SCHOOL OF CHEMICAL, BIOLOGICAL & MATERIALS ENGINEERING

And

UNIVERSITY OF OKLAHOMA BIOENGINEERING CENTER

100 E. Boyd, Sarkeys Energy Center, T-335 405-325-5811 The University of Oklahoma Norman, Oklahoma 2010 – 2011 Seminar Series

DR. KONSTANTINOS KONSTANTOPOULOS

PROFESSOR AND CHAIR
DEPARTMENT OF CHEMICAL AND BIOMOLECULAR ENGINEERING
JOHNS HOPKINS UNIVERSITY
BALTIMORE, MARYLAND

Will present a seminar on

"CANCER CELL LIFE IN TRANSIT: A MULTIDISCIPLINARY ANALYSIS OF THE VASCULAR INTERACTIONS OF TUMOR CELLS"

Cancer metastasis is a highly orchestrated multistep process, in which cancerous cells separate from the primary tumor and enter the circulatory system where they interact extensively with host cells before they lodge and colonize the target organ. The adhesive interactions of circulating tumor cells with host platelets, leukocytes and endothelial cells facilitate their survival and extravasation from the vasculature, thus representing critical "kick-off" events for the colonization of distant organs. This seminar will provide an example of a multidisciplinary approach integrating engineering fundamentals with concepts and techniques from biochemistry and biophysics in order to better understand the pathological process of hematogenous metastasis. More specifically, it will emphasize the importance of the fluid dynamic environment in regulating the adhesion process of colon carcinoma cells to host cells. In view of the critical role of a family of adhesion molecules called selectins in metastasis, the seminar will discuss our approach for the identification of selectin ligands on colon carcinoma cells, their biochemical and biophysical characterization, and also outline the development of novel diagnostic and therapeutic strategies.

THURSDAY, NOVEMBER 18, 2010 COOKIES AND COFFEE -- 2:45 P.M. SEMINAR -- 3:00 P.M. SARKEYS ENERGY CENTER, ROOM M-204

THIS IS A REQUIRED SEMINAR FOR CHE 5971

Accommodations on the basis of disability are available by contacting the office above three days before the event.