9. The method of any previous claim, wherein the secretory component in step (b) is recombinant secretory component.

10. The method of any previous claim, wherein the secretory component is human secretory component.

11. The method of any previous claim, wherein the secretory component is produced in a mammalian cell line.

12. The method of any previous claim, wherein the secretory component is the extracellular portion of the polymeric immunoglobulin receptor pIgR.

13. The method of any previous claim, wherein in step (b) the molar ratio between added secretory component and J chain within IgA dimers/polymers ranges between 1:10 and 10:1.

14. The method of claim 13, wherein the ratio ranges between ~~about~~ 1:5 and 5:1.

15. The method of claim 14, wherein the ratio ranges between ~~about~~ 1:2 and 2:1.

16. A composition comprising secretory-like IgA and/or secretory-like IgM or a combination thereof obtainable by a method of any of claims 1 to 15.

17. The composition of claim 16, further comprising a pharmaceutically acceptable carrier or excipient.

18. The composition of claim 16 or claim 17 for medical use.

19. The composition according to any one of claims 16 to 18, wherein the composition is for the prevention and treatment of infections on mucosal surfaces in subjects.

20. Use of secretory-like IgA and/or secretory-like IgM or a combination thereof obtainable by a method of any of claims 1 to 15, in the preparation of a medicament for medical use.

21. The use according to claim 20, wherein the medicament further comprising a pharmaceutically acceptable carrier or excipient.

22. The use according to any one of claims 20-21, wherein the medicament is for the prevention and treatment of infections on mucosal surfaces in subjects.