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Proliferated Cell Lines and Uses Thereof

With recent advancements in areas such as stem cell research, cell culturing and tissue engineering, the so-called "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 new 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.

Recent progress by researchers at the University of South Florida has yielded a means of inducing cell lines to proliferate indefinitely while maintaining the cell type characteristics. Even terminally differentiated cells can be made to divide without suffering the effects of cellular senescence. By use of this method, cell lines can be immortalized and made useful for applications in fields such as tissue engineering, drug discovery, and biopharmaceutical reactors.

As this technique can be employed on virtually any adult cell type, potential applications where it could find use include the treatment of neurological, muscular, cartilage, cardiovascular, liver, pancreatic, eyesight, and autoimmune disorders.

Used to supplement progress in such advanced cellular research, this newly developed technology promises to make many currently envisioned cellular therapies a reality.

Advantages

- Produce continuous cell lines by culturing in specially conditioned medium
- Provides "immortality" to even fully differentiated adult cells
- Resulting lines useful for testing, biopharmaceutical production, or "cellular therapies"

Create immortal cell lines of fully differentiated cells

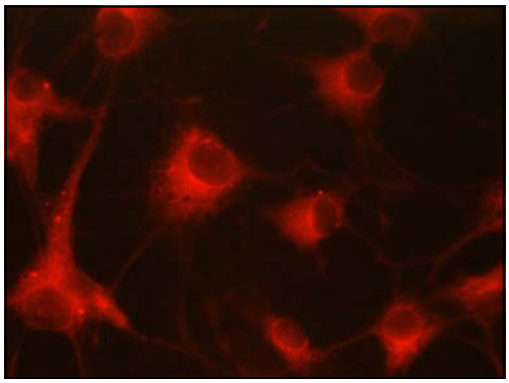

Figure: Fluorescent micrograph of proliferating cells

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