

1. Container for the preparation of Bone Marrow Concentrate (BMC) and/or Plasma Concentrate (PC),
characterized in that:
 - a) said container comprises or is prefilled with:
 - i) at the least one anticoagulant, and/or
 - ii) at the least one filter and/or composition allowing separation of red blood cells (RBCs), preferably or optionally a cell selector gel (CSG), preferably or optionally a thixotropic gel, preferably or optionally an inert polyester CSG, and
 - iii) optionally at the least one biomaterial preferably or optionally selected from hyaluronic acid, chitosan, silk protein or fibroin or any combination thereof, and
 - iv) optionally at the least one blood, bone marrow, cells and/or platelet preservation and/or stimulating solution, preferably or optionally plasmalyte-A, and
 - b) optionally a collection device, optionally or preferably comprising or consisting of a collection holder with accessories, preferably or optionally a safety lock and butterfly needle, may be affixed to said container for collection of blood and/or bone marrow into said container and wherein said collection preferably or optionally occurs in closed circuit, preferably or optionally automatically, preferably or optionally by vacuum, and
 - c) optionally a collection device may be affixed to said container for collection of thrombin serum, preferably or optionally autologous thrombin serum, into said container and wherein said collection preferably or optionally occurs in closed circuit, preferably or optionally automatically, and
 - d) optionally a transfer device can be affixed to said container for the transfer of said PC and/or said BMC into another container, wherein said container is preferably or optionally a tube or syringe, preferably or optionally said another container is under vacuum, wherein said transfer preferably or optionally occurs in closed circuit, preferably or optionally automatically, preferably or optionally by vacuum, preferably or optionally either by direct contact between the two containers or through means of a device, and

- e) optionally further comprises at least one filter or substance for the separation of other blood components and/or bone marrow components, optionally or preferably for lymphocytes,
 - f) said container optionally is under vacuum.
2. Container for the preparation of PC and/or BMC in combination with at the least one biomaterial preferably or optionally selected from hyaluronic acid, chitosan, silk protein or fibroin, cell extract or any combination thereof, characterized in that:
- a) said container comprises or is prefilled with a biomaterial preferably or optionally selected from hyaluronic acid, chitosan, silk protein or fibroin, cell extract or any combination thereof, and
 - b) optionally a collection device, preferably or optionally comprising a collection holder, may be affixed to said container for the collection of PC and/or BMC from another container, preferably or optionally a tube, or another device, preferably or optionally a syringe, into said container, preferably or optionally in closed circuit, and
 - c) optionally said PC and/or BMC in combination with at the least one biomaterial can be collected, preferably or optionally in closed circuit, and
 - d) said container optionally further comprises or is prefilled with a coagulation activator, preferably or optionally selected from thrombin serum, calcium gluconate and/or calcium chloride, and
 - e) said container optionally is under vacuum,
 - f) said container optionally contains two or more chambers wherein each chamber may contain a composition selected from a substance, biomaterial, cell extract, PC or BMC and/or coagulation activator, wherein said compositions are isolated from each other in their respective chamber and wherein said compositions may optionally enter into contact with each other or be mixed together inside and or outside said container, wherein said chambers are separated by a chemical or biological substance, membrane or any other means of separation, wherein such means of separation may optionally disintegrate over time or is biodegradable.

3. A syringe for the preparation of PC and/or BMC in combination with at the least one biomaterial preferably or optionally selected from hyaluronic acid, chitosan, silk protein or fibroin, cell extract or any combination thereof, characterized in that:
- a) said syringe comprises or is prefilled with a biomaterial preferably or optionally selected from hyaluronic acid, chitosan, silk protein or fibroin, cell extract or any combination thereof,
 - b) optionally a collection device, preferably or optionally a collection holder, can be affixed to said syringe for the collection of PC and/or BMC from another container, preferably or optionally a tube, or another device, preferably or optionally a syringe, into said syringe, preferably or optionally in closed circuit,
 - c) optionally said syringe comprises or is prefilled with a coagulation activator, preferably or optionally selected from thrombin serum, calcium gluconate and/or calcium chloride,
 - d) said syringe optionally contains two or more chambers wherein each chamber may contain a composition selected from a substance, biomaterial, cell extract, PC or BMC and/or coagulation activator, wherein said compositions are isolated from each other in their respective chamber and wherein said compositions may optionally enter into contact with each other or be mixed together inside and or outside said syringe, wherein said chambers are separated by a chemical or biological substance, membrane or any other means of separation, wherein such means of separation may optionally disintegrate over time or is biodegradable,
 - e) said syringe optionally is under vacuum,
4. The container or syringe according to any of the previous claims further prefilled with or comprising:
- i) at the least one anticoagulant, and/or
 - ii) at the least one filter and/or composition allowing separation of red blood cells (RBCs), preferably or optionally a cell selector gel (CSG), preferably or optionally a thixotropic gel, preferably or optionally an inert polyester CSG, and/or

- iii) optionally at the least one biomaterial preferably or optionally selected from hyaluronic acid, chitosan, silk protein or fibroin or any combination thereof, and/or
 - iv) optionally at the least one PC or BMC preservation solution, optionally or preferably plasmalyte-A, and/or
 - v) optionally at the least one coagulation activator, thrombin serum, tricalcium phosphate (TCP), a bone substitute, hyaluronic acid composition, calcium gluconate, calcium saccharate, chitosan, fibroin, fibroin-silk protein or fibroin proteins, growth factors, mannitol, collagen, albumin, ascorbic acid, cream, fat cells, fat tissue, bone marrow concentrate, lubricin, cd-gelatin, botulinum toxin and/or one or more cell extracts, preferably an autologous cell extract, selected from an extract of keratinocytes, bone marrow, fibroblasts, periosteum or corneal cells, melanocytes and Langerhans cells, fat cells, muscle cells such as myoblasts and satellite cells, osteoblasts, chondrocytes, umbilical cord cells, stem cells, mesenchymal stem cells (MSCs), preadipocytes, adipocytes, pre-endothelial cells, Schwann cells or Achilles tendon cells.
5. The container or syringe according to any of the previous claims further characterized in that:
- a) said container is a tube or syringe, and/or
 - b) said container or syringe is under vacuum, and/or
 - c) said tube or syringe allows the withdrawal of about 1 ml to about 20 ml of whole blood, bone marrow, PC or BMC, preferably or optionally about 2 ml to about 10 ml, preferably or optionally about 4 ml, and/or
 - d) said container and/or syringe is sterile and/or non-pyrogenic, and/or
 - e) said container is suitable for the preparation of PRP, autologous PRP, PC, autologous PC and/or autologous BMC, and/or
 - f) said container is suitable for the preparation of about 2ml to about 10 ml, preferably or optionally about 3 ml to about 6 ml, preferably or optionally about 4 ml of PRP, autologous PRP, autologous PC and/or autologous BMC, and/or

- g) said syringe is prefilled with or comprises from about 0.5 ml to about 5 ml of biomaterial, preferably or optionally about 2 ml of biomaterial, and/or
- h) said container is prefilled with or comprises from about 1 ml to about 4 ml of cell-selector gel, preferably or optionally from about 1.5 ml to about 3.5 ml, preferably or optionally about 1.5 ml, about 2 ml, about 2.5 ml or about 3 ml of cell-selector gel, and/or
- i) said container comprises or is prefilled with about 0.2 ml to about 1 ml of anticoagulant, preferably or optionally about 0.6 ml of anticoagulant, preferably or optionally sodium citrate, from about 2% to about 6%, preferably or optionally about 4%, and/or
- j) said container or syringe contains from about 1 ml to about 5 ml of hyaluronic acid, preferably or optionally about 2 ml of hyaluronic acid, and/or
- k) said hyaluronic acid is in the form of a gel, and/or
- l) said hyaluronic acid resides in a buffer, preferably or optionally phosphate buffer, preferably or optionally comprising or consisting of sodium chloride, dipotassium hydrogenphosphate, potassium dihydrogenphosphate, potassium chloride and water, and/or
- m) said hyaluronic acid is suitable for injection, mesotherapy, and/or application, and/or
- n) said hyaluronic acid is present from about 40 mg to about 200 mg per container, preferably or optionally about 80 mg per container, and/or
- o) said hyaluronic acid has a molecular weight of about 1000 KDa to about 2000 KDa, preferably or optionally about 1550 KDa, and/or
- p) said hyaluronic acid is at about 0.1% to about 3%, preferably about 1% to about 2%, and/or
- q) said hyaluronic acid is obtained by fermentation, and/or
- r) said container is prefilled:
 - 1. during the manufacturing process and/or
 - 2. before centrifugation, either before and/or after collection of blood or bone marrow into said container, and/or
 - 3. with at the least one substance, biomaterial, gel and/or anticoagulant or any combination thereof and is contained in a kit or medical device.

6. A medical device or kit consisting of or comprising either:

- a) at the least one container and/or at the least one syringe according to any of the previous claims.
- b) at the least one container of claim 1, at the least one container of claim 2 and/or at the least one syringe of claim 3 or any combination thereof,
- c) at the least one container of claim 1 and at the least one container of claim 2,
- d) at the least one container of claim 1 and at the least one syringe of claim 3,
- e) at the least one container of claim 1, at the least one container of claim 2 and at the least one syringe of claim 3,
- f) at the least one container of claim 2 and at the least one syringe of claim 3,
- g) at the least one container of claim 1 for the preparation of PC and at the least one container of claim 1 for the preparation of BMC,
- h) at the least one container of claim 1 for the preparation of PC and/or at the least one container of claim 1 for the preparation of BMC, and at the least one container of claim 2 comprising or prefilled with a cell extract and at the least one container of claim 2 comprising or prefilled with hyaluronic acid, chitosan, silk protein or fibroin or any combination thereof,
- i) at the least one container of claim 1 for the preparation of PC and/or at the least one container of claim 1 for the preparation of BMC, and at the least one container of claim 2 comprising or prefilled with a cell extract and at the least one syringe of claim 3 comprising or prefilled with hyaluronic acid, chitosan, silk protein or fibroin or any combination thereof,
- j) at the least one container of claim 1 for the preparation of PC and/or at the least one container of claim 1 for the preparation of BMC, and at the least one syringe of claim 3 comprising or prefilled with a cell extract and at the least one container of claim 2 comprising or prefilled with hyaluronic acid, chitosan, silk protein or fibroin or any combination thereof,

wherein said medical device or kit optionally further comprises:

- k) at the least one container of claim 1, a container of claim 2 and/or a syringe of claim 3 or any combination thereof, and/or

- l) at the least one container for the preparation of thrombin serum, preferably autologous thrombin serum, and/or
 - m) a connecting device enabling transfer of any substance, material, PC, BMC, cell extract or composition from one container or syringe to another container or syringe.
7. A medical device or kit comprising:
- a) the container according to claim 1, and
 - b) the container of claim 1, the container of claim 2 or the syringe of claim 3, and
 - c) optionally a collection device for collecting blood or bone marrow preferably or optionally comprising or consisting of a collection holder with preferably or optionally a safety lock and butterfly needle, and
 - d) optionally a collection device preferably or optionally comprising or consisting of a collection holder and transfer device for collecting PC and/or BMC into said container of claim 1, said container of claim 2 and/or said syringe of claim 3, and
 - e) optionally accessories and/or single use phlebotomy material.
8. A medical device or kit comprising:
- a) a tube for the preparation of PRP or BMC under vacuum allowing the withdrawal of about 4 mL of blood or bone marrow which contains:
 - i. about 2.5 mL of inert cell-selector gel
 - ii. about 0.6 mL of anticoagulant, preferably or optionally sodium citrate at about 4%,
 - b) a tube under vacuum allowing the withdrawal of about 4 mL of PRP or BMC from said tube a), which contains about 2 mL of hyaluronic acid gel in phosphate buffer, preferably or optionally sodium chloride, dipotassium hydrogenphosphate, potassium dihydrogenphosphate, potassium chloride and water for injection,
 - c) a collection device for collecting blood and/or bone marrow consisting of a collection holder with a safety lock and butterfly needle,
 - d) a collection device preferably or optionally consisting of a collection holder and transfer device for collecting PC and/or BMC from said tube a) into said tube b).

9. A medical device or kit comprising:

- a) a tube for the preparation of PRP or BMC under vacuum allowing the withdrawal of about 4 mL of blood or bone marrow which contains:
 - i. about 2.5 mL of inert cell-selector gel
 - ii. about 0.6 mL of anticoagulant, preferably or optionally sodium citrate at about 4%,
- b) a syringe allowing the withdrawal of about 4 mL of PRP or BMC from said tube a), which contains about 2 mL of hyaluronic acid gel in phosphate buffer, preferably or optionally sodium chloride, dipotassium hydrogenphosphate, potassium dihydrogenphosphate, potassium chloride and water for injection,
- c) a collection device for collecting blood and/or bone marrow consisting of a collection holder with a safety lock and butterfly needle,
- d) a collection device preferably or optionally consisting of a collection holder and transfer device for collecting PC and/or BMC from said tube a) into said syringe b).

10. A medical device or kit according to any of the previous claims, further comprising a tissue harvesting cannula, preferably or optionally a fat-tissue harvesting cannula, a cannula for injection preferably or optionally straight or concave, a piston stopper, at the least one self-adhesive disc, a luer connector, anesthetic solution, injection accessories such as needles and/or syringes, syringes for tissue harvesting and mixing preferably or optionally luer-lock syringes, at the least one transfer cannula, a clip device, a container with dispenser for dispensing PC and/or BMC, a trocar, ampoule of coagulation activator such as calcium chloride or calcium gluconate, a paper mask, a device for the simultaneous release of PC and thrombin serum or any other combination of PC, BMC, substance, biomaterial or coagulation activator, wherein such device comprises at least one syringe, a nozzle for spray application, a double piston stopper, an applicator syringe holder and/or a connector, or any combination thereof.

11. A method for the preparation of a composition, preferably PC and/or BMC optionally in combination with at the least one biomaterial preferably or optionally selected from hyaluronic acid, chitosan, silk protein or fibroin or any combination thereof using at least one, two, three, four, five, six, seven, eight,

nine, ten or more container(s) and/or syringe(s) according to any of the previous claims, wherein the method is preferably or optionally for use in therapy, dermatology, dentistry, orthopedics, sports medicine, cosmetics, esthetics, surgery, ophthalmology, mesotherapy, injections, infiltrations, subcutaneous applications, wound care, volume enhancement, volume corrections, mechanical support and/or visco-supplementation.

12. Composition, preferably PC and/or BMC optionally in combination with at the least one biomaterial preferably selected from hyaluronic acid, chitosan, silk protein or fibroin or any combination thereof, obtained using at least one, two, three, four, five, six, seven, eight, nine, ten or more container(s) and/or syringe(s) according to any of the previous claims or obtained by using a method according to any of the previous claims, said composition optionally further combined with a coagulation activator, thrombin serum, tricalcium phosphate (TCP), a bone substitute, hyaluronic acid composition, calcium gluconate, calcium saccharate, chitosan, fibroin, fibroin-silk protein or fibroin proteins, growth factors, mannitol, collagen, albumin, ascorbic acid, cream, fat cells, fat tissue, bone marrow concentrate, lubricin, cd-gelatin, botulinum toxin and/or one or more cell extracts, optionally or preferably an autologous cell extract, selected from an extract of keratinocytes, bone marrow, fibroblasts, periosteum or corneal cells, melanocytes and Langerhans cell, fat cells, muscle cells such as myoblasts and satellite cells, osteoblasts, chondrocytes, umbilical cord cells, stem cells, mesenchymal stem cells (MSCs), preadipocytes, pre-endothelial cells, Schwann cells or Achilles tendon cells, wherein said composition is preferably or optionally for use in therapy, dermatology, dentistry, orthopedics, sports medicine, cosmetics, esthetics, surgery, ophthalmology, mesotherapy, injections, infiltrations, subcutaneous applications, wound care, volume enhancement, volume corrections, mechanical support and/or visco-supplementation.

13. A method of treatment for healing of wounds or tissues or for promoting bone or periodontum growth and/or bone and/or tissue regeneration such as skin, cartilage, muscle, tendon, ligament, adipose tissue, cornea, peripheral nerves, spine or bone using at least one, two, three, four, five, six, seven, eight, nine, ten or more container(s) and/or syringe(s) according to any of the previous claims.

14. Use of a composition, method, medical device, kit, container or syringe according to any of the previous claims in therapy, dermatology, dentistry, orthopedics, sports medicine, cosmetics, esthetics, surgery, ophthalmology, mesotherapy, injections, infiltrations, subcutaneous applications, wound care, volume enhancement, volume corrections, mechanical support and/or visco-supplementation, on/for a wound, a damaged tissue, damaged bone or periodontal defect or cavity, for cellular regeneration, for tissue adhesion, for promoting wound healing or tissue healing and/or sealing and/or regeneration of a tissue and/or a cartilage and/or a bone and/or a nerve in a wound or tissue of a human or animal.

15. Method for the preparation of adipocytes in combination with a PC comprising the steps of:

- i) Collecting adipose tissue with a cannula, and
- ii) Aspirating adipose tissue through said cannula into syringe connected to said cannula in a simultaneous or sequential manner to step i), and
- iii) Optionally connecting said syringe with a connector to another syringe and mixing of said adipose tissue by back and forth movements from one said syringe to said another syringe, and
- iv) Optionally washing said adipose tissue with a washing solution, and
- v) Either:
 - a. Mixing said adipose tissue with a biomaterial, PC, PRP, PC combined with hyaluronic acid, hyaluronic acid, PC combined with chitosan, PC combined with silk, chitosan or silk, or
 - b. Culturing said adipose tissue of steps i), ii), iii) or iv) into 20-80% PC, PRP, biomaterial, PC combined with hyaluronic acid, hyaluronic acid, PC combined with chitosan, PC combined with silk, chitosan or silk, and
- vi) Optionally injecting resulting composition preferably percutaneously or applying on desired site.

16. Multiple connector device enabling the mixing of at the least 2, 3, 4, 5, 6 or more substances or compositions, comprising:

- i) at the least 2, 3, 4, 5, 6 or more containers, preferably syringes, connected into different separate locations of said multiple connector device,
- ii) optionally at the least one bag, two bags, three bags, four bags, five bags, six bags or more for the collection of waste and/or collection of substances

or compositions coming from one or more of said containers, simultaneously or in a sequential manner, and

- iii) at the least one device, two devices, three devices, four devices, five devices, six devices or more, said device(s) being preferably taps, wherein said device(s) enable control of the release of the compositions or substances contained in said containers and/or flux control between compartments of said multiple connector device.

17. Tissue harvesting cannula comprising:

- i. a cannular tube having a distal end and a proximal end, the proximal end of the cannular tube being insertable in tissue or cavity; and
- ii. a plurality of peeling apertures each characterized by a spiral aperture.