

Abstract

Project code: PDF/29/2540

Project title: Generation and Characterization of cyclinE transgenic mouse

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Project period: 2 years (August 1997-July 1999)

Objectives:

1. To produce cyclinE transgenic mice
2. To study the function of cyclinE in transgenic animal and transfected fibroblast.

Methodology:

- 1.) Generate cyclinE transgenic mice by micro-injection assay
- 2.) Produce cyclinE transfected cells by CaPO₄ precipitation method.
- 3.) Study the function of cyclinE in regulating cell growth and apoptosis respond in lymphocyte and fibroblast by using different stimulators.

Results:

- 1.) We generate 4 lines of cyclinE transgenic mice with high copy number and produce pooled of cyclinE transfected cells.
- 2.) High level of cyclinE increases cell growth respond and enhances cell death after UV irradiation in fibroblast.
- 3.) CyclinE was induced in LPS stimulated cell proliferation but not in UV-induced apoptosis lymphocyte.

Discussion / Conclusion: CyclinE is not working only in cell cycle but also in growth and apoptosis regulatory pathway in fibroblast and lymphocyte. The data can imply to the phenomenon observed in transgenic mice.

Further Implication: CyclinE transgenic mice can be further used to study in others aspects.

Keywords: cyclinE, transgenic mice, transfected cells, cell growth, apoptosis.