CLAIMS

We claim:

1. An implantable mesh for use in reconstructing tissue, the implantable mesh comprising:

a mesh body having a surrounding edge;

one or more mesh extensions extending from the surrounding edge of the mesh body, each mesh extension having a first end, a second end, and a length therebetween, the first end being integrated into or part of the mesh body; and

a fixation device at the second end of each mesh extension.

2. The implantable mesh of claim 1, wherein each mesh extension is configured to permit multiple anchor points with surrounding tissue after implantation.

3. An implantable mesh for use in reconstructing tissue, the implantable mesh comprising:

a mesh body;

one or more mesh extensions extending from the mesh body, each mesh extension having a first end and a second end, wherein the first end of the mesh extension is integrated into or part of the mesh body and wherein each mesh extension is configured to permit multiple anchor points with surrounding tissue upon implantation.

4. The implantable mesh of claim 3, further comprising a fixation device at the second end of each mesh extension.

5. The implantable mesh of claim 3 or 4, wherein the mesh body has a surrounding edge and the mesh extensions extend from the surrounding edge.

6. The implantable mesh of any one of claims 1-2 or 5, comprising two or more mesh extensions extending from the surrounding edge of the mesh body, and wherein at least two of the mesh extensions extend from the surrounding edge in opposite directions from one another.

7. The implantable mesh of any one of claims 1-6, wherein the mesh body and the mesh extensions are fabricated as a uniform mesh construction.

8. The implantable mesh of any one of claims 1-7, wherein the mesh body is comprised of mesh threads woven or knitted together, and each mesh extension is formed by the mesh threads.

9. The implantable mesh of any one of claims 1-8, wherein the each mesh extension is an end of a single mesh thread.

10. The implantable mesh of any one of claims 1-6, wherein each mesh extension is initially separate from the mesh body and is comprised of mesh threads woven or knitted together,

wherein the mesh extensions are integrated into the mesh body by weaving the mesh threads of the mesh extension into the mesh body.

~~11. The implantable mesh of any one of claims 1-2 or 5-10, wherein at least two of the mesh extensions extend from the surrounding edge in opposite directions from one another.~~

11~~2~~. The implantable mesh of any one of claims 1-10~~1~~, wherein the length of the mesh extensions is between 10cm and 90 cm.

12~~3~~. The implantable mesh of any one of claims 1-11~~2~~, wherein the length of the mesh extensions is at least 20cm or at least 30cm.

~~14. The implantable mesh of any one of claims 1-13, wherein the length of the mesh extensions is at least 30cm.~~

13~~5~~. The implantable mesh of any one of claims 1-12~~4~~, wherein at least two mesh extensions are spaced apart from one another by an amount between 1mm and 100cm.

14~~6~~. The implantable mesh of any one of claims 1-12~~4~~, wherein at least two mesh extensions are spaced apart from one another by at least 1cm.

15~~7~~. The implantable mesh of any one of claims 1-14~~6~~, wherein each mesh extension is 0.2-3 cm wide.

16~~8~~. The implantable mesh of any one of claims 1-15~~7~~ that, when affixed to the surrounding tissue, can withstand a tensile stress of least 16 newtons per centimeter (N/cm) without migrating or dehiscing.

17~~9~~. The implantable mesh of any one of claims 1-2 or 4-16~~8~~, wherein the fixation device is selected from the group consisting of a surgical needle permanently connected to the second end of each mesh extension, a device permanently connected to the second end of each mesh extension and a tack.

~~20. The implantable mesh of any one of claims 1-2 or 4-18, wherein the fixation device is permanently connected to the second end of each mesh extension.~~

~~21. The implantable mesh of any one of claims 1-2 or 4-18, wherein the fixation device is a tack.~~

18~~22~~. The implantable mesh of any one of claims 1-17~~21~~, wherein at least one of the mesh body and each mesh extension is comprised of synthetic material.

19~~23~~. The implantable mesh of any one of claims 1-18~~22~~, wherein at least one of the mesh body and each mesh extension is comprised of biological material.

20~~24~~. A use of~~method of using~~ the implantable mesh of any one of claims 1-19~~23~~ in a method of reconstructing tissue or repairing a tissue defect, the method comprising:

positioning the implantable mesh such that the mesh body extends across the tissue defect or tissue to be reconstructed;

affixing the implantable mesh to surrounding tissue near the tissue defect or reconstruction by anchoring each mesh extension to multiple anchor points in the surrounding tissue.

215. The use~~method~~ of claim 204, wherein the step of anchoring each mesh extension to multiple anchor points includes passing the mesh extensions through at least a portion of the surrounding tissue more than one time.

226. The use~~method~~ of claim 215, wherein the step of anchoring each mesh extension to multiple anchor points includes passing the mesh extensions through at least a portion of the surrounding tissue at least three times to create at least three anchor points.

237. The use~~method~~ of any one of claims 20-22~~24-26~~, wherein the tissue defect is a hernia.

248. The use~~method~~ of any one of claims 20-22~~24-26~~, wherein the tissue defect is in breast tissue.

259. The use~~method~~ of any one of claims 20-24~~24-28~~, further comprising fixing the mesh extension to a bone.

26~~30~~. The use~~method~~ of any one of claims 20-25~~24-29~~, wherein the mesh implant affixed to the surrounding tissue can withstand a tensile stress of least 16 newtons per centimeter (N/cm) without migrating or dehiscing.