

Clinical trials of spray-on skin to start in US

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(PhysOrg.com) -- Clinical trials comparing a spray-on skin product with skin grafts will start in the US in December. The trials, which are partly funded by a US army grant of \$1.4 million, will last about a year and will involve 106 patients with second degree burns. The product, ReCell, has been available for some time in Europe, Australia, Malaysia and elsewhere, and was approved for use in China earlier this year.

ReCell is one of two products developed in the burns unit of the Royal Perth Hospital in Western Australia by burns expert Dr Fiona Wood, who was named Australian of the year in 2005. ReCell was first successfully used in 2002 to treat burns victims of the Bali bombings terrorist attacks. ReCell is used to heal small burns, and to re-pigment old scars or blotchy [skin](#) conditions such as vitiligo. For larger burns, CellSpray is used instead. Both ReCell and CellSpray are products of the Clinical Cell Culture (C3) technology invented by Dr Wood.

The C3 kit is a little larger than a sunglasses case and has everything needed to create the [skin cells](#) spray. A small piece of skin, approximately the area of a postage stamp and around 0.015 cm deep is harvested from the patient's healthy skin. The sample contains basal cells and melanocytes, which are dissolved in a solution containing the enzyme trypsin.

The cells are processed and grown, and then the solution is sprayed on the area to be treated. The wound is dressed and the dressing is removed 3-5 days later, by which time the sprayed cells have multiplied and are forming new skin.

In vitiligo and old scar treatments the melanocytes ([pigment cells](#)) are most important. A sample of skin of the required color is taken, and the cells are processed and grown in the kit. The solution containing the cells is then sprayed on and the new skin that grows has the same color as the sample.

Dr Woods said that in the Royal Perth Hospital burns unit the products have dramatically reduced follow-up work in burns patients because the wounds heal faster and there is less scarring. Woods and scientist Marie Stoner together formed a company, the McComb Foundation, to further research ways of healing burns quickly and reducing scarring.

Efforts to market ReCell and CellSpray globally began in Europe, followed by Asia. After success in these markets the next goal is the US. The FDA is expected to approve ReCell if the US clinical trials are as successful as they have been elsewhere. The product should be available shortly after it is approved for release.

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