

## Fabrication of ITO electrode for cell chip to detect the effects of environmental toxicants on PC12 cells

Rama Bhusal<sup>1</sup>, 김태형<sup>2</sup>, 김현철<sup>1,2</sup>, 최정우<sup>1,2,\*</sup>

<sup>1</sup>서강대학교 바이오융합기술협동과정;

<sup>2</sup>서강대학교 화공생명공학과

(jwchoi@sogang.ac.kr\*)

Indium Tin Oxide (ITO) substrates are highly desirable at the development of cell-based chip. In this study, PC12 cells were immobilized on an oligopeptide modified ITO surface for improving the cell attachment. Cells were further treated with the nerve growth factor to induce neurite outgrowth and then, effects of environmental toxicity were examined by cyclic voltammetry. The cyclic voltammetry study determined the inverse linear relationship between the concentrations of environmental toxins and current peak at specific potential. This research has a number of potential applications to cell based electrical biosensors and neuronal prosthetic devices.

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