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## Determination of trimethoprim in livestock and fishery products with UPLC-ESI-MS/MS

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The development of the engineering technology has improved the available instruments to study the cell and its environment. Nowadays, many chemical signals coming from the cell are being researched and the demand for biosensors has been increasing in many fields specially the ones related to the neuron. Silicon nitride is widely used as a sensing component of the growing technology of ion imaging sensors and PC12 cells manifest features of the cells that give rise to sympathetic neurons. Our main goal is to characterize the interface between cells and sensor surface making possible the detection of chemical and electrical changes in the cellular environment. To characterize the features of PC12 cells we describe their behavior when cultured on a silicon nitride surface which was also examined using Atomic Force Microscopy and contact angle measurements. Our results reveal that poly-L-lysine coated silicon nitride is a suitable surface for PC12 cells attachment and the proliferation log phase begins earlier than when cultured in a plastic dish. When PC12 cells growing on the silicon nitride surface were stimulated with NGF, the proliferation was delayed and almost inhibited after some days of the treatment, but the neurite sprout was visible even after one day of the NGF stimulus. We conclude that cells grown in poly-L-lysine coated silicon nitride surface showed a shorter lag phase of proliferation, a delayed log phase and the outgrowth extensions formation occurred earlier than in the plastic dish. This study represents a useful tool for neurobiological research related to the axon growth and guidance.

## Biography

Johan Medina, graduated as a Surgeon-Physician in Peru, has completed his Ph.D in Gunma University, Japan. He worked as a Visiting Researcher in the National Institute for Physiological Sciences in Okazaki, Japan. He is working as a Research Fellow in the Department of Electrical and Electronic Information Engineering in the Toyohashi University of Technology and also as a member of the Japan Science and Technology Agency. He is author of three papers published in reputed journals of hepatology and endocrinology. He is now commended to improve the biological part of the interface of the sensor devices that are being researched in the university above mentioned.

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