CLAIMS:

1. A membrane comprising at least one positively charged synthetic, hydrophobic polymer, at least one hydrophilic polymer and at least one plasticizer wherein said at least one hydrophilic polymer and said plasticizer ~~is~~ are polyethylene glycol ranging from 300-20,000; wherein said at least one hydrophilic polymer is present at a concentration of between 1% and 30% (w/w) of the membrane, said positively charged synthetic, hydrophobic polymer is ammonio methacrylate copolymer type A NF (AMCA) and wherein said membrane is flexible and is capable of supporting at least one of cell adherence, cell proliferation or cell differentiation.

~~2. A membrane comprising at least one positively charged synthetic, hydrophobic polymer, at least one hydrophilic polymer and at least one plasticizer, wherein:~~

- ~~said positively charged synthetic, hydrophobic polymer is ammonio methacrylate copolymer type A NF (AMCA);~~
- ~~said plasticizer are polyethylene glycol ranging from 300-20,000; and~~
- ~~wherein said membrane is flexible and is capable of supporting at least one of cell adherence, cell proliferation or cell differentiation.~~

~~3. A membrane according to any one of claims 1 to 2, wherein both said hydrophilic polymer and said plasticizer are polyethylene glycol ranging from 300-20,000.~~

~~4.~~2. A membrane according to ~~any one of~~ claims ~~1 to 3~~, wherein both said hydrophilic polymer and said plasticizer are polyethylene glycol 400.

~~5.~~3. A membrane according to ~~any one of~~ claims ~~1 to 3~~, wherein said hydrophilic polymer~~polyethylene glycol 400~~ is present at a concentration of ~~5%,~~ 10%, 15%~~, 20%~~ or 25% w/w.

~~6. A membrane according to any one of claims 1 to 5, wherein said at least one hydrophilic polymer is present in a concentration of between about 1% (w/w) to 30% (w/w) of the membrane.~~

~~7.~~4. A membrane according to any one of claims 1 to ~~6~~3, wherein said membrane further comprises at least one type of cell.

~~8.~~5. A membrane according to claim ~~7~~4, wherein said cells are selected from the group consisting of adult stem cells, ~~embryonic stem cells,~~ pluripotent stem cells, mesenchymal stem cells, umbilical cord blood cells, osteoblasts, chondroblasts and CD105+ cells.

~~9.~~6. A membrane according to claim ~~8~~5, wherein said stem cells are autologous adult stem cells.

~~10.~~7. A membrane according to any one of claims 1 to ~~9~~6, further comprising at least one active agent, wherein said at least one active agent is selected from the group consisting of cytokine, hormone, bisphosphnate, cannabinoid, beta blocker, bone inducing agent, growth factor, HMG-CoA reductase inhibitor, drug and antibiotic.

~~11.~~8. A membrane according to claim ~~10~~7, wherein said active agent is selected from the group consisting of statin, estrogen, androgen, propranolol, transforming growth factor (TGF), bone morphogenetic protein (BMP), insulin like growth hormone, fibroblast growth factor (FGF), alendronate, risendronate and parathyroid hormone.

~~12.~~9. A membrane according to claim ~~11~~8, wherein said active agent is simvastatin or lovastatin.

~~13.~~10. A membrane according to any one of claims 1 to ~~12~~9, wherein said membrane is capable of being porous upon hydration, and wherein the pore size is between ~~about~~ 0.1 to ~~about~~ 5 microns.

~~14.~~11. Use of a membrane, comprising at least one positively charged synthetic, hydrophobic polymer, at least one hydrophilic polymer and at least one plasticizer and wherein said membrane is flexible and is capable of supporting at least one of cell adherence, cell proliferation or cell differentiation, for the preparation of a three dimensional hollow implant for tissue regeneration of a defected tissue region, wherein said tissue is selected from ligament, tendon, cartilage, intervertebral disc, teeth and bone.

12. Use of a membrane according to claim ~~14~~11, wherein said three dimensional hollow implant is selected from the group consisting of a tubular implant, a cylindrical implant, a conical implant or a planar implant.

~~15.~~13. Use according to claim 11 or 12, wherein the membrane comprises a membrane defined by any one of claims 1 to 10.