# ABSTRACT

The present invention provides a method of constituting a tissue construct *in vitro* using a tissue without depending on scaffold materials.

A method of integrating a biological tissue with a vascular system *in vitro*, comprising coculturing a biological tissue with vascular cells and mesenchymal cells. A biological tissue which has been integrated with a vascular system by the above-described method. A method of preparing a tissue or an organ, comprising transplanting the biological tissue described above into a non-human animal and differentiating the biological tissue into a tissue or an organ in which vascular networks have been constructed. A method of regeneration or function recovery of a tissue or an organ, comprising transplanting the biological tissue described above into a human or a non-human animal and differentiating the biological tissue into a tissue or an organ in which vascular networks have been constructed. A method of preparing a non-human chimeric animal, comprising transplanting the biological tissue described above into a non-human animal and differentiating the biological tissue into a tissue or organ in which vascular networks have been constructed. A method of evaluating a drug, comprising using at least one member selected from the group consisting of the biological tissue described above, the tissue or organ prepared by the method described above, and the non-human chimeric animal prepared by the method described above. A composition for regenerative medicine, comprising a biological tissue which has been integrated with a vascular system by the method described above.