CLAIMS

1. Anti-HERV-W Env ligand for its use for the prevention and/or the treatment of the remyelination blockage in diseases associated with the expression of HERV-W envelope protein (ENV), in particular of its MSRV subtype.

2. The anti-HERV-W Env ligand of claim 1 for its use for the prevention and/or the treatment of the remyelination blockage in Multiple Sclerosis (MS), more particularly of Remitting-Relapsing Multiple Sclerosis (RRMS), the progressive Multiple Sclerosis such as Secondary Progressive Multiple Sclerosis (SPMS) or Primary Progressive Multiple Sclerosis (PPMS), Chronic Inflammatory Demyelinating Polyneuropathy (CIDP), psychoses such as Schizophrenia or bipolar Disorder and other demyelinating diseases associated with expression of HERV-W Envelope protein (Env), in particular of its MSRV subtype.

3. The anti-HERV-W Env ligand of claim 1 or 2 being a scFV, a Fab fragment or an antibody, more particularly a chimeric, engineered or humanized antibody, and even more particularly an IgG, such as an IgG1 or an IgG4.

4. The anti-HERV-W Env ligand of any one of claim 1 to 3 characterized in that it comprises at least one and more preferably each of the complementary-determining regions (CDRs) set forth in SEQ ID No. 1, SEQ ID No. 2, SEQ ID No. 3 SEQ ID No. 4, SEQ ID No. 5 and SEQ ID No. 6.

5. A Nitric Oxyde radical inhibitory drug for its use for the prevention and/or the treatment of the remyelination blockage in diseases associated with the expression of HERV-W envelope protein (ENV), in particular of its MSRV subtype.

6. The Nitric Oxyde radical inhibitory drug of claim 5 for its use for the prevention and/or the treatment of the remyelination blockage in MS, more particularly of Remitting-Relapsing Multiple Sclerosis (RRMS), the progressive Multiple Sclerosis such as Secondary Progressive Multiple Sclerosis (SPMS) or

Primary Progressive Multiple Sclerosis (PPMS), Chronic Inflammatory Demyelinating Polyneuropathy (CIDP), psychoses such as Schizophrenia or bipolar Disorder and other demyelinating diseases associated with expression of HERV-W Envelope protein (Env), in particular of its MSRV subtype.

7. The Nitric Oxyde radical inhibitory drug of claim 5 or 6 being chosen among N^g-nitro-L-arginine-methylester (L-NAME), S-methyl-isothiourea (SMT), fumaric acid or dimethyl fumarate (DMF).

8. A pharmaceutical composition comprising at least an anti-MSRV/HERV-W Env ligand according to anyone of claim 1 to 4 and at least one Nitric Oxyde radical inhibitory drug according at least anyone of claim 5 to 7.

9. The pharmaceutical composition of claim 8 for its use in for the prevention and/or the treatment of the remyelination blockage in diseases associated with the expression of HERV-W envelope protein (ENV), in particular of its MSRV subtype.

10. The pharmaceutical composition of claim 9 for its use for the prevention and/or the treatment of the remyelination blockage in Multiple Sclerosis (MS) more particularly of Remitting-Relapsing Multiple Sclerosis (RRMS), the progressive Multiple Sclerosis such as Secondary Progressive Multiple Sclerosis (SPMS) or Primary Progressive Multiple Sclerosis (PPMS), Chronic Inflammatory Demyelinating Polyneuropathy (CIDP), psychoses such as Schizophrenia or bipolar Disorder and other demyelinating diseases associated with expression of HERV-W Envelope protein (Env), in particular of its MSRV subtype.

11. Method for preventing and/or treating of the remyelination blockage in diseases associated with the expression of HERV-W envelope protein (ENV), in particular of its MSRV subtype comprising the administration of at least one anti-HERV-W Env ligand to a human being.

12. The method according to claim 11 for preventing and/or treating the remyelination blockage in Multiple Sclerosis (MS) more particularly the

treatment of Remitting-Relapsing Multiple Sclerosis (RRMS), the progressive Multiple Sclerosis such as Secondary Progressive Multiple Sclerosis (SPMS) or Primary Progressive Multiple Sclerosis (PPMS), Chronic Inflammatory Demyelinating Polyneuropathy (CIDP)), psychoses such as Schizophrenia or bipolar Disorder and other demyelinating diseases associated with expression of HERV-W Envelope protein (Env), in particular of its MSRV subtype.

13. The method of claim 11 or 12 wherein the anti-HERV-W Env ligand is a scFV, a Fab fragment or an antibody, more particularly a chimeric, engineered or humanized antibody, and even more particularly an IgG, such as an IgG1 or an IgG4.

14. The method according to claim 13 wherein the anti-HERV-W Env ligand comprises each of the complementary-determining regions (CDRs) set forth in SEQ ID No. 1, SEQ ID No. 2, SEQ ID No. 3 SEQ ID No. 4, SEQ ID No. 5 and SEQ ID No. 6.

15. The method of according to anyone of claims 11 to 14 further comprising the administration of at least one Nitric Oxyde radical inhibitory drug.

16. The method of claim 15 wherein the Nitric Oxyde radical inhibitory drug is chosen among chosen among N^g-nitro-L-arginine-methylester (L-NAME), S-methyl-isothiourea (SMT), fumaric acid or dimethyl fumarate (DMF).

17. Method for preventing and/or treating the remyelination blockage in diseases associated with the expression of HERV-W envelope protein (ENV), in particular of its MSRV subtype comprising the administration of at least one Nitric Oxyde radical inhibitory drug to a human being.

18. The method according to claim 17 for preventing and/or treating the remyelination blockage in Multiple Sclerosis (MS) more particularly of Remitting-Relapsing Multiple Sclerosis (RRMS), the progressive Multiple Sclerosis such as Secondary Progressive Multiple Sclerosis (SPMS) or Primary Progressive Multiple Sclerosis (PPMS), Chronic Inflammatory Demyelinating Polyneuropathy (CIDP)), psychoses such as Schizophrenia or bipolar Disorder

and other demyelinating diseases associated with expression of HERV-W Envelope protein (Env), in particular of its MSRV subtype.

19. The method according to claim 17 or 18 wherein the Nitric Oxyde radical inhibitory drug is chosen among chosen among N^g-nitro-L-arginine-methylester (L-NAME), S-methyl-isothiourea (SMT), fumaric acid or dimethyl fumarate (DMF).

20. A pharmaceutical product containing:

- At least one anti-HERV-W Env ligand as defined in one of claims 1 to 4; and
- At least one Nitric Oxyde radical inhibitory drug as defined in one of claims 5, 6 or 7;

as a combination product for simultaneous, separate or spread over time administration for preventing and/or treating the remyelination blockage in diseases associated with the expression of HERV-W envelope protein (ENV), in particular of its MSRV subtype.

21. The pharmaceutical product of claim 20 for treating and/or preventing the remyelination blockage in Multiple Sclerosis (MS) more particularly of Remitting-Relapsing Multiple Sclerosis (RRMS), the progressive Multiple Sclerosis such as Secondary Progressive Multiple Sclerosis (SPMS) or Primary Progressive Multiple Sclerosis (PPMS), Chronic Inflammatory Demyelinating Polyneuropathy (CIDP), psychoses such as Schizophrenia or bipolar Disorder and other demyelinating diseases associated with expression of HERV-W Envelope protein (Env), in particular of its MSRV subtype.

CLAIMS

1. A pharmaceutical composition comprising at least an anti-MSRV/HERV-W Env ligand and at least one Nitric Oxyde radical inhibitory drug.

2. The pharmaceutical composition of claim 1, wherein said anti-HERV-W Env ligand is selected among a scFV, a Fab fragment or an antibody, more particularly a chimeric, engineered or humanized antibody, and particularly an IgG, such as an IgG1 or an IgG4.

3. The pharmaceutical composition of claim 1 or 2, wherein said anti-HERV-W Env ligand comprises each of the complementary-determining regions (CDRs) set forth in SEQ ID No. 1, SEQ ID No. 2, SEQ ID No. 3 SEQ ID No. 4, SEQ ID No. 5 and SEQ ID No. 6.

4. The pharmaceutical composition of any one of claims 1 to 3, wherein said Nitric Oxyde radical inhibitory drug is chosen among N^g-nitro-L-arginine-methylester (L-NAME), S-methyl-isothiourea (SMT), fumaric acid or dimethyl fumarate (DMF).

5. The pharmaceutical composition of any one of claim 1 to 4 for use in for the prevention and/or the treatment of the remyelination blockage in diseases associated with the expression of HERV-W envelope protein (ENV), in particular of its MSRV subtype.

6. The pharmaceutical composition of any one of claims 1 to 4 for use for the prevention and/or the treatment of the remyelination blockage in Multiple Sclerosis (MS) more particularly of Remitting-Relapsing Multiple Sclerosis (RRMS), the progressive Multiple Sclerosis such as Secondary Progressive Multiple Sclerosis (SPMS) or Primary Progressive Multiple Sclerosis (PPMS), Chronic Inflammatory Demyelinating Polyneuropathy (CIDP), psychoses such as Schizophrenia or bipolar Disorder and other demyelinating diseases associated with expression of HERV-W Envelope protein (Env), in particular of its MSRV subtype.