There is disclosed a method comprising:

aligning a scalpet array of a device at a donor site, wherein the scalpet array comprises at least one scalpet arranged in a configuration;

incising skin pixels at the donor site with the scalpet array;

capturing the incised skin pixels and transferring them to a recipient site while maintaining the configuration;

generating skin defects at the recipient site with the scalpet array; and

applying the incised skin pixels at the recipient site.

A first aspect of the present invention provides a system comprising:

a guide plate comprising perforations arranged in a configuration corresponding to a harvest pattern, and configured to be positioned at a donor site and a recipient site;

a device comprising a scalpet array that includes at least one scalpet, wherein the at least one scalpet is configured to align with the harvest pattern, wherein the at least one scalpet is configured to incise skin pixels at the donor site and generate skin defects at the recipient site; and

an adherent substrate configured to capture the incised skin pixels at the donor site.

A second aspect of the present invention provides a system comprising:

a guide plate configured for use in generating a harvest pattern including indicators arranged in a configuration, wherein the harvest pattern is configured to be positioned at a target site and a recipient site;

a device comprising a scalpet array that includes a plurality of scalpets arranged in the configuration, wherein the plurality of scalpets is configured to align with at least one set of the indicators, wherein the plurality of scalpets is configured to incise skin pixels at the target site and generate skin defects at the recipient site; and

an adherent substrate configured to capture the incised skin pixels at the target site and maintain the configuration during application of the incised skin pixels at the recipient site.

A third aspect of the present invention provides a system comprising:

a guide plate configured for use in generating a harvest pattern including indicators arranged in a configuration, wherein the harvest pattern is configured to be positioned at a target site and a recipient site; and

a device comprising a scalpet array that includes a plurality of scalpets arranged in the configuration, wherein the plurality of scalpets is configured to align with at least one set of the indicators, wherein the plurality of scalpets is configured to incise skin pixels at the target site and generate skin defects at the recipient site.

## BRIEF DESCRIPTION OF THE DRAWINGS

**Figure 1** shows the PAD Kit placed at a target site, under an embodiment.

**Figure 2** is a cross-section of a scalpet punch or device including a scalpet array, under an embodiment.

**Figure 3** is a partial cross-section of a scalpet punch or device including a scalpet array, under an embodiment.

**Figure 4** shows the adhesive membrane with backing (adherent substrate) included in a PAD Kit, under an embodiment.

**Figure 5** shows the adhesive membrane (adherent substrate) when used with the PAD Kit frame and blade assembly, under an embodiment.

**Figure 6** shows the removal of skin pixels, under an embodiment.

**Figure 7** is a side view of blade transection and removal of incised skin pixels with the PAD Kit, under an embodiment.

**Figure 8** is an isometric view of blade/pixel interaction during a procedure using the PAD Kit, under an embodiment.

**Figure 9** is another view during a procedure using the PAD Kit (blade removed for clarity) showing both harvested skin pixels or plugs transected and captured and non-transected skin pixels or plugs prior to transection, under an embodiment.

**Figure 10A** is a side view of a portion of the pixel array showing scalpets secured onto an investing plate, under an embodiment.

**Figure 10B** is a side view of a portion of the pixel array showing scalpets secured onto an investing plate, under an alternative embodiment.

**Figure 10C** is a top view of the scalpet plate, under an embodiment.

**Figure 10D** is a close view of a portion of the scalpet plate, under an embodiment.

CLAIMS

What is claimed is:

1. A system comprising:

a guide plate comprising perforations arranged in a configuration corresponding to a harvest pattern, and configured to be positioned at a donor site and a recipient site;

a device comprising a scalpet array that includes at least one scalpet, wherein the at least one scalpet is configured to align with the harvest pattern, wherein the at least one scalpet is configured to incise skin pixels at the donor site and generate skin defects at the recipient site; and

an adherent substrate configured to capture the incised skin pixels at the donor site.

2. The system of claim 1, wherein the guide plate is configured for use in marking the harvest pattern is on a skin surface on at least one of the donor site and the recipient site.

3. The system of claim 2, wherein the harvest pattern comprises an indicator on a skin surface on at least one of the donor site and the recipient site.

4. The system of claim 1, wherein the scalpet array is removeably coupled to the device.

5. The system of claim 1, wherein the scalpet array is disposable.

6. The system of claim 1, wherein a shape of each scalpet of the scalpet array is elliptical.

7. The system of claim 1, wherein a shape of each scalpet of the scalpet array is circular.

8. The system of claim 1, wherein a shape of each scalpet of the scalpet array is semicircular.

20. The system of claim 19, wherein the at least one scalpet on the device is configured to align with the harvest pattern.

21. The system of claim 20, wherein the scalpet array is configured to be applied to the donor site directly in accordance with the harvest pattern and configured to incise the skin .

22. The system of claim 21, wherein the adherent substrate is configured to maintain the incised skin pixels in accordance with the harvest pattern.

23. The system of claim 20, wherein the scalpet array is configured to be applied to the recipient site directly in accordance with the harvest pattern and configured to generate the skin defects.

24. The system of claim 19, wherein the adherent substrate is configured for application to the target site subsequent to application of the scalpet array.

25. The system of claim 24, wherein the guide plate is positioned directly on a skin surface at one of the donor site and the recipient site.

26. The system of claim 24, wherein the guide plate is configured to extrude the incised skin pixels.

27. The system of claim 26, wherein the skin pixels are extruded through the perforations in response to an applied load.

28. The system of claim 26, wherein the skin pixels are extruded through the incised skin surface in response to an applied load.

29. The system of claim 24, wherein the incised skin pixels of the donor site and the skin defects of the recipient site are arranged in the configuration.

30. The system of claim 24, wherein the incised skin pixels of the donor site comprise a first configuration and the skin defects of the recipient site comprise a second configuration, wherein the first configuration and the second configuration are different.

31. The system of claim 24, wherein the at least one scalpet on the device is configured to align with at least one set of the perforations of the guide plate.

32. The system of claim 20, wherein the scalpet array is configured to be applied to the donor site directly through the perforations and configured to incise the skin pixels.

33. The system of claim 32, wherein the adherent substrate is configured to maintain relative positioning of the incised skin pixels in the configuration .

34. The system of claim 24, wherein the scalpet array is configured to be applied to the recipient site directly through the at least one set of the perforations and configured to generate the skin defects.

35. The system of claim 24, wherein the guide plate is at least one of adherent, rigid, semi-rigid, conformable, non-conformable, and non-deformable.

36. The system of claim 24, wherein the guide plate includes at least one of metal, plastic, polymer, and membranous material.

37. The system of claim 24, wherein the guide plate is configured to transmit a load to a skin surface of at least one of the donor site and the recipient site.

38. The system of claim 1, wherein the scalpet array is configured to transfer a load to subjacent skin surface that includes the donor site, wherein the skin pixels are circumferentially incised by application of the load.

39. The system of claim 1, comprising a cutting member.

40. The system of claim 39, wherein the cutting member is configured to transect the incised skin pixels.

41. The system of claim 39, wherein the cutting member is coupled to a plate frame.

42. The system of claim 41, wherein the plate frame is coupled to the guide plate.

43. The system of claim 42, wherein the adherent substrate is coupled to at least one of the guide plate and the plate frame.

44. The system of claim 1, comprising a first bandage configured for application to the donor site following the incising of the skin pixels, wherein the first bandage is configured to close the donor site and control a direction that the skin defects of the donor site are closed.

45. The system of claim 1, comprising a second bandage configured for application to the recipient site following application of the incised skin pixels at the recipient site, wherein the second bandage is configured to generate a force at the recipient site.

46. The system of claim 1, wherein the incised skin pixels include hair follicles.

47. The system of claim 1, wherein the skin defects are configured to evoke neovascularization in the incised skin pixels inserted at the recipient site.

48. The system of claim 1, wherein the skin defects are configured to evoke a wound healing response in the incised skin pixels inserted at the recipient site.

49. A system comprising:

a guide plate configured for use in generating a harvest pattern including indicators arranged in a configuration, wherein the harvest pattern is configured to be positioned at a target site and a recipient site;

a device comprising a scalpet array that includes a plurality of scalpets arranged in the configuration, wherein the plurality of scalpets is configured to align with at least one set of the indicators, wherein the plurality of scalpets is configured to incise skin pixels at the target site and generate skin defects at the recipient site; and

an adherent substrate configured to capture the incised skin pixels at the target site and maintain the configuration during application of the incised skin pixels at the recipient site.

50. A system comprising:

a guide plate configured for use in generating a harvest pattern including indicators arranged in a configuration, wherein the harvest pattern is configured to be positioned at a target site and a recipient site; and

a device comprising a scalpet array that includes a plurality of scalpets arranged in the configuration, wherein the plurality of scalpets is configured to align with at least one set of the indicators, wherein the plurality of scalpets is configured to incise skin pixels at the target site and generate skin defects at the recipient site.