

## Fabrication of Nanoscale Peptide Film to Enhance the Neural Stem Cell Proliferation on Cell Chip

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In this study, we fabricated the electrode which surface was coated with nanoscale film including various sort of cysteine contained peptide for enhancing the electrochemical signal, proliferating the rat neural stem cells(NE-4C), and spreading cells. Before seeding neural stem cell on its surface, we could observe each kind of lysine-rich and RGD peptides were assembled on the gold nanoparticle by themselves. With nanoscale peptide film, K-MAP-C with quadruple branches of cysteine terminal and lysine chain indicated a remarkable characteristics corresponding to improvement of above three properties. Accordingly, our newly developed cell chip can be usefully applied on cell proliferation related research. **Acknowledgement:** This research was supported by Leading Foreign Research Institute Recruitment Program through the Nantional Research Foundation of Korea(NRF) funded by the Ministry of Science, ICT & Future Planning(MSIP) (2013K14A3055268) and by the Orignal Technology Research Program for Brain Science through Nantional Research Foundation of Korea(NRF) funded by the Ministry of Science, ICT & Future Planning(MSIP) (2006-2005374)