Claims

1. A therapeutic comprising a secretome obtained from mesenchymal stem cells of umbilical cord tissue or mesenchymal stem cells of wharton's jelly tissue wherein the secretome comprises or consists of the following components: Granulocyte colony-stimulating factor (G-CSF); Growth-regulated protein alpha (GRO-a); hepatocyte growth factor (HGF); Interleukin-6 (IL-6); Leukemia inhibitory factor (LIF); monocyte chemoattractant protein 3 (MCP-3); stem cell growth factor beta (SCGF-b); Tissue inhibitor of metalloproteinase 1(TIMP-1); Matrix metalloproteinase 3 (MMP-3); Angiopoietin-like Protein 4 (ANGPTL4) Tumour necrosis factor receptor RI (TNF-RI) and CD63+ exosomes.
2. The therapeutic according to claim 1 wherein said secretome comprises or consists of: at least one of the following components, including any combination thereof: Interleukin-8 (IL-8); monocyte chemoattractant protein 1 (MCP-1); Macrophage migration inhibitory factor (MIF); Tissue inhibitor of metalloproteinases 2 (TIMP-2); Angiopoietin-1; Follistatin; Matrix metalloproteinase 1 (MMP-1); Matrix metalloproteinase 2 (MMP-2); and Matrix metalloproteinase 8 (MMP-8).
3. The therapeutic according to claim 1 or claim 2 wherein said secretome comprises or consists of the said components in the following relative amounts with respect to the amount of G-CSF:

Component	Relative Amount
G-CSF	1.00
GRO-a	1.11
HGF	0.30
IL-6	0.88
IL-8	0.20
LIF	0.03
MCP-1	0.02
MCP-3	0.15
MIF	0.04
SCGF-b	10.99
TIMP-1	0.7
TIMP-2	0.29
Angiopoietin-1	0.12

Follistatin	0.51
MMP-1	0.05
MMP-2	0.03
MMP-3	0.15
MMP-8	0.01
TNF-RI	0.04
Angiopoietin-like Protein 4/ANGPTL4	0.79

4. The therapeutic according to any one of claims 1 - 3 wherein said secretome comprises or consists of: the components in the following amounts:

Component	pg/ml
G-CSF	2392-27899 pg/ml
GRO-a	6870-24583 pg/ml
HGF	5443-9709 pg/ml
IL-6	2059-29353 pg/ml
IL-8	575-7697 pg/ml
LIF	256-810 pg/ml
MCP-1	431-2204 pg/ml
MCP-3	637-4120 pg/ml
MIF	695-2700 pg/ml
SCGF-b	144354-436153 pg/ml
TIMP-1	1628-15579 pg/ml
TIMP-2	3623-10543 pg/ml
Angiopoietin-1	1996-4932 pg/ml
Follistatin	5062-17984 pg/ml
MMP-1	169-1919 pg/ml
MMP-2	565-829 pg/ml
MMP-3	637-4120 pg/ml
MMP-8	24-209 pg/ml
TNF-RI	256-1193 pg/ml
Angiopoietin-like Protein 4/ANGPTL4	7765-26807pg/ml

5. The therapeutic according to claim 4 wherein the amount of each component is present in the following amount

Component	pg/ml

G-CSF	22166
GRO-a	24583
HGF	6653
IL-6	19404
IL-8	4438
LIF	655
MCP-1	487
MCP-3	3268
MIF	816
SCGF-b	243596
TIMP-1	15579
TIMP-2	6391
Angiopoietin-1	2667
Follistatin	11401
MMP-1	1065
MMP-2	761
MMP-3	3268
MMP-8	122
TNF-RI	830
Angiopoietin-like Protein 4/ANGPTL4	17527

6. The therapeutic according to any one of the preceding claims wherein said CD63+ exosomes are present in an amount that is 2 – 30 µg/ml or 5 - 20µg/ml.

7. A method for making a therapeutic comprising a secretome obtained from mesenchymal stem cells of umbilical cord tissue or mesenchymal stem cells of wharton's jelly tissue wherein the method comprises:

   i) culturing mesenchymal stem cells of the umbilical cord or mesenchymal stem cells of wharton's jelly to confluence;
   ii) removing growth medium and washing the cell layer with an isotonic salt solution;
   iii) incubating the cells with a growth factor free medium; then

iv) incubating the cells with a growth factor medium; and

v) collecting the cell secretome from said cells.

8. The method according to claim 7 wherein steps iii) and/or iv) may be repeated once or more than once and/or step v) may be performed after step iii) and/or step iv).
9. The method according to claim 7 or claim 8 wherein steps iii) and iv) may be reversed so that incubating with a growth factor medium preceeds incubating with a growth factor free medium.
10. The method, preferably according to any one of claims 7 - 9 wherein said isotonic salt solution is phosphate buffered saline.
11. The method according to any one of claims 7 - 10 wherein said growth factor free medium comprises a basal medium (e.g. DMEM) containing 0.01 to 0.5% human serum albumin or recombinant human serum albumin, 50 – 500µM sodium ascorbyl phosphate, and pen-strep-glutamax-NEAA.
12. The method according to any one of claims 7 – 11 wherein said growth factor medium comprises comprises a basal medium (e.g. DMEM) containing 0.1 – 2IU FGF2 and/or EGF and/or TGF beta and/or PDGF, 0.01 to 0.5% human serum albumin or recombinant human serum albumin, 50 – 500µM sodium ascorbyl phosphate, and pen-strep-glutamax-NEAA.
13. The method according to any one of claims 7 – 12 wherein the secretome is stabilized by adding 0.1 – 1% carrier protein, and/or 0.5 – 10mM sodium ascorbyl phosphate, and/or 0.5 – 20% sucrose, and/or phosphate buffer.
14. A therapeutic comprising the secretome obtained by the method according to any one of claims 7 - 13.
15. Use of the therapeutic according to any one of claims 1 – 6, optionally produced or obtained using the method of any one of claims 7 - 13, in the manufacture of a medicament for treatment of wounds.