



Respiratory Diseases: Using Stem Cells for Regeneration

Cell replacement therapy may be a new possibility for patients with lung injuries or diseases like cystic fibrosis after a recent report from TGR1 scientists showing that adult stem cells can successfully engraft and grow into specific lung cell types.

In the new therapy, recently tested in an animal model, lungs are subjected to a mild chemical which prepares the area for engraftment.

Following this, adult bone marrow stem cells are injected directly into the site. Stem cells developed into the appropriate bronchial epithelial cells and future studies will determine if these approaches are able to promote recovery and improve lung function.

“Cell replacement therapy allows treatment for areas using selective, mild acute destruction followed by carefully timed, targeted cell delivery directly to the tissue,” says Dr. [Thomas Waddell](#). “The findings from this study lend solid evidence for this kind of therapy to be used as a future novel treatment for other types of lung diseases.”

Am J Physiol Lung Cell Mol Physiol. 2007 Jul 6; [Epub ahead of print] [[Pubmed abstract](#)].
Research was supported by the Canadian Cystic Fibrosis Foundation, Canadian Institutes of Health Research and the R. Fraser Elliott Chair in Transplantation Research.