C L A I M S

1. Arrangement that comprises at least the following elements:

- a boundary layer that separates a first environment from a second environment;
- a translayer protein;
- a first ligand for the translayer protein that is present in the first environment;
- a second ligand for the translayer protein that is present in the second environment, in which the second ligand is an immunoglobulin single variable domain; and
- a binding pair that consists of at least a first binding member and a second binding member, which binding pair is capable of generating a detectable signal.

2. Arrangement according to claim 1, in which the first binding member of the binding pair is part of a first fusion protein comprising the first binding member that is fused or linked, either directly or via a suitable linker or spacer, to the translayer protein.

3. Arrangement according to claim 1 or 2, in which the second ligand is a protein, ligand, binding domain, binding unit or other chemical entity that specifically binds to one or more functional, active and/or druggable conformations of the translayer protein, that induces the formation of and/or stabilizes one or more functional, active and/or druggable conformations of the translayer protein (and/or shifts the conformational equilibrium of the translayer protein towards one or more such conformations); and/or that induces the formation of and/or stabilizes a complex of the translayer protein, the first ligand and the second ligand.

4. Arrangement according to any of claims 1 to 3, in which the second ligand is part of a (second) fusion protein comprising the second binding member of the binding pair that is fused or linked, either directly or via a suitable linker or spacer, to the second ligand.

5. Arrangement according to any of claims 1 to 3, in which the second ligand is a naturally occurring ligand of the translayer protein or an analog, derivative or ortholog of such a naturally occurring ligand.

6. Arrangement according to any of claims 1 to 3 and 5, in which the second member of the binding pair is part of a (second) fusion protein comprising the second binding member of the binding pair that is fused or linked, either directly or via a suitable linker or spacer, to a binding domain or binding unit that can bind to the second ligand.

7. Arrangement according to claim 6, in which the binding domain or binding unit is an immunoglobulin single variable domain.

8. Arrangement according to any of claims 1 to 3, in which the second ligand is part of a protein complex that comprises the second ligand and one or more further proteins, which protein complex binds to, or is bound to, the translayer protein.

9. Arrangement according to claim 1 to 3 and 8, in which the second member of the binding pair is part of a (second) fusion protein comprising the second binding member of the binding pair that is fused or linked, either directly or via a suitable linker or spacer, to a binding domain or binding unit that can bind to the second ligand.

10. Arrangement according to claim 9, in which the binding domain or binding unit is an immunoglobulin single variable domain.

11. Arrangement according to claim 1 or 2, in which the second binding member of the binding pair is part of a second fusion protein comprising the second binding member of the binding pair that is fused or linked, either directly or via a suitable linker or spacer, to a protein that can bind directly or indirectly to the translayer protein.

12. Arrangement according to any of claims 1, 2 and 11, in which the second binding member of the binding pair is part of a second fusion protein comprising the second binding member of the binding pair that is fused or linked, either directly or via a suitable linker or spacer, to a protein that can bind directly to the translayer protein (said protein being the second ligand).

13. Arrangement according to any of claims 1, 2, 11 and 12, in which the second binding member of the binding pair is part of a second fusion protein comprising the second binding member of the binding pair that is fused or linked, either directly or via a suitable linker or spacer, to a protein that can bind directly to the translayer protein (said protein being the second ligand), in which the protein that can bind directly to the translayer protein is a protein, ligand, binding domain, binding unit or other chemical entity that specifically binds to one or more functional, active and/or druggable conformations of the translayer protein, that induces the formation of and/or stabilizes one or more functional, active and/or druggable conformations of the translayer protein (and/or shifts the conformational equilibrium of the translayer protein towards one or more such conformations); and/or that induces the formation of and/or stabilizes a complex of the translayer protein, the first ligand and the second ligand.

14. Arrangement according to claim 12 or 13, in which the protein that can bind directly to the translayer protein is an immunoglobulin single variable domain.

15. Arrangement according to any of claims 1, 2 and 11, in which the second binding member of the binding pair is part of a second fusion protein comprising the second binding member of the binding pair that is fused or linked, either directly or via a suitable linker or spacer, to a protein that can bind indirectly to the translayer protein.

16. Arrangement according to claim 15, in which the second binding member of the binding pair is part of a second fusion protein comprising the second binding member of the binding pair that is fused or linked, either directly or via a suitable linker or spacer, to a binding domain or binding unit protein can bind to the second ligand.

17. Arrangement according to claim 16, in which the second binding member of the binding pair is part of a second fusion protein comprising the second binding member of the binding pair that is fused or linked, either directly or via a suitable linker or spacer, to a binding domain or binding unit protein can bind to the second ligand, in which the second ligand is a protein, ligand, binding domain, binding unit or other chemical entity that specifically binds to one or more functional, active and/or druggable conformations of the translayer protein, that induces the formation of and/or stabilizes one or more functional,

active and/or druggable conformations of the translayer protein (and/or shifts the conformational equilibrium of the translayer protein towards one or more such conformations); and/or that induces the formation of and/or stabilizes a complex of the translayer protein, the first ligand and the second ligand.

18. Arrangement according to claim 16 or 17, in which the protein binding domain or binding unit protein can bind to the second ligand is an immunoglobulin single variable domain.

19. Arrangement according to claim 15, in which the second binding member of the binding pair is part of a second fusion protein comprising the second binding member of the binding pair that is fused or linked, either directly or via a suitable linker or spacer, to a binding domain or binding unit protein can bind to a protein complex that comprises the second ligand, which protein complex is bound to, or can bind to, the translayer protein.

20. Arrangement according to claim 19, in which the protein binding domain or binding unit protein can bind to the protein complex is an immunoglobulin single variable domain.

21. Arrangement that comprises at least the following elements:

- a boundary layer that separates a first environment from a second environment;
- a translayer protein;
- a ligand for the translayer protein that is present in the second environment; and
- a binding pair that consists of at least a first binding member and a second binding member, which binding pair is capable of generating a detectable signal.

22. Arrangement according to any of the preceding claims, in which the boundary layer is a cell wall or cell membrane.

23. Arrangement according to any of the preceding claims, in which the boundary layer is the wall or membrane of a liposome or vesicle.

24. Arrangement according to any of the preceding claims, in which the translayer protein is a GPCR.

25. Method comprising the steps of:

a) providing an arrangement according to claim 21;

and

b) adding a first ligand to the first environment of said arrangement.

26. Method according to claim 25, further comprising the step of:

c) measuring the signal that is generated by the binding pair and/or measuring the change in the signal that is generated by the binding pair.