[0006d] In a further aspect, the present disclosure refers to a co-crystal of N-(2-(5-(((2*R*,3*R*,4*S*,5*R*)-3,4-dihydroxy-5-methoxy-6,6-dimethyltetra-hydro-2H-pyran-2-yl)oxy)-3'-fluoro-[1,1'-biphenyl]-2-yl)ethyl)-acetamide, L-proline, methyl ethyl ketone, and pyrazine in a molar ratio of about 1:1.2:0.6:0.1, characterized by an X-ray powder diffractogram comprising the following peaks: 10.42, 14.62, 19.28, and 21.14 º2θ ±0.20 º2θ as determined on a diffractometer using Cu-Kα radiation at a wavelength of 1.54178 Å.

[0006e] In another aspect, the present disclosure refers to a co-crystal of N-(2-(5-(((2*R*,3*R*,4*S*,5*R*)-3,4-dihydroxy-5-methoxy-6,6-dimethyltetra-hydro-2H-pyran-2-yl)oxy)-3'-fluoro-[1,1'-biphenyl]-2-yl)ethyl)-acetamide and D-proline (1:1), characterized by an X-ray powder diffractogram comprising the following peaks: 11.77, 14.52, 19.54, and 21.23 º2θ ±0.20 º2θ as determined on a diffractometer using Cu-$K_{\alpha 1}$ radiation at a wavelength of 1.5405929 Å.

[0006f] In yet another aspect, the present disclosure refers to a co-crystal of N-(2-(5-(((2*R*,3*R*,4*S*,5*R*)-3,4-dihydroxy-5-methoxy-6,6-dimethyltetra-hydro-2H-pyran-2-yl)oxy)-3'-fluoro-[1,1'-biphenyl]-2-yl)ethyl)-acetamide and L-proline (1:1), characterized by an X-ray powder diffractogram comprising the following peaks: 8.52, 16.33, 19.50, and 21.22 º2θ ±0.20 º2θ as determined on a diffractometer using Cu-$K_{\alpha 1}$ radiation at a wavelength of 1.5405929 Å.

[0006g] In a further aspect, the present disclosure refers to a pharmaceutical composition comprising a co-crystal disclosed herein and a pharmaceutically acceptable solid carrier.

[0006h] In another aspect, the present disclosure refers to a co-crystal disclosed herein for use in inhibiting heat shock protein 90 (Hsp90) in a subject.

[0006i] In yet another aspect, the present disclosure refers to a use of a co-crystal disclosed herein, in the manufacture of a medicament for treating diabetic neuropathy or neuropathic pain ~~inhibiting heat shock protein 90 (Hsp90)~~ in a subject.

[0006j] In a further aspect, the present disclosure refers to a method of increasing the concentration of N-(2-(5-(((2*R*,3*R*,4*S*,5*R*)-3,4-dihydroxy-5-methoxy-6,6-dimethyltetra-hydro-2H-pyran-2-yl)oxy)-3'-fluoro-[1,1'-biphenyl]-2-yl)ethyl)-acetamide (**4a**) relative to N-(2-(5-(((2*S*,3*R*,4*S*,5*R*)-3,4-dihydroxy-5-methoxy-6,6-dimethyltetra-hydro-2H-pyran-2-yl)oxy)-3'-fluoro-[1,1'-biphenyl]-2-yl)ethyl)-acetamide (**4b**) in a starting composition comprising **4a** and **4b**, comprising contacting the starting composition with proline in a solvent, and subjecting the

WE CLAIM:

1. A co-crystal of N-(2-(5-(((2*R*,3*R*,4*S*,5*R*)-3,4-dihydroxy-5-methoxy-6,6-dimethyltetrahydro-2H-pyran-2-yl)oxy)-3'-fluoro-[1,1'-biphenyl]-2-yl)ethyl)-acetamide and L-proline (1:2), characterized by an X-ray powder diffractogram comprising the following peaks: 14.76, 16.86, 19.00, and 21.05 º2θ ±0.20 º2θ as determined on a diffractometer using Cu-Kα radiation at a wavelength of 1.54178 Å.

2. The co-crystal according to claim 1, wherein the X-ray powder diffractogram further comprises peaks at 12.14, 17.51, 18.89, and 19.41 º2θ ±0.20 º2θ.

3. The co-crystal according to claim 1 or 2, wherein the X-ray powder diffractogram is substantially as shown in Figure 1.

4. The co-crystal according to any one of claims 1 - 3, characterized by a differential scanning calorimetry (DSC) thermogram comprising an exotherm at about 211 ºC.

5. The co-crystal according to claim 4, wherein the DSC thermogram is substantially as shown in Figure 2.

6. A co-crystal of N-(2-(5-(((2*R*,3*R*,4*S*,5*R*)-3,4-dihydroxy-5-methoxy-6,6-dimethyltetrahydro-2H-pyran-2-yl)oxy)-3'-fluoro-[1,1'-biphenyl]-2-yl)ethyl)-acetamide and L-proline (1:2), characterized by an X-ray powder diffractogram comprising the following peaks: 9.20, 16.19, 18.45, and 24.51 º2θ ±0.20 º2θ as determined on a diffractometer using Cu-Kα radiation at a wavelength of 1.54178 Å.

7. The co-crystal according to claim 6, wherein the X-ray powder diffractogram further comprises peaks at 11.83, 17.16, 20.15, and 25.34 º2θ ±0.2 º2θ.

8. The co-crystal according to claim 6 or 7, wherein the X-ray powder diffractogram is substantially as shown in Figure 14.

9. The co-crystal according to any one of claims 6 - 8, characterized by a differential scanning calorimetry (DSC) thermogram comprising an endotherm having an onset temperature of about 211.2 ºC.

10. The co-crystal according to claim 9, wherein the DSC thermogram is substantially as shown in Figure 15.

11. A co-crystal of N-(2-(5-(((2*R*,3*R*,4*S*,5*R*)-3,4-dihydroxy-5-methoxy-6,6-dimethyltetrahydro-2H-pyran-2-yl)oxy)-3'-fluoro-[1,1'-biphenyl]-2-yl)ethyl)-acetamide and L-proline acetone solvate (1:1:1), characterized by an X-ray powder diffractogram comprising the following peaks: 14.64, 17.53, 18.91, and 21.33 º2θ ±0.20 º2θ as determined on a diffractometer using Cu-Kα radiation at a wavelength of 1.54178 Å.

12. The co-crystal according to claim 11, wherein the X-ray powder diffractogram further comprises peaks at 12.10, 15.14, 18.26, and 19.56 º2θ ±0.2 º2θ.

13. The co-crystal according to claim 11 or 12, wherein the X-ray powder diffractogram is substantially as shown in Figure 10.

14. The co-crystal according to any one of claims 11 - 13, characterized by a thermogravimetric analysis (TGA) thermogram comprising weight loss steps that conclude at about 150 ºC and about 220 ºC.

15. The co-crystal according to claim 14, wherein the TGA thermogram is substantially as shown in Figure 11.

16. A co-crystal of N-(2-(5-(((2*R*,3*R*,4*S*,5*R*)-3,4-dihydroxy-5-methoxy-6,6-dimethyltetrahydro-2H-pyran-2-yl)oxy)-3'-fluoro-[1,1'-biphenyl]-2-yl)ethyl)-acetamide, L-proline, methyl ethyl ketone, and pyrazine in a molar ratio of about 1:1.2:0.6:0.1, characterized by an X-ray powder diffractogram comprising the following peaks: 10.42, 14.62, 19.28, and 21.14 º2θ ±0.20 º2θ as determined on a diffractometer using Cu-Kα radiation at a wavelength of 1.54178 Å.

17. The co-crystal according to claim 16, wherein the X-ray powder diffractogram further comprises peaks at 11.85, 14.93, 17.40, and 19.28 º2θ ±0.2 º2θ.

18. The co-crystal according to claim 16 or 17, wherein the X-ray powder diffractogram is substantially as shown in Figure 17.

19. The co-crystal according to any one of claims 16 - 18, characterized by unit cell dimensions as follows: a = 10.975 Å, b = 10.310 Å, c = 15.704 Å, α = 90º, β = 108.56º, and γ = 90º.

20. A co-crystal of N-(2-(5-(((2*R*,3*R*,4*S*,5*R*)-3,4-dihydroxy-5-methoxy-6,6-dimethyltetra-hydro-2H-pyran-2-yl)oxy)-3'-fluoro-[1,1'-biphenyl]-2-yl)ethyl)-acetamide and D-proline (1:1), characterized by an X-ray powder diffractogram comprising the following peaks: 11.77, 14.52, 19.54, and 21.23 º2θ ±0.20 º2θ as determined on a diffractometer using Cu-$K_{\alpha 1}$ radiation at a wavelength of 1.5405929 Å.

21. The co-crystal according to claim 20, wherein the X-ray powder diffractogram further comprises peaks at 8.45, 13.18, 16.95, and 19.12 º2θ ±0.2 º2θ.

22. The co-crystal according to claim 20 or 21, wherein the X-ray powder diffractogram is substantially as shown in Figure 18.

23. The co-crystal according to any one of claims 20 – 22 characterized by a differential scanning calorimetry (DSC) thermogram comprising an endotherm at about 130 ºC.

24. The co-crystal according to claim 23, wherein the DSC thermogram is substantially as shown in Figure 19.

25. A co-crystal of N-(2-(5-(((2*R*,3*R*,4*S*,5*R*)-3,4-dihydroxy-5-methoxy-6,6-dimethyltetra-hydro-2H-pyran-2-yl)oxy)-3'-fluoro-[1,1'-biphenyl]-2-yl)ethyl)-acetamide and L-proline (1:1), characterized by an X-ray powder diffractogram comprising the following peaks: 8.52, 16.33,

19.50, and 21.22 º2θ ±0.20 º2θ as determined on a diffractometer using Cu-$K_{\alpha 1}$ radiation at a wavelength of 1.5405929 Å.

26. The co-crystal according to claim 25, wherein the X-ray powder diffractogram further comprises peaks at 9.19, 13.22, 14.75, and 17.57 º2θ ±0.2 º2θ.

27. The co-crystal according to claim 25 or 26, wherein the X-ray powder diffractogram is substantially as shown in Figure 23.

28. The co-crystal according to any one of claims 25 - 27, characterized by unit cell dimensions as follows: a = 10.126 Å, b = 11.021 Å, c = 30.259 Å, α = 90º, β = 90º, and γ = 90º.

29. The co-crystal according to any one of claims 25 - 27, characterized by a differential scanning calorimetry (DSC) thermogram comprising an endotherm at about 145 ºC.

30. The co-crystal according to claim 29, wherein the DSC thermogram is substantially as shown in Figure 24.

31. A pharmaceutical composition comprising a co-crystal according to any one of claims 1 - 30 and a pharmaceutically acceptable solid carrier.

32. A co-crystal according to any one of claims 1 - 30 for use in inhibiting heat shock protein 90 (Hsp90) in a subject.

33. Use of a co-crystal according to any one of claims 1 - 30, in the manufacture of a medicament for ~~inhibiting heat shock protein 90 (Hsp90)~~treating diabetic neuropathy or neuropathic pain in a subject.

34. A method of increasing the concentration of N-(2-(5-(((2*R*,3*R*,4*S*,5*R*)-3,4-dihydroxy-5-methoxy-6,6-dimethyltetra-hydro-2H-pyran-2-yl)oxy)-3'-fluoro-[1,1'-biphenyl]-2-yl)ethyl)-acetamide (**4a**) relative to N-(2-(5-(((2*S*,3*R*,4*S*,5*R*)-3,4-dihydroxy-5-methoxy-6,6-dimethyltetra-hydro-2H-pyran-2-yl)oxy)-3'-fluoro-[1,1'-biphenyl]-2-yl)ethyl)-acetamide (**4b**) in a starting composition comprising **4a** and **4b**, comprising contacting the starting composition with proline in a solvent, and subjecting the starting composition, proline, and solvent to crystallization conditions, whereby a co-crystal of **4a** and proline is produced, wherein the bulk co-crystal exhibits a concentration of **4a** that is higher than in the starting composition comprising **4a** and **4b**.

35. The method according to claim 34, wherein the proline is L-proline.

36. The method according to claim 34, wherein the proline is D-proline.

37. The method according to any one of claims 34 to 36, wherein the method further comprises heating the starting composition, proline, and solvent.

38. The method according to any one of claims 34 to 37, wherein the concentration of **4a** is determined by HPLC.

39. The method according to any one of claims 34 to 38, wherein the concentration of **4a** in the bulk co-crystal of **4a** and proline is ~~about~~ 3 to ~~about~~ 20% (w/w) higher than in the starting composition.

40. The method according to any one of claims 34 to 39, wherein the concentration of **4a** in the bulk co-crystal of **4a** and proline is ~~about~~ 5 to ~~about~~ 15% (w/w) higher than in the starting composition.

41. The method according to any one of claims 34 to 40, wherein the concentration of **4a** in the bulk co-crystal of **4a** and proline increases by about 5%, about 10%, or about 15% (w/w).

42. A co-crystal according to any one of claims 1 - 30 for use in treating or preventing a neurodegenerative disorder in a subject suffering therefrom.

43. A co-crystal according to any one of claims 1 - 30 for use in preventing or reducing the likelihood of diabetic peripheral neuropathy from developing in a subject who suffers from Type 1 or Type 2 diabetes.

44. Use of a co-crystal according to any one of claims 1 - 30, in the manufacture of a medicament for treating or preventing a neurodegenerative disorder in a subject suffering therefrom.

45. The use according to claim 44, wherein the neurodegenerative disorder is diabetic peripheral neuropathy.

46. Use of a co-crystal according to any one of claims 1 - 30, in the manufacture of a medicament for preventing or reducing the likelihood of diabetic peripheral neuropathy from developing in a subject who suffers from Type 1 or Type 2 diabetes.