WHAT IS CLAIMED IS:

1. A patch graft for sustaining and maintaining a mixed population of cells, comprising:

(a) a mixed population having two or more cell types, at least one of which is at an early lineage stage, wherein the cell type at the early lineage stage expresses membrane-associated and/or secreted matrix metalloproteinases (MMPs), said mixed population supported in a medium in a first hydrogel having a viscoelasticity sufficient to allow for migration of said mixed population within the first hydrogel or to allow for migration of said mixed population into a target tissue or organ when the first hydrogel is tethered on the target organ or tissue, wherein the first hydrogel has a viscoelasticity from about 0.1 to 200 Pa; and

(b) a backing comprising a biocompatible, biodegradable material that inhibits a migration of said mixed population through said backing, and wherein

the first hydrogel is configured to sustain and maintain said mixed population while inhibiting said at least one early lineage stage cell type from differentiating or further maturing to a later lineage stage cell type that no longer expresses membrane-associated and/or secreted MMPs; and

(c) a third hydrogel overlaid on a serosal surface of said backing, the serosal surface being opposite to that in contact with said mixed population, wherein the third hydrogel has a viscoelasticity from about 250 to 400 Pa.

2. The patch graft of claim 1, in which said backing comprises a porous mesh infused with a second hydrogel.

3. The patch graft of claim 2, in which the second hydrogel comprises one or more hyaluronans.

4. The patch graft of claim 2, in which the third hydrogel comprises one or more hyaluronans.

5. The patch graft of claim 2, wherein the second layer of hydrogel has a viscoelasticity of at least about 250 Pa.

6. The patch graft of claim 1, in which the first hydrogel comprises one or more hyaluronans.

7. The patch graft of claim 1, in which said medium comprises Kubota's Medium.

8. The patch graft of claim 1, in which said mixed population comprises mesenchymal cells and epithelial cells.

9. The patch graft of claim 8, in which the mesenchymal cells comprise early lineage stage mesenchymal cells (ELSMCs).

10. The patch graft of claim 9, in which said ELSMCs comprise one or more of angioblasts, precursors to endothelia, or precursors to stellate cells or mesenchymal stem cells (MSCs).

11. The patch graft of claim 8, in which said epithelial cells comprise epithelial stem cells.

12. The patch graft of claim 8, in which said epithelial cells comprise biliary tree stem cells (BTSCs).

13. The patch graft of claim 8, in which said epithelial cells comprise committed and/or mature epithelial cells.

14. The patch graft of claim 13, in which said committed and/or mature epithelial cells comprise mature parenchymal cells.

15. The patch graft of claim 14, in which said mature parenchymal cells comprise one or more of hepatocytes, cholangiocytes, and islet cells.

16. The patch graft of claim 8, in which said mesenchymal cells and epithelial cells both comprise stem cells.

17. The patch graft of claim 1, in which said mixed population comprises autologous and/or allogeneic cells.

18. The patch graft of claim 1, in which one or more cell type is genetically modified.

19. The patch graft of claim 1, in which the backing comprises a porous mesh, scaffold, or membrane.

20. The patch graft of claim 1, in which the backing comprises non-porous material.

21. The patch graft of claim 20, in which the non-porous material is selected from silk, amnion, placenta, omentum, a synthetic textile, a derivative of the foregoing, or combinations thereof.

22. The patch graft of claim 1, in which the backing tethers the patch graft to a target organ or tissue, and provides resilience to withstand mechanical forces applied from or by other tissues and organs.