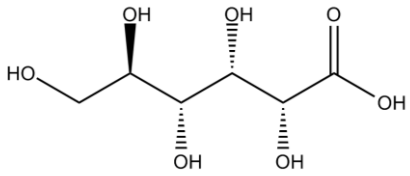
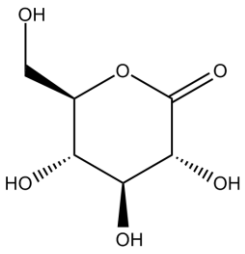
Claims

1. Use of a compound of Formula XX,

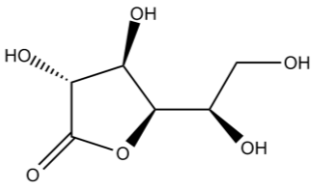


XX

or a lactone thereof, such as a compound of formula XIX or XXI,



XIX



XXI

for the manufacture of a medicament for the treatment and/or prevention of a bacterial infection selected from the group consisting of *Gardnerella vaginalis-, Porphyromonas gingivalis-, Escherichia coli-*, *Pseudomonas aeruginosa-, Acetinobacter baumanii-, Streptococcus pyogenes-,* Beta-Hemolytic *Streptococci* Group C-*,* Beta-Hemolytic *Streptococci* Group G-*,* and/or *Streptococcus agalactiae* infection.

2. The use according to claim 1, wherein the compound is of Formula XX or Formula XIX.

3. The use according to any one of the preceding claims, wherein the microbial infection is a urogenital infection.

4. The use according to any one of the preceding claims, wherein the microbial infection is a vaginal infection.

5. The use according to any one of the preceding claims, wherein the bacterial infection is bacterial vaginosis.

6. The use according to any one of the preceding claims, wherein the infection is dermatitis and/or eczema.

7. The use according to claim 6, wherein the dermatitis and/or eczema is Seborrhoeic dermatitis.

8. The use according to any one of the preceding claims, wherein the infection is a secondary infection of dermatitis or eczema.

9. The use according to any one of the preceding claims, wherein the infection is acne and/or acneiform conditions.

10. The use according to claim 9, wherein acne or acneiform conditions is rosacea, perioral dermatitis or periorbital dermatitis.

11. The use according to any one of the preceding claims, wherein the infection is furunculosis, carbunculosis or folliculitis.

12. The use according to any one of the preceding claims, wherein the infection is impetigo or erysipelas.

13. The use according to any one of the preceding claims, wherein the bacterial infection is periodontitis.

14. The use according to any one of the preceding claims, wherein the infection is secondary to secondary to colonization of group A or B streptococci multiresistant bacteria.

15. The use according to claim 14, wherein the colonization is oral, nasal or anogential.

16. The use according to any one of the preceding claims, wherein the infection is perianal streptococcal dermatitis.

17. The use according to any one of the preceding claims, wherein the infection is intertriginous dermatitis or paronychia.

18. The use according to any one of the preceding claims, wherein the infection is an infection in a mammal.

19. The use according to any one of the preceding claims, wherein the mammal is a human.

20. The use according to any one of the preceding claims, wherein the human is a woman.

21. The use according to any one of the preceding claims, wherein the woman is pregnant.

22. The use according to any one of the preceding claims, wherein the infection is an infection of the face, scalp, torso and/or groin.

23. The use according to any one of the preceding claims, the infection is an infection of infected skin wounds.

24. The use according to any one of the preceding claims, wherein the infection is an infection of the feet.

25. The use according to any one of the preceding claims, wherein the infection of feet is secondary to ingrown toenails or blisters of the feet.

26. The use according to claim25, wherein the infection is associated with diabetic foot wounds.

27. The use according to any one of the preceding claims, wherein the infection is a secondary infection arising after animal bite.

28. The use according to any one of the preceding claims, wherein the infection is a secondary infection arising after insect bites, mosquito bites, tic bites, erythema migrans or lymphadenosis benigna cutis.

29. The use according to any one of the preceding claims, wherein the infection is a secondary infection of herpes simplex.

30. The use according to claim29, wherein the secondary infection of herpes simplex is oral or genital.

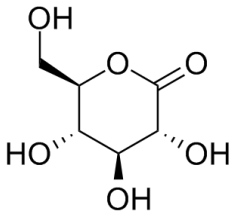
31. The use according to any one of the preceding claims, wherein the infection is a secondary infection of herpes zoster or varicella zoster.

32. The use according to any one of the preceding claims, wherein the infection is blepharitis.

33. The use according to any one of the preceding claims, wherein the infection is conjunctivitis.

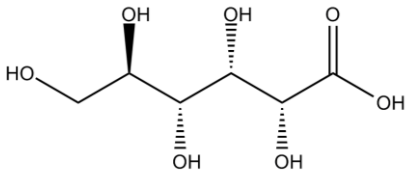
34. The use according to any one of the preceding claims, wherein the infection is a vaginitis or a cervicitis.

35. The use according to any one of the preceding claims, wherein the compound is glucono-δ-lactone (Formula XIX)



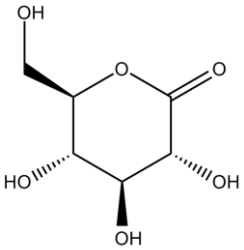
XIX

36. Use of a compound of formula XX,

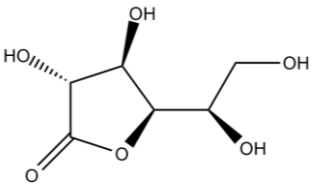


XX

or a lactone thereof, such as a compound of formula XIX or XXI,



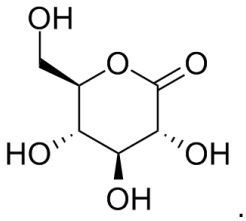
XIX



XXI

for the manufacture of a medicament for the treatment of bacterial vaginosis.

37. The use according to claim 36, wherein the compound is glucono-δ-lactone (Formula XIX),



XIX

38. Use of an oligomer or polymer for the manufacture of a medicament for the treatment and/or prevention of a bacterial infection selected from the group consisting of *Gardnerella vaginalis-, Porphyromonas gingivalis-, Escherichia coli-*, *Pseudomonas aeruginosa-, Acetinobacter baumanii-, Streptococcus pyogenes-,* Beta-Hemolytic *Streptococci* Group C-*,* Beta-Hemolytic *Streptococci* Group G-*,* and/or *Streptococcus agalactiae* infection, wherein the oligomer or polymer comprises one or more compounds selected from the group consisting of gluconic acid, δ-gluconolactone and γ-gluconolactone.

39. The use according to claim 38, wherein the oligomer or polymer comprises one or more compounds selected from the group consisting of gluconic acid and δ-gluconolactone.

40. The use according to claim 37, wherein the oligomer or polymer further comprises lactic acid.

41. The use according to any one of the preceding claims, wherein the compound is in a pharmaceutical composition.

42. The use according to claim 41, wherein the pharmaceutical composition is formulated as a tablet, orally disintegrating tablet, lozenge, gum, chewing gum, cream, lotion, gel, emulsion, solution, foam, ointment, spray, suspension mouthwash, nail polish, dermal patch or shampoo.

43. The use according to any one of claims 41 to 42, wherein the pharmaceutical composition comprises at least 5 wt %, such as at least 10 wt %, such as at least 15 wt %, such as at least 20 wt %, such as at least 25 wt %, such as at least 30 wt %, such as at least 40 wt %, such as at least 50 wt %, such as at least 60 wt % of the compound of Formula XX or a lactone thereof.

44. The use according to any one of claims 41 to 43, wherein the pharmaceutical composition comprises no more than 99 wt %, such as no more than 95 wt %, such as no more than 90 wt %, such as no more than 85 wt %, such as no more than 80 wt %, such as no more than 75 wt % of the compound of Formula XX or a lactone thereof.

45. The use according to any one of claims 41 to 44, wherein the pharmaceutical composition comprises 5 to 99 wt %, such as in 10 to 95 wt %, such as in 15 to 95 wt %, such as in 20 to 90 wt %, such as in 40 to 95 wt %, such as in 40 to 95 wt %, such as in 50 to 95 wt % of the compound of Formula XX or a lactone thereof.

46. The use according to any one of claims 41 to 45, wherein the pharmaceutical composition comprises no more than 10 wt % water, such as no more than 5 wt % water.

47. The use according to any one of claims 41 to 44, wherein the pharmaceutical composition is formulated as a tampon, vagitorium, vaginal aerosol, vaginal cup, vaginal gel, vaginal insert, vaginal patch, vaginal ring, vaginal sponge, vaginal suppository, vaginal cream, vaginal emulsion, vaginal foam, vaginal lotion, vaginal ointment, vaginal powder, vaginal

shampoo, vaginal solution, vaginal spray, vaginal suspension, vaginal tablet, vaginal rod, vaginal disc, vaginal device, and any combination thereof, or wherein the composition is present on a sanitary article, such as a tampon, a sanitary napkin, an incontinence pad or diaper, or a panty liner.

48. The use according to any one of claims 41 to 47, wherein, the pharmaceutical composition is adapted for administration for at least once daily during at least a week.

49. The use according to any one of claims 41 to 48, wherein the pharmaceutical composition is formulated to release the compound according to Formula I over an extended period of time, such as over at least 4 hours, such as over at least 6 hours, such as over at least 24 hours after administration.

50. The use according to any one of claims 41 to 49, wherein the pharmaceutical composition is adapted for administration at least once daily, such as at least twice daily, such as at least three times daily.

51. The use according to any one of claims 41 to 50, wherein the pharmaceutical composition is adapted for administration no more than every second day, such as no more than every third day, such as no more than once a week.

52. The use according to any one of claims 41 to 51, wherein the pharmaceutical composition is adapted for administration for no more than six days.

53. The use according to any one of claims 41 to 52, wherein the pharmaceutical composition is adapted for administration during at least one week, such as during at least two weeks, such as during at least three weeks, such as during at least four weeks.

54. Use of a compound of Formula XX or a lactone thereof for the manufacture of a medicament for preventing preterm birth.

55. The use according to claim 54, wherein the compound is administered vaginally.

56. The use according to any one of claims 54 to 55, wherein the compound is formulated as a tampon, vagitorium, vaginal aerosol, vaginal cup, vaginal gel, vaginal insert, vaginal patch, vaginal ring, vaginal sponge, vaginal suppository, vaginal cream, vaginal emulsion, vaginal foam, vaginal lotion, vaginal ointment, vaginal powder, vaginal shampoo, vaginal solution, vaginal spray, vaginal suspension, vaginal tablet, vaginal rod, vaginal disc, vaginal device, and any combination thereof, or wherein the compound is present on a sanitary article, such as a tampon, a sanitary napkin, an incontinence pad or diaper, or a panty liner.