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Proliferated Cell Lines and Uses Thereof

Researchers at the University of South Florida have developed a means of inducing cell lines to proliferate indefinitely while maintaining their cell type characteristics.

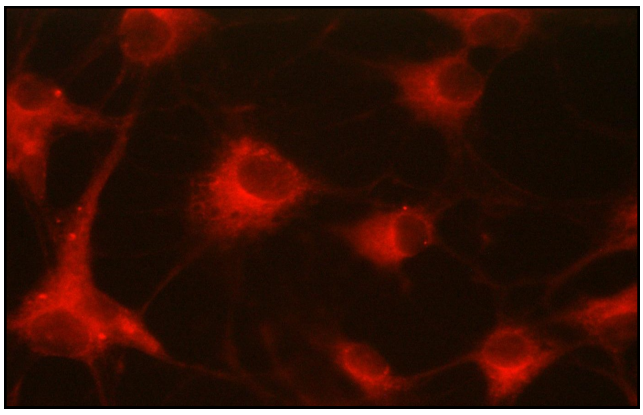
With advancements in areas such as stem cell research, cell culturing and tissue engineering, cellular therapies hold much promise in the treatment of many human ailments. Many problems ranging from neural injury to diabetes could potentially be treated using these techniques. Despite the promising potential of cellular therapies, one fundamental problem that has long hindered implementation is the fact that most cells are only capable of replicating a finite number of times.

Our scientists have developed a technique that can be employed to allow virtually any adult cell type to proliferate indefinitely. This technique employees a novel cell line (UCHT1) to precondition media that is then used to increase the proliferation potential of other cell types. Multiple cell lines have already been produced using this method including: RCMT-1, RCDMD, M4b and MTh. Through this method, even terminally differentiated cells can be made to divide without suffering the effects of cellular senescence. This technique and the cell lines produced from its use are useful for applications in fields such as research, tissue engineering, cell therapy, drug discovery, and biopharmaceutical reactors.

ADVANTAGES:

- **Produce continuous cell lines**
- **Provides "immortality" to fully differentiated adult cells**
- **Produced the RCMT-1 cell line**
- **Produced the RCDMD cell line**
- **Produced the M4b and MTh cell lines**

Immortalized Cell Lines of Fully Differentiated Cells



Fluorescent Micrograph of Proliferating Cells

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