Elena Timoféeff-Ressovsky *Seminar Series*

Notable Women in Science & Medicine

presents

Photographic design: Lukas Eckardt

supported by the Society of Friends of the MDC Berlin-Buch

Professor Dr. Hua Eleanor Yu

Cancer Immunotherapeutics Program, Comprehensive Cancer Center, City of Hope, Duarte, CA

"STAT3 pathway: from fundamental discoveries to clinical translation"

Tuesday, June 10, 2014

3.00 p.m.

MDC.C Axon I

Hosts: Thomas Blankenstein
Christiane Nolte

If you are interested to discuss scientific issues with Dr. Yu, please contact klahn@mdc-berlin.de

After the scientific presentation there will be opportunity for personal discussion with the speaker about issues related to women in life-science careers. Please contact cnolte@mdc-berlin.de

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Zertifikat seit 2009 audit berufundfamilie

Short CV

2011 - present, Co-leader, Cancer Immunotherapeutics Program, Comprehensive Cancer Center, City of Hope, Duarte, CA
2005 - present, Professor, Department of Cancer Immunotherapeutics & Tumor Immunology, Beckman Research Institute of City of Hope, Duarte, CA
2002 - 2005, Associate Professor, Immunology Program, Moffitt Cancer Center
1995 - 2002, Assistant Professor, Immunology Program, Moffitt Cancer Center
1994 - 1995, Research Scientist, Microbiology and Immunology, University of Michigan

Education/Training

1989 - 1992, University of Michigan, Ann Arbor, MI, Postdoc, Molecular Biology
1988, Columbia University, New York, NY., Ph.D., Molecular Biology
1983, Columbia University, New York, NY., B.A., Biology

Research Summary

Dr. Yu's laboratory was the first to show that STAT3 is a target for cancer therapy in animal tumor models. An unexpected tumor-killing effect (bystander effect) *in vivo* led them to uncover a link between STAT3 and tumor immune suppression and tumor angiogenesis, first in tumor cells, and later in the tumor stromal cells. Their studies also linked hypoxia with STAT3 activation, demonstrating STAT3's crucial role in tumor cells, myeloid cells and endothelial cells in inducing tumor progression. At the molecular level, Hua's lab has provided evidence that STAT3-NF-kB interacts in inducing tumor inflammation and tumor survival. Recent studies further show the importance of lipid metabolite S1P/S1PR1 signaling in persistent activation of STAT3 in tumor cells and in the tumor stromal cells, including various immune subsets, promoting colonization of non-transformed cells at the future metastatic sites. Furthermore, they have identified a critical role of acetylated STAT3 in mediating promoter methylation of many tumor suppressor/therapeutic target genes in cancer, and more recently, they demonstrated the importance of STAT3 in T cells in type 2-diabetes. To therapeutic ally target STAT3, one of the most critical yet challenging target for cancer and likely many other inflammatory indications, Hua's lab has developed an *in vivo* siRNA targeted delivery technology platform. Recent extensive results indicate that the CpG-STAT3siRNA works effectively in treating glioma/glioma cancer stem cells, and this technology is to be tested in Phase I clinical trials for GBM and B cell lymphoma.