Molecular Oncology

1. Staffs and Students (April, 2009)

Professor Yasuhiyo YUASA

Lecturer Yoshimitsu AKIYAMA, Hiroshi FUKAMACHI

Visiting Professor Masabumi SHIBUYA

Tokunin Assistant Professor Feng WANG, Tsuyoshi OSAWA,
Rika TSUCHIDA, Masashi MURAMATSU

Secretary Yoshiko OZAWA

Graduate Student Takeshi OTSUBO, Shu SHIMADA,
Ayako MIMATA, Rie WADA,
Yutaka HASHIMOTO, Pichayanoot ROTKRUA,
Aika HIRATSUKA

2. Purpose of Education

• Undergraduate course:
Hygiene is our charge. The undergraduate curriculum of hygiene includes lectures, small-group seminars, and laboratory studies. Topics of lectures consist of environmental pollution and human health, world-wide environmental problems, carcinogen and occupational cancer, smoking-related diseases, infectious diseases including AIDS and hepatitis, food poisoning, anoxia and heat-related diseases.

• Graduate course:
The graduate students pursue their own projects associated with one of researches being in progress in the division. Every student can learn the basic scientific techniques, such as genetic engineering, cell culture and biochemical procedures. There are also many special lectures on cancer, gene, cell biology and biochemistry for the graduate students. On weekly seminars, the students present their own research data and introduce important papers from newly-arrived journals. Once the students get new findings, they are encouraged to present them at the domestic or international meeting and write manuscripts.

3. Research Subjects

1) Cellular and molecular analyses of cancer-related genes, such as oncogenes and tumor suppressor genes, in gastroenterological cancers
2) Molecular mechanism of cell growth, differentiation and apoptosis
3) Involvement of differentiation-related genes in gastroenterological diseases
4) Cancer stem cells
5) DNA methylation and cancer
6) Transcription factors and cancer
7) Effect of environmental factors on gene expression and DNA methylation
8) Involvement of microRNA in gastric carcinogenesis
9) Involvement of VEGF receptors in tumor growth and metastasis
10) Importance of bone marrow-derived cells in tumor growth
11) Mechanism of tumor resistance to anti-angiogenesis therapy

4. Publications

Original Article


Book