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(54) **Title**: METHOD OF ENGRAFTING CELLS FROM SOLID TISSUES

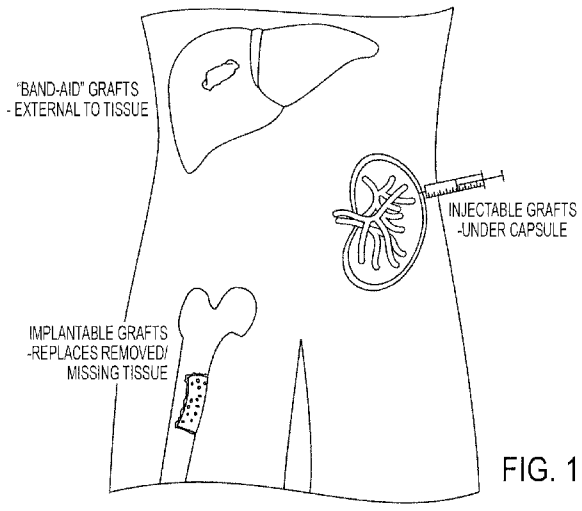


FIG. 1

(57) **Abstract**: A method of repairing diseased or dysfunctional organs or of establishing a model system of a disease state is provided. For repairing diseased organs, the method involves engraftment of cells from healthy tissue of the diseased or dysfunctional organ admixed with gel-forming biomaterials and nutrient medium, signaling molecules and extracellular matrix components that can be made insoluble rapidly upon transplantation to form a graft. In this way, the graft mimics the complexity of the native microenvironment with a minimum number of components that allow transplantation of cells to successfully engraft, expand and then rebuild part or the entirety of the diseased or dysfunctional organ. In the case of using grafting methods for establishing a disease model, diseased cells may be transplanted in the biomaterials and into experimental hosts.

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