CLAIMS

1. Use of a~~A~~n antibody, a fragment or a derivative thereof, in the manufacture of ~~for use as~~ an antiretroviral drug targeting a virus belonging to human endogenous retroviruses (HERV), wherein said antibody, fragment or derivative is directed against HERV-W Envelope protein (HERV-W Env).

2. The ~~antibody, fragment or derivative thereof for~~ use according to claim **1,** wherein said antibody, fragment or derivative is able to:

- suppress or inhibit totally or partially the replication of a virus belonging to the human endogenous retroviruses type W (HERV-W) family; or
- suppress or inhibit totally or partially the expression of a virus belonging to human endogenous retroviruses type W family, or the expression of the envelope protein of said virus.

3. The ~~antibody, fragment or derivative thereof for~~ use according to claim **1 or 2**, wherein said virus belongs to the MSRV subtype of human endogenous retrovirus family (HERV-W).

4. The ~~antibody, fragment or derivative thereof for~~ use according to any one of claims **1 to 3**, wherein said virus is MSRV.

5. The ~~antibody, fragment or derivative thereof for~~ use according to any one of claims **1 to 4**, for preventing and/or treating an HERV-W associated disease.

6. The ~~antibody, fragment or derivative thereof for~~ use according to any one of claims **1 to 5**, wherein said HERV-W associated disease is selected from the group consisting of multiple sclerosis (MS), schizophrenia (SZ), bipolar disorder (BP), unipolar or psychotic depression, clinically isolated syndrome (CIS, with neurological symptom), chronic inflammatory demyelinating polyneuropathy (CIDP), epilepsy, psoriasis, cancer, inflammatory pancreatitis and diabetes such as type 1 or type 2 diabetes.

7. The ~~antibody, fragment or derivative thereof for~~ use according to any one of claims **1 to 6**, wherein said HERV-W associated disease is selected from the group consisting of Multiple Sclerosis (MS) and Chronic Inflammatory Demyelinating Polyneuropathy (CIDP).

8. The ~~antibody, fragment or derivative thereof for~~ use according to any one of claims **1 to 7**, wherein said antibody, fragment or derivative comprises each of the 6 CDRs as depicted 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.

9. ~~Antibody, fragment or derivative thereof for~~ The use according to any one of claims **1 to 7**, wherein said antibody, fragment or derivative comprises:

- a light chain variable region (VL) as depicted in SEQ ID No: 7; and
- a heavy chain variable region (VH) as depicted in SEQ ID No: 8.

10. The ~~antibody, fragment or derivative thereof for~~ use according to any one of claims **1 to 9**, wherein said antibody, fragment or derivative is selected from the group consisting of a Fv, Fab, F(ab')2, Fab', dsFv, scFv, sc(Fv)2, a diabody, and multispecific antibodies formed from antibody fragments.

11. The ~~antibody for~~ use according to any one of claims **1 to 8**, wherein said antibody is a monoclonal humanized antibody.

12. The ~~antibody for~~ use according to claim **11**, wherein:

- the heavy chain (HC) has the amino acid sequence as set forth in SEQ ID No: 9 and
- the light chain (LC) has the amino acid sequence set forth in SEQ ID No: 10.

13. Use of a ~~C~~composition comprising:

- an antibody, a fragment, or a derivative thereof as defined in claims **1 to 12**; and
- a retroviral reverse-transcriptase inhibitory drug;

in the manufacture of ~~for use as~~ an antiretroviral drug targeting a virus belonging to human endogenous retroviruses type W (HERV-W).

14. Use of a ~~C~~composition comprising:

- an antibody, a fragment or a derivative thereof as defined in claims **1 to 12**; and
- a retroviral reverse-transcriptase inhibitory drug;

in the manufacture of a medicament for ~~use for~~ preventing and/or treating a disease selected from the group consisting of multiple sclerosis (MS), schizophrenia (SZ), bipolar disorder (BP), unipolar or psychotic depression, clinically isolated syndrome (CIS, with neurological symptom), chronic inflammatory demyelinating polyneuropathy (CIDP), epilepsy, psoriasis, cancer, inflammatory pancreatitis and diabetes such as type 1 or type 2 diabetes.

15. ~~Composition for~~The use according to claim **13 or 14**, wherein said retroviral reverse-transcriptase inhibitory drug is azidothymidine (AZT).

16. Use of a ~~A~~an antibody, a fragment or a derivative thereof directed against HERV-W Envelope protein (HERV-W Env) as defined in claims **1 to 12** and a retroviral reverse-transcriptase inhibitory drug in the manufacture of ~~as~~ a combined preparation ~~for simultaneous, separate or sequential use in a method~~ for treating a disease selected from the group consisting of multiple sclerosis (MS), schizophrenia (SZ), bipolar disorder (BP), unipolar or psychotic depression, clinically isolated syndrome (CIS, with neurological symptom), chronic inflammatory demyelinating polyneuropathy (CIDP), epilepsy, psoriasis, cancer, inflammatory pancreatitis and diabetes such as type 1 or type 2 diabetes, wherein said combined preparation is formulated for simultaneous, separate or sequential use.

17. Use of ~~A~~an antibody, a fragment or a derivative thereof directed against HERV-W Envelope protein (HERV-W Env) as defined in claims **1 to 12** and a retroviral reverse-transcriptase inhibitory drug ~~as a~~in the manufacture of a combined preparation ~~for simultaneous, separate or sequential use in a method~~ for treating a disease selected from the group consisting of Multiple Sclerosis (MS) and Chronic Inflammatory Demyelinating Polyneuropathy (CIDP), wherein said combined preparation is formulated for simultaneous, separate or sequential use.

18. A kit comprising at least two oligonucleotides selected from the group consisting of SEQ ID No: 11 to 28.

19. Use of ~~A~~an antibody, a fragment or a derivative thereof directed against HERV-W Envelope protein (HERV-W Env) ~~for use as~~in the manufacture of an antiretroviral drug for targeting a virus belonging to human endogenous retroviruses (HERV) in a patient suffering from an HERV-W associated disease, wherein said patient is identified by a method comprising a step i) of detecting and/or quantifying HERV-W in a biological sample of said patient.

20. The ~~antibody, fragment or derivative thereof for~~ use according to claim **19**, wherein said step i) are performed with the kit according to claim **18.**

21. The ~~antibody, fragment or derivative thereof for~~ use according to claim **19 or 20,** wherein said biological sample is selected from the group consisting of :

- body fluids such as blood, serum, plasma, nipple aspirate fluid, urine, saliva, synovial fluid and cerebrospinal fluid; and
- disease-specific tissues and lesions such as MS brain plaque, CIDP nerve biopsies or diabetes pancreas biopsies.