Claims

1. A solid pharmaceutical composition suitable for vaginal administration, wherein the pharmaceutical composition comprises

a. 5 to 30 wt% Glucono-δ-lactone (GDL); and

b. 10 to 40 wt% Hypromellose (HPMC).

2. The pharmaceutical composition according to claim 1, wherein the pharmaceutical composition is a tablet.

3. The pharmaceutical composition according to any one of the preceding claims, wherein no more than 60 % of the pharmaceutical composition is dissolved within two hours using United States Pharmacopeia (USP) Dissolution Apparatus 2 – Paddle method, at 50 rpm in 500 mL 50 mM acetate buffer (pH 4.0) at 37°C.

4. The pharmaceutical composition according to any one of the preceding claims, wherein GDL is released *in vivo* for at least 6 h, such as for at least 12 h, such as for at least 18 h, such as for at least 24 h, such as for at least 36 h, such as for at least 42 h.

5. The pharmaceutical composition according to any one of the preceding claims, wherein the amount of GDL is 50 to 500 mg, such as 100 to 400 mg, such as about 150 mg or about 300 mg.

6. The pharmaceutical composition according to any one of the preceding claims, wherein the composition comprises 10 to 25 wt% GDL, such as about 20 wt% or such as about 15 wt% GDL.

7. The pharmaceutical composition according to any one of the preceding claims, wherein the pharmaceutical composition further comprises a gluconate salt, such as sodium gluconate (NaG).

8. The pharmaceutical composition according to claim 0, wherein the composition comprises in the range of 10 to 30 wt% NaG, such as 15 to 25 wt%, such as 18 to 19wt% or such as 24 to 25 wt% NaG.

9. The pharmaceutical composition according to any one of claims 0 to 0, wherein the molar ratio of GDL and gluconate salt is 2:1 to 1:2, such as 3:2 to 2:3, such as about 1:1.

10. The pharmaceutical composition according to any one of the preceding claims, wherein the composition comprises in the range of 10 to 20 wt% HPMC, or 15 to 40 wt%, such as 20 to 35 wt% HPMC.

11. The pharmaceutical composition according to any one of the preceding claims, wherein the HPMC viscosity is in the range of 50 to 200 mPas, such as 100 mPas.

12. The pharmaceutical composition according to any one of the preceding claims, wherein the HPMC viscosity is in the range of 50.000 to 200.000 mPas, such as 100.000 mPas.

13. The pharmaceutical composition according to any one of the preceding claims, wherein the composition further comprises starch, silica and/or a lubricant.

14. The pharmaceutical composition according to any one of the preceding claims, wherein the composition further comprises cellulose, such as microcrystalline cellulose (MCC).

15. The pharmaceutical composition according to claim 1, wherein the composition comprises or consists of: 10 to 25 wt% GDL; 15 to 30 wt% NaG; 10 to 40 wt% HPMC; 10 to 25 wt% starch; 0.25 to 1.25 wt% silica; and 0.5 to 1.5 wt% magnesium stearate, with the proviso that the sum of the components does not exceed 100 wt%.

16. The pharmaceutical composition according to claim 1, wherein the composition comprises or consists of: 10 to 25 wt% GDL; 10 to 30 wt% NaG; 5 to 40 wt% HPMC; 10 to 45 wt% MCC; 10 to 20 wt% starch; 0.25 to 1.25 wt% silica; and 0.5 to 1.5 wt% magnesium stearate, such as the composition comprises or consists essentially of about: 15 wt% GDL; 18.4 wt% NaG; 15 wt% HPMC; 36 wt% MCC; 14.25 wt% starch; 0.38 wt% silica; and 1.0 wt% magnesium stearate, with the proviso that the sum of the components does not exceed 100 wt%.

17. The pharmaceutical composition according to claim 1, wherein the composition comprises or consists of: 10 to 25 wt% GDL; 15 to 30 wt% NaG;30 to 40 wt% HPMC; 15 to 45 wt% starch; 0.25 to 1.25 wt% silica; and 0.5 to 1.5 wt% magnesium stearate, such as the composition comprises or consists essentially of about: 20 wt% GDL; 24.5 wt% NaG; 35 wt% HPMC; 19 wt% starch; 0.5 wt% silica; and 1 wt% magnesium stearate, with the proviso that the sum of the components does not exceed 100 wt%.

18. The pharmaceutical composition according to any one of the preceding claims for use as a medicament.

19. The pharmaceutical composition according to any one of claims 1 to 17 for use in the treatment of microbial infections, such as of vaginal microbial infections.

20. Use of the pharmaceutical composition according to any one of claims 1 to 17 in the manufacture of a medicament for the treatment of microbial infections, such as of vaginal microbial infections.