclodextrin, maltosyl-α-cyclodextrin, maltosyl-β-cyclodextrin, maltosyl-γ-cyclodextrin, maltotriosyl-β-cyclodextrin, maltotriosyl-γ-cyclodextrin, dimaltosyl-β-cyclodextrin, succinyl-β-cyclodextrin, 6A-amino-6A-deoxy-N-(3-hydroxypropyl)-β-cyclodextrin, sulfobutylether-β-cyclodextrin, sulfobutylether-γ-cyclodextrin, sulfoalkylether-β-cyclodextrins, and sulfoalkylether-γ-cyclodextrins.

12. The kit of claim 1, wherein said cyclodextrin comprises hydroxypropyl-β-cyclodextrin.

13. The kit of claim 1, wherein said concentration of said cyclodextrin is from about 15% (w/v) to about 25% (w/v) of said liquid solution.

14. The kit of claim 1, wherein said concentration of said cyclodextrin is about 20% (w/v) of said liquid solution.

15. The kit of claim 1, wherein said pharmaceutical composition further comprises an artificial sweetener.

16. The kit of claim 1, wherein said dose contains from about 150 mg to about 250 mg of said salt of flecainide.

17. The kit of claim 16, wherein said dose contains about 200 mg of said salt of flecainide.

18. The kit of claim 1, further comprising a nebulizer selected from the group consisting of: a breath-actuated jet nebulizer, a vibrating mesh nebulizer, and an ultrasonic nebulizer.

19. The kit of claim 1, wherein said pharmaceutical composition is formulated for administration via a breath-actuated jet nebulizer, a vibrating mesh nebulizer, or an ultrasonic nebulizer.

20. The kit of claim 16, wherein said dose contains about 175 mg of said salt of flecainide.

21. The kit of claim 1, wherein:

(a) said salt of flecainide comprises flecainide acetate, and said concentration of said salt of flecainide is about 75 mg/mL;

(b) said acid comprises acetic acid; and

(c) said cyclodextrin comprises hydroxypropyl-β-cyclodextrin, and said concentration of said cyclodextrin is about 20% (w/v) of said liquid solution.

22. A pharmaceutical composition, comprising:

(1) a therapeutically effective amount of a salt of flecainide,

(2) a cyclodextrin, and

(3) an acid,

wherein said pharmaceutical composition is in the form of a liquid solution that has said salt of flecainide at a concentration above 60 mg/mL, said cyclodextrin at a concentration of from about 5% (w/v) to about 50% (w/v) of said liquid solution, said acid at a concentration of 2 mM to 10 mM, and a pH above 5.5 when measured at room temperature.

23. The pharmaceutical composition of claim 22, wherein said concentration of said cyclodextrin is from about 15% (w/v) to about 25% (w/v) of said liquid solution.

24. The pharmaceutical composition of claim 22, wherein said concentration of said cyclodextrin is about 20% (w/v) of said liquid solution.

25. The pharmaceutical composition of claim 22, wherein said cyclodextrin is selected from the group consisting of: α-cyclodextrin, β-cyclodextrin, γ-cyclodextrin, hydroxypropyl-β-cyclodextrin, hydroxyethyl-β-cyclodextrin, hydroxypropyl-γ-cyclodextrin, hydroxyethyl-γ-cyclodextrin, dihydroxypropyl-β-cyclodextrin, glucosyl-α-cyclodextrin, glucosyl-β-cyclodextrin, diglucosyl-β-cyclodextrin, maltosyl-α-cyclodextrin, maltosyl-β-cyclodextrin, maltosyl-γ-cyclodextrin, maltotriosyl-β-cyclodextrin, maltotriosyl-γ-cyclodextrin, dimaltosyl-β-cyclodextrin, succinyl-β-cyclodextrin, 6A-amino-6A-deoxy-N-(3-hydroxypropyl)-β-cyclodextrin, sulfobutylether-β-cyclodextrin, sulfobutylether-γ-cyclodextrin, sulfoalkylether-β-cyclodextrins, and sulfoalkylether-γ-cyclodextrins.

26. The pharmaceutical composition of claim 22, wherein said cyclodextrin comprises hydroxypropyl-β-cyclodextrin.

27. The pharmaceutical composition of claim 22, wherein said concentration of said salt of flecainide is up to 200 mg/mL.

28. The pharmaceutical composition of claim 22, wherein said concentration of said salt of flecainide is from about 65 mg/mL to about 95 mg/mL.

29. The pharmaceutical composition of claim 22, wherein said concentration of said salt of flecainide is about 75 mg/mL.

30. The pharmaceutical composition of claim 22, wherein said salt of flecainide is selected from the group consisting of: flecainide acetate, flecainide hydrochloride, flecainide citrate, flecainide phosphate, and flecainide nitrate.

31. The pharmaceutical composition of claim 22, wherein said salt of flecainide comprises flecainide acetate.

32. The pharmaceutical composition of claim 22, wherein said acid is selected from the group consisting of: acetic acid, citric acid, nitric acid, hydrochloric acid, sulfuric acid, maleic acid, tartaric acid, phosphoric acid, aconitic acid, adipic acid, ascorbic acid, benzoic acid, caprylic acid, cholic acid, formic acid, glutamic acid, lactic acid, propionic acid, sorbic acid, stearic acid, and succinic acid.

33. The pharmaceutical composition of claim 22, wherein said acid comprises acetic acid.

34. The pharmaceutical composition of claim 22, wherein said acid comprises citric acid.

35. The pharmaceutical composition of claim 22, wherein said concentration of said acid is about 5 mM.

36. The pharmaceutical composition of claim 22, wherein said pH of said liquid solution is about 5.9 when measured at room temperature.

37. The pharmaceutical composition of claim 22, wherein said pharmaceutical composition further comprises a sweetener.

38. The pharmaceutical composition of claim 37, wherein said sweetener is selected from the group consisting of acesulfame potassium, aspartame, cyclamate, mogrosides, saccharin, *stevia*, sucralose, neotame, mannitol, sorbitol, xylitol, lactitol, isomalt, maltitol, and pharmaceutically acceptable salts thereof.

39. The pharmaceutical composition of claim 22, wherein said pharmaceutical composition is formulated for administration via inhalation.

40. A unit dose of a pharmaceutical composition that comprises: a salt of flecainide, a cyclodextrin, and an acid,
wherein said pharmaceutical composition is in the form of a liquid solution that has said salt of flecainide at a concentration above 60 mg/mL, said cyclodextrin at a concentration of from about 5% (w/v) to about 50% (w/v) of said liquid solution, said acid at a concentration of 2 mM to 10 mM, and a pH above 5.5 when measured at room temperature, and
wherein said unit dose comprises from about 50 mg to about 350 mg of said salt of flecainide.

41. The unit dose of claim 40, comprising from about 250 mg to about 350 mg of said salt of flecainide.

42. The unit dose of claim 40, comprising from about 100 mg to about 250 mg of said salt of flecainide.

43. The unit dose of claim 41, wherein:
(i) said salt of flecainide comprises flecainide acetate, and said concentration of said salt of flecainide is about 75 mg/mL;
(ii) said acid comprises acetic acid; and
(iii) said cyclodextrin comprises hydroxypropyl-β-cyclodextrin, and said concentration of said cyclodextrin is about 20% (w/v) of said liquid solution.

44. The unit dose of claim 42, wherein:
(i) said salt of flecainide comprises flecainide acetate, and said concentration of said salt of flecainide is about 75 mg/mL;
(ii) said acid comprises acetic acid; and
(iii) said cyclodextrin comprises hydroxypropyl-β-cyclodextrin, and said concentration of said cyclodextrin is about 20% (w/v) of said liquid solution.

45. The unit dose of claim 40, wherein said concentration of salt of flecainide is from about 65 mg/mL to about 95 mg/mL.

46. The unit dose of claim 45, wherein said salt of flecainide comprises flecainide acetate.

47. The unit dose of claim 46, wherein said cyclodextrin comprises hydroxypropyl-β-cyclodextrin, and said concentration of said cyclodextrin is from about 15% (w/v) to about 25% (w/v) of said liquid solution.

48. The unit dose of claim 47, wherein said pH is about 5.8 to about 6.2 when measured at room temperature.

49. The composition of claim 22, wherein:
(a) said salt of flecainide comprises flecainide acetate, and said concentration of said salt of flecainide is about 75 mg/mL;
(b) said acid comprises acetic acid; and
(c) said cyclodextrin comprises hydroxypropyl-β-cyclodextrin, and said concentration of said cyclodextrin is about 20% (w/v) of said liquid solution.

~~39. A system, comprising: said pharmaceutical composition of any prior claim and a nebulizer.~~

~~40. The system of claim 39, wherein said pharmaceutical composition is formulated for administration via the nebulizer, wherein the nebulizer is selected from the group consisting of a breath-actuated jet nebulizer, a vibrating mesh nebulizer, and a ultrasonic nebulizer.~~

~~41. The system of claim 39, further comprising instructions for use of said nebulizer and said pharmaceutical composition for treatment of a heart condition.~~

~~42. The system of claim 39, further comprising instructions for use of said nebulizer and said pharmaceutical composition for treatment of atrial arrhythmia.~~

~~43. The system of claim 39, wherein said nebulizer is configured to deliver said pharmaceutical composition as droplets having a mass median aerodynamic diameter of less than 10 μm.~~

~~44. The system of claim 39, wherein said nebulizer is a breath-actuated nebulizer.~~

~~45. The system of claim 39, wherein said nebulizer is a jet nebulizer.~~

46. The system of claim 39, wherein said instructions contain instructions for use of said nebulizer to deliver said pharmaceutical composition in a unit dose that contains about 60 mg to about 150 mg of said salt of flecainide.

47. The system of claim 39, wherein said instructions contain instructions for use of said nebulizer to deliver said pharmaceutical composition in a unit dose that contains about 75 mg to about 125 mg of said salt of flecainide.

48. A system, comprising:

a pharmaceutical composition that comprises a salt of flecainide, a cyclodextrin, and an acid;

a nebulizer configured to deliver said pharmaceutical composition as droplets having a mass median aerodynamic diameter of less than 10 μm; and

instructions for use of said nebulizer to deliver said pharmaceutical composition in a unit dose that contains between about 50 mg and about 250 mg of said salt of flecainide,

wherein said pharmaceutical composition is in the form of a liquid solution that has (i) said salt of flecainide at a concentration of between 65 mg/mL and 100 mg/mL, (ii) said cyclodextrin at a concentration of between about 10% (w/v) and about 30% (w/v) of said solution; and (iii) a pH of between about 5.5 and about 6.5 at room temperature..

49. A method of treating a subject suffering from a heart condition, comprising:

administering to said subject via inhalation a pharmaceutical composition in the form of a liquid solution, wherein said pharmaceutical composition comprises a therapeutically effective amount of a salt of flecainide, and wherein a concentration of said salt of flecainide in said pharmaceutical composition is above 60 mg/mL.

50. The method of claim 49, wherein said pharmaceutical composition further comprises a cyclodextrin.

51. The method of claim 49 or 50, wherein a pH of said solution is above 5.5 when said pH is measured at room temperature.

~~52. A method of treating a human subject suffering from a heart condition, comprising administering to said subject via inhalation within about 10 min a pharmaceutical composition in the form of a liquid solution, wherein said pharmaceutical composition comprises a therapeutically effective amount of a salt of flecainide, and wherein said administration results in a peak plasma concentration (Cmax) of said salt of flecainide in said subject that is at least 200 ng/mL.~~

~~53. The method of claim 52, wherein a concentration of said salt of flecainide in said pharmaceutical composition is above 60 mg/mL of said solution.~~

~~54. The method of claim 49, 52 or 53, wherein said pharmaceutical composition further comprises a cyclodextrin.~~

~~55. The method of claim 52, wherein said Cmax is between about 250 ng/mL and about 1000 ng/mL.~~

~~56. The method of claim 52, wherein said Cmax is between about 300 ng/mL and about 700 ng/mL.~~

~~57. The method of claim 49 or 52, wherein said administration of said pharmaceutical composition is performed within about 10 min.~~

~~58. The method of claim 49 or 52, wherein said administration of said pharmaceutical composition is performed via one or two inhalations.~~

~~59. The method of claim 49 or 52, wherein said administration of said pharmaceutical composition is performed via two inhalations that are separated by a break for from about 10 seconds to about 1 minute.~~

~~60. The method of claim 49 or 52, wherein said administration of said pharmaceutical composition is performed within about 5 min.~~

~~61. The method of claim 49 or 52, wherein said administration is performed via a nebulizer.~~

~~62. The method of claim 61, wherein said nebulizer is a breath-actuated nebulizer.~~

~~63. The method of claim 61, wherein said nebulizer is a jet nebulizer.~~

~~64. The method of claim 61, wherein said nebulizer is a vibrating mesh nebulizer.~~

~~65. The method of claim 49 or 52, wherein about 100 mg to about 250 mg of said salt of flecainide is administered to said subject via inhalation.~~

~~66. The method of claim 49 or 52, wherein about 90 mg of said salt of flecainide is administered to said subject via inhalation.~~

~~67. The method of claim 49 or 52, wherein about 120 mg of said salt of flecainide is administered to said subject via inhalation.~~

~~68. The method of claim 49 or 52, wherein about 200 mg of said salt of flecainide is administered to said subject via inhalation.~~

~~69. The method of claim 49 or 52, wherein said heart condition comprises atrial arrhythmia.~~

~~70. The method of claim 49 or 52, wherein said atrial arrhythmia comprises tachycardia.~~

~~71. The method of claim 49 or 52, comprising acute treatment after detection of said atrial arrhythmia.~~

~~72. The method of claim 49 or 52, wherein said heart condition comprises atrial fibrillation.~~

~~73. The method of claim 72, wherein said atrial fibrillation is recurrent atrial fibrillation.~~

~~74. The method of claim 72, wherein said atrial fibrillation is paroxysmal atrial fibrillation.~~

~~75. The method of claim 49 or 52, wherein said subject has a systolic blood pressure that is greater than about 90 mmHg at the time of treating.~~

76. The method of claim 49 or 52, wherein said subject has a systolic blood pressure that is from about 100 mmHg to about 160 mmHg at the time of treating.

77. The method of claim 49 or 52, wherein said subject has a ventricular rate that is no more than 170 BPM at the time of treating.

78. The method of claim 49 or 52, wherein said subject has a ventricular rate that is from about 80 BPM to about 155 BPM at the time of treating.

79. A method of preparing a liquid pharmaceutical composition, comprising combining:

(a) water;

(b) a pH adjusting agent;

(c) flecainide or a pharmaceutically acceptable salt thereof; and

(d) a cyclodextrin.

80. The method of claim 79, wherein:

(i) a concentration of said flecainide or a pharmaceutically acceptable salt thereof is from about 65 mg/mL to about 95 mg/mL in said pharmaceutical composition,

(ii) a concentration of said cyclodextrin in said pharmaceutical composition is from about 10% (w/v) to about 30% (w/v); and

(iii) a room-temperature pH in said pharmaceutical composition of from about 5.5 to about 6.5.

81. The method of claims 79 or 80, wherein said combining comprises:

(a) providing said water;

(b) contacting said portion of water with said flecainide or pharmaceutically acceptable salt thereof, said cyclodextrin, and said pH adjusting agent in a vessel; and

(c) adding a subsequent portion of said water to said vessel to provide said pharmaceutical composition, wherein:

(i) a concentration of said flecainide or a pharmaceutically acceptable salt thereof is from about 65 mg/mL to about 95 mg/mL in said pharmaceutical composition,

(ii) a concentration of said cyclodextrin in said pharmaceutical composition is from about 10% (w/v) to about 30% (w/v); and

(iii) a room-temperature pH in said pharmaceutical composition of from about 5.5 to about 6.5.

82. The method of claim 79, wherein said pH adjusting agent comprises an ion selected from the group consisting of: acetate, citrate, nitrate, chloride, sulfate, maleate, tartrate, phosphate, aconitate, adipate, ascorbate, benzoate, caprylate, cholate, formate, glutamate, lactate, propionate, sorbate, stearate, and succinate.

83. The method of claim 79, wherein said pH adjusting agent is selected from the group consisting of: acetic acid, citric acid, nitric acid, hydrochloric acid, sulfuric acid, maleic acid, tartaric acid, phosphoric acid, aconitic acid, adipic acid, ascorbic acid, benzoic acid, caprylic acid, cholic acid, formic acid, glutamic acid, lactic acid, propionic acid, sorbic acid, stearic acid, and succinic acid.

84. The method of claim 79, wherein said pH adjusting agent is selected from the group consisting of: acetic acid, citric acid, nitric acid, hydrochloric acid, and sulfuric acid.

85. The method of claim 79, wherein said pH adjusting agent comprises a mixture of acids selected from the group consisting of: acetic acid, citric acid, nitric acid, hydrochloric acid, and sulfuric acid.

86. The method of claim 79, wherein a concentration of said pH adjusting agent in said pharmaceutical composition is about 2 mM to about 10 mM.

87. The method of claim 79, wherein said pH adjusting agent comprises acetic acid.

88. The method of claim 87, wherein said concentration in said pharmaceutical composition of said acetic acid is about 5 mM.

89. The method of claim 79, wherein said pH adjusting agent comprises citric acid.

~~90. The method of claim 89, wherein said concentration in said pharmaceutical composition of said citric acid is about 5 mM.~~

~~91. The method of claim 79, wherein said cyclodextrin comprises hydroxypropyl-β-cyclodextrin.~~

~~92. The method of claim 79, wherein said concentration of said cyclodextrin in said pharmaceutical composition is from about 10% (w/v) to about 30% (w/v).~~

~~93. The method of claim 79-92, further comprising adding a sweetener.~~

~~94. The method of claim 93, wherein said sweetener comprises saccharin.~~

~~95. The method of claim 93, wherein said sweetener comprises saccharin sodium.~~

~~96. The method of claim 93, wherein a concentration of said sweetener in said pharmaceutical composition is from about 0.001% (w/v) to about 0.01% (w/v).~~

~~97. The method of claim 79, wherein said pharmaceutically acceptable salt of flecainide is added.~~

~~98. The method of claim 97, wherein pharmaceutically acceptable said salt of flecainide comprises flecainide acetate.~~

~~99. The method of claim 79, further comprising packaging said pharmaceutical composition in unit dose form.~~

~~100. The method of claim 99, wherein said unit dose form further comprises a container selected from the group consisting of: a vial, a syringe, a capsule, a blow-fill-seal, a blister, a cartridge, and an ampoule.~~