Samir A. Farghaly, J Cell Sci Ther 2012, 3:8
http://dx.doi.org/10.4172/2157-7013.S1.022

OMICS Group Conferences
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2nd World Congress on
Cell Science & Stem Cell Research

November 12-14, 2012 Hilton San Antonio Airport, USA

Cd133 biomarker as a potential cancer stem cells therapy for epithelialovarian cancer (EOC)

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There were 225,000 new cases of ovarian cancer in the world in 2011, with approximately 140,000 deaths. Ovarian cancer is the second most gynecological cancer in the United States of America, but most common cause of gynecological cancer related death primarily because most patients present with advanced disease. Ovarian cancer develops when proliferation becomes independent of normal cellular control. Cancer stem cells maintain their ability to differentiate, which explains the variety of cell types in ovarian tumors. Most therapies for epithelial ovarian cancer are directed at the fast growing tumor mass and not the slow dividing cancer stem cell and therefore the cancer is not eradicated. The Cancer Stem Cells (CSCs) hypothesis suggests that tumor cells are organized hierarchically, similar to normal tissues, with a small self-renewing population of stem cells generating a large population of proliferative cells that differ from the rest. Thus, these tumors are maintained through a small subset of tumor cells that are ultimately responsible for their formation and growth. These CSCs have been identified in a variety of solid tumors. CD 133 is CSCs biomarker. It is transmembrane glycoprotein overexpressed in ovarian tumors and has been used to identify ovarian cancer stem cells. The development of an antibody against CD133 presents the opportunity to eliminate a potentially drug-resistant cancer subpopulation in ovarian cancer. The monoclonal murine anti-human CD133 antibody conjugated to monomethyl auristatin F (MMAF), a potential cytotoxic drug, has been shown to inhibit growth in epithelial ovarian cancer. CD133 marker as a potential Cancer Stem Cells therapy for epithelial ovarian cancer will be discussed

Biography

Samir A. Farghaly is a Physician / Scientist and national and international expert in Obstetrics and Gynecology at Joan and Sanford I. Weill College of Medicine and the New York Presbyterian Hospital/ Weill Cornell Medical Center- Cornell University, New York, NY – USA. He received his M.D. from London University and his PhD degree in molecular biology from London University. He was affiliated with major London University teaching hospitals, Columbia University College of Physicians and Surgeons/ Columbia University medical center, New York, NY-USA. He received several national and international clinical and research awards. He has been an invited speaker at several national and international conferences on Women's health, Molecular genetic of female cancers, Gynecological cancer and oncologic radical surgical techniques. He is a member of several national and international societies, organizations, foundations of Women health and Cancer. He is an editor, member of editorial boards, editorial advisory boards of Cancer Science & Therapy, Women's Health, Clinical & Experimental Obstetrics and Gynecology, Biomedical Sciences, Open Journal of Obstetrics & Gynecology, Carcinogenesis& Mutagenesis, and current Angiogenesis, Clinical Medicine Insights: Women's Health, and Clinical Medicine Insights: Oncology journals. He is a reviewer for several medical journals on Obstetrics & Gynecology, Cancer, and Surgery. He has published 78 articles in reputed peer review journals. He has written several books chapters, and is an editor of (2) books on ovarian cancer

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