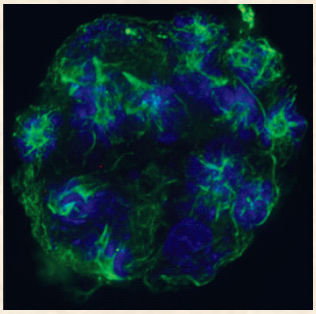
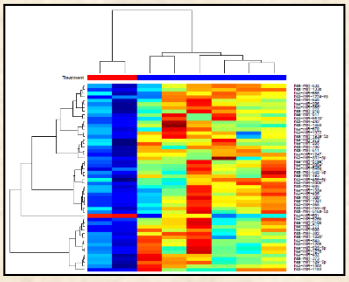
Department of Molecular Oncology

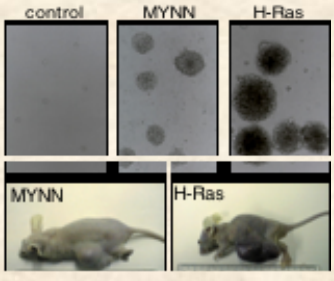
Translation of basic science discoveries into validated therapeutic targets and biomarkers

The Mission of Molecular Oncology Laboratory Focuses on Three Goals:

1. To discover novel molecular targets for chemoprevention and treatment.
2. To develop and validate the biomarkers for diagnosis and prediction of response/resistance to treatment.
3. To translate the developed assays into the clinical laboratory environment.







MYNNの腫瘍形成能

Our Research Interests Are:

1.Mitotic Regulators and Chromosomal Instability in Cancer

We have been investigating essential key role interactions of oncogenic proteins and/or tumor suppressor proteins with mitotic kinases, frequently over expressed in a wide variety of human cancers, in the induction of chromosomal instability, deregulation of DNA and spindle checkpoints, and development of stem like phenotypes in mitotic kinases overexpressing chemo-resistant cancer cells.
(Ref. Nature Genetics, Cancer Cell, J Natl Cancer Inst, Cancer Res.)

2. MicroRNAs/Exosome and Cancer Therapy

We have been pursuing identification of microRNAs aberrantly expressed in lung cancer and esophageal cancer and their bona fide target genes to elucidate central signaling pathways relevant to tumor malignancy, and to validate them as promising cancer biomarkers in molecular diagnostics.
(Ref. Neoplasma, Plos One)

3. MYNN, Novel Oncogenic Transcription Faction in Lung Tumor Development

We have been characterizing function of a novel oncogenic transcription factor MYNN identified by us, which is overexpressed in squamous cell derived carcinomas including lung squamous cell carcinoma by means of expression array and transgenic mouse model.

We are seeking highly motivated, responsible and detail-oriented students to help conduct research experiments and analyze data, and play an central role in teaching undergraduate students. Candidate must be organized, hard-working, and careful person !!

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