OMICS Group Conferences
Accelerating Scientific Discovery

International Conference on
Genetic Syndromes & Gene Therapy

November 19-21, 2012 Hilton San Antonio Airport, USA

Detection of Wilms' tumor 1 (WT1) gene expression in renal cancer cell lines

John Mark Villena
University of Santo Tomas, Philippines

The Wilms' tumor 1 (WT1) gene located at chromosome 11p13 normally provides instructions for the synthesis of a protein which is involved in the development of the urogenital system. Initially this gene was discovered as a tumor-suppressor gene, further studies however show evidences that the WT1 is an oncogene. Gene mutation of WT1 was observed in children with renal neoplasm. Studies in certain types of lung, prostate, breast and ovarian cancer show abnormal expression of the WT1 gene. The present study aims to investigate the expression of the WT1 gene from renal cancer cell lines (KDN 1, KDN 2 and KDN 5) and its effect on the proliferative activity of the cancer cells before and after treatment with suberoylanilide hydroxamic acid (SAHA), a histone deacetylase known to downregulate WT1 gene expression. Ribonucleic Acid (RNA) from renal cancer cell lines was extracted using Purelink RNA extraction kit and was quantified by Quibit 2.0 Fluorometer. Expression of WT1 mRNA profile will be quantified and analyzed by qRT-PCR. Results obtained from this study is expected to show downregulation of WT1 expression levels that leads to decrease proliferative activity of renal cancer cell lines after treatment with SAHA. This study will give contribution in understanding the role of WT1 gene in the tumorigenesis of renal cancer. (On-going research, complete results and data analysis will be finished by August 2012)

Biography

Gerald Sevilla, Rio Pauline Roque, Irene Evana Veloria, John Mark Villena are undergraduate seniors of the Bachelor's Degree in Biochemistry under the Faculty of Pharmacy of the University of Santo Tomas. Their current study is under the advisory of Asst. Professor Minerva L. Daya.

johnmarkvillena@yahoo.com