

## **MOLECULAR BASIS OF CARCINOGENESIS**

**Wednesdays 5:30pm to 7:30pm**  
**W302 Conference Room**  
**Research Bldg**  
**Lombardi Cancer Center**

**Spring 2008**  
**Course # BCHB-540**  
**Credit 3**

### **Part I Mechanisms of Carcinogenesis**

- 1) Viral Oncogenesis
- 2) Multistage Carcinogenesis
- 3) Chemical Carcinogens and Signal Transduction
- 4) Anticarcinogen-initiated Signal Transduction
- 5) Radiation Carcinogenesis
- 6) UV-induced Skin Carcinogenesis
- 7) Radiation and Signal Transduction

### **Part II Molecular Biology of Carcinogen-induced Defects**

- 8) Role of DNA adducts in Carcinogenesis
- 9) Abrogation of Cellular Senescence via Telomerase Activation
- 10) DNA Damage Responsive Cell Cycle Regulation
- 11) Molecular Targets for Radiation-induced BCC
- 12) Carcinogens and Genomic Instability

### **Part III Molecular Genetics of Human Cancers**

- 13) Molecular Biology of Tumor Suppression
- 14) Regulation of Tumor Suppression
- 15) Genetic Susceptibility to Cancer
- 16) Genetic Basis of Apoptosis
- 17) Phytochemicals and Cancer Prevention
- 18) Animal Models for Targeted Gene Disruption

**Pre-requisites:** A good background in the basic aspects of Biochemistry and Biology.

**Note:** All registrants are required to submit a written proposal on a selected topic by May 7, 2008. Seventy-five percent of the total credit is assigned to this proposal. Additionally, twenty five percent of the credit is assigned to the presentation (20 min) of a full-length article published (since 2005) in Cell, Molecular Cell, PNASc, Molecular and Cellular Biology, J. Biol. Chem., Oncogene, EMBO J., Science, Nature, Nature Medicine, Nature Genetics, Nature Cell Biology, Nature Biotechnology, or Molecular Carcinogenesis. For more Information, please contact Dr. Kasid at 72226/72210/72144.