

**CLAIMS**

1. A device comprising a chamber, the chamber comprising a lumen and projections in the lumen, the lumen comprising a gel matrix secured by the projections to prevent delamination, the gel matrix positioned above a porous membrane, and the membrane positioned above one  
5 or more fluidic channels.
2. A device according to Claim 1, in which fibroblasts are within the gel matrix and keratinocytes are on top of the gel matrix.
3. A device according to Claim 2, in which the keratinocytes comprise more than one layer on top of the gel matrix.
- 10 4. A device according to Claim 1, in which a layer of endothelial cells is positioned on the bottom of the membrane so as to be in contact with the fluidic channels.
5. A device according to Claim 1, in which the lumen is circular.
6. A device according to Claim 1, further comprising a removable cover.
7. A device according to Claim 1, in which the device is a microfluidic device and the  
15 fluidic channels are microfluidic channels.
8. A microfluidic device according to Claim 7, in which the gel matrix comprises at least one of neurons and astrocytes and the membrane comprises brain microvascular endothelial cells in contact with the microfluidic channels.
9. A device according to Claim 8, in which neurons are on, in or under the gel matrix.
- 20 10. A device according to Claim 8, in which astrocytes are on, in or under the gel matrix.
11. A device according to Claim 1, in which the gel matrix comprises cells.
12. A device according to Claim 15, in which the cells comprise lung cells.