CLAIMS

1. An immunogenic composition comprising a PSE54 (PA5340) antigen and optionally one or more antigens selected from the list of: a PSE44-4 (PA3526) antigen; a PSE10-1 (PA1178) antigen; a PSE21-5 (PA5112) antigen; a PSE27-1 (PA0328) antigen; a PSE52-1 (PA4765) antigen; a PSE53-1 (PA5047) antigen; PSE11-3 (PA1248) antigen; a PSE41-5 (PA2407) antigen; a PSE47A-2 (PA4082); PSE5-1 (PA0595); PSE13-2 (PA1954); PSE17-1 (PA3692); PSE18-2 (PA4370); PSE20-1 (PA4735); PSE23-1 (PA3647); PSE24-1 (PA0126); PSE25-1 (PA0189); PSE26-1 (PA0274); PSE28-2 (PA0537); PSE31-2 (PA0737); PSE33-2 (PA1086); PSE42-1 (PA2793); PSE45-2 (PA3535); PSE50-1 (PA4578); PSE51-4 (PA4667); PSE19-1 (PA4710); PSE34-1 (PA1106); PSE36-3 (PA1324); PSE38-1 (PA1777).

2. The composition of claim 1, comprising a PSE54 (PA5340) antigen in combination with at least one other antigen selected from the list: a PSE44-4 (PA3526) antigen; a PSE10-1 (PA1178) antigen; a PSE21-5 (PA5112) antigen; a PSE27-1 (PA0328) antigen; a PSE52-1 (PA4765) antigen; a PSE53-1 (PA5047) antigen; PSE11-3 (PA1248) antigen; a PSE41 (PA2407) antigen; a PSE47A-2 (PA4082); PSE5-1 (PA0595); PSE13-2 (PA1954); PSE17-1 (PA3692); PSE18-2 (PA4370); PSE20-1 (PA4735); PSE23-1 (PA3647); PSE24-1 (PA0126); PSE25-1 (PA0189); PSE26-1 (PA0274); PSE28-2 (PA0537); PSE31-2 (PA0737); PSE33-2 (PA1086); PSE42-1 (PA2793); PSE45-2 (PA3535); PSE50-1 (PA4578); PSE51-4 (PA4667); PSE19-1 (PA4710); PSE34-1 (PA1106); PSE36-3 (PA1324); PSE38-1 (PA1777).

3. The composition according to claim 2, further comprising one or more antigens selected from the list: PilA, OprF-OprI, FliC, FliD, ExoA.

4. The composition of claim 2, comprising at least one antigen selected from: PSE10-1 (PA1178), PSE52-1 (PA4765), PSE53-1 (PA5047) and PSE21-5 (PA5112).

5. The composition of claim 2, comprising one or more antigens selected from the group consisting of: a PSE10-1 (PA1178) antigen; a PSE44-4 (PA3526) antigen; a PSE52-1(PA4765) antigen; a PSE53-1 (PA5047) antigen; a PSE21-5 (PA5112) antigen; a PSE27-1 (PA0328) antigen; a PSE47A-2 (PA4082) antigen; or OprF-OprI.

6. The composition of any preceding claim, wherein one or more of said antigens is adsorbed to an aluminium hydroxide adjuvant, and optionally wherein the composition includes a histidine buffer.

7. The composition of any preceding claim, further comprising: one or more conjugates of (i) a *P. aeruginosa* exopolysaccharide and (ii) a carrier protein.

8. An immunogenic composition comprising the composition of any preceding claims, and further comprising one or more of:

   (A) one or more conjugates of (i) a *S.aureus* exopolysaccharide;

(B) one or more protein antigens of (i) a *S.aureus* or

(C) one or more pathogenic *E. coli* antigen/s

(D) one or more pathogenic *B. cenocepacia* antigen/s

9. An immunogenic composition comprising the composition of claim 1 and one or more of (i) a OprF-OprI antigen; (ii) a FliC antigen; (iii) a FliD antigen; and/or (iv) a PilA antigen.

10. The composition according to claim 1 wherein the one or more antigens is a OprF-OprI antigen.

11. The composition of any preceding claim, including an adjuvant.

12. A pharmaceutical composition comprising:

(a) a polypeptide comprising an amino acid sequence having 80% or more identity to SEQ ID NO: 10 which can elicit an antibody that recognises SEQ ID NO: 10; or

(b) a polypeptide comprising amino acid sequence SEQ ID NO:45; and

optionally further comprising an amino acid sequence having 80% or more identity to any one of SEQ ID NOs: 1-9, 11-35 or SEQ ID NOs: 36-65.

13. The immunogenic composition of any one of claims 1-11, for use:

(i) in raising an immune response against *Pseudomonas aeruginosa* infections in a mammal; or

(ii) as a prophylactic or therapeutic vaccine against nosocomial infections caused by *Pseudomonas aeruginosa*.