

SPECIAL SEMINAR



Luis F. Parada, Ph.D.

Director, Brain Tumor Center
Memorial Sloan Kettering Cancer Center
New York, NY

“Mouse Models of GBM: Cancer Stem Cells and Therapeutic Opportunities.”

Glioblastoma Multiforme (GBM) is an incurable cancer with a rapid progression and a prognosis of month from the time of diagnosis. Given the resistance to all known therapies, new paradigms to understand this disease and identify novel therapeutic targets are sorely needed. We have used genetically engineered models to ablate GBM relevant tumor suppressors (p53; NF1; & Pten) in brain cells. Our fully penetrant mouse models indicate that adult stem cells and progenitors are preferential sites of tumor initiation. As such, further study of these cells, and how they transform may provide unique insights into tumor development and progression. In addition, our data indicate that GBM develops in hierarchical fashion with Cancer Stem Cells at the apex of the hierarchy. In addition, our efforts to understand whether additional cell types can give rise to GBM indicate that fully differentiated brain cells are considerably more resistant to tumor suppressor mediated transformation than are stem cells, but in contrast, OPC progenitor/stem cells are also able to give rise to GBM that, while pathologically similar to stem cell derived tumors, also have unique growth and molecular properties that distinguish them clearly. I will discuss the state of understanding of these tumors and the implications for cancer stem cells, the role of the microenvironment and therapeutic opportunities.

Tuesday, March 14, 2017

4:00 PM – 5:00 PM

Jukhyun Bio Auditorium

School of Life Sciences

Gwangju Institute of Science and Technology (GIST)