

Molecular Cytogenetics

1. Staffs and Students (April, 2009)

Professor	Johji Inazawa	M.D., Ph.D.
Associate Professor	Issei Imoto	M.D., Ph.D.
Associate Professor	Ken-ichi Kozaki	D.D.S., Ph.D.
MTT Lecturer	Takeshi Matsui	Ph.D.
Assistant Professor	Jun Inoue	Ph.D.
Assistant Professor	Shin Hayashi	M.D., Ph.D.
Research Assistan	Ayako Takahashi,	Rumi Mori
Secretary	Yoriko Fukukawa,	Yuko Shinozaki
Graduate Student	Shozo Honda,	Bai Hua,
	Tomoki Muramatsu,	Mayuko Furuta,
	Itsumi Ohmori,	Masato Kawahara,
	Junya Kobayashi,	Makoto Maeda
Research Student	Ryoko Kikuchi,	Shuheii Komatsu,
	Tomohiko Tsuruta	

2. Purpose of Education

The principal aim of Department of Molecular Cytogenetics is to understand the molecular mechanism underlying intractable diseases, such as cancer and uncharacterized genetic diseases. Main objective of Department of Molecular Cytogenetics in the graduate course is to provide students opportunity to study molecular cytogenetic approach for intractable diseases, identify genes responsible for those diseases, and develop innovative techniques/ practically useful tools for detection of genomic and epigenomic aberrations in those diseases. It is our goal to bridge the gap between basic and clinical research for the benefit of each of the patients.

3. Research Subjects

1. Identification of genes responsible for intractable diseases including cancer and genomic disorders through integrative genomics and epigenomics
2. Development of innovative techniques for genomics and epigenomics in medical science
3. Development of practically useful tools for molecular diagnosis of intractable diseases
4. Molecular mechanisms involved in stratified epithelial differentiation and cancer progression

4. Publications

Original Article

1. Prapinjumrune C, Morita KI, Kuribayashi Y, Hanabata Y, Shi Q, Nakajima Y, Inazawa J, Omura K: DNA amplification and expression of FADD in oral squamous cell carcinoma. *J Oral Pathol Med.* 2009 Dec 22. [Epub ahead of print]
2. Tanaka S, Mogushi K, Yasen M, Noguchi N, Kudo A, Nakamura N, Ito K, Miki Y, Inazawa J, Tanaka H, Arii S: Gene-expression phenotypes for vascular invasiveness of hepatocellular carcinomas. *Surgery.* 2009 [Epub ahead of print]
3. Furuta M, Kozaki K, Tanaka S, Arii S, Imoto I, Inazawa J: miR-124 and miR-203 are epigenetically silenced tumor-suppressive microRNAs in hepatocellular carcinoma. *Carcinogenesis.* 2009 [Epub ahead of print]
4. Inoue J, Misawa A, Tanaka Y, Ichinose S, Sugino Y, Hosoi H, Sugimoto T, Imoto I, Inazawa J: Lysosomal-associated protein multispansing transmembrane 5 gene (LAPTM5) is associated with spontaneous regression of neuroblastomas. *PLoS One.* 4:e7099. 2009
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7. Begum A, Imoto I, Kozaki K, Tsuda H, Suzuki E, Amagasa T, Inazawa J: Identification of PAK4 as a putative target

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 11. Fujita K, Sanada M, Harada H, Mori H, Niikura H, Omine M, Inazawa J, Imoto I: Molecular cloning of t(2;7)(p24.3;p14.2), a novel chromosomal translocation in myelodysplastic syndrome-derived acute myeloid leukemia. *J Hum Genet.* 54:355-9, 2009
 12. Tanaka S, Mogushi K, Yasen M, Noguchi N, Kudo A, Kurokawa T, Nakamura N, Inazawa J, Tanaka H, Arii S: Surgical contribution to recurrence-free survival in patients with macrovascular-invasion-negative hepatocellular carcinoma. *J Am Coll Surg.* 208:368-74, 2009
 13. Iriyama T, Takeda K, Nakamura H, Motimoto Y, Kuroiwa T, Mizukami J, Umeda T, Noguchi T, Naguro I, Nishitoh H, Saegusa K, Tobiume K, Homma T, Shimada Y, Tsuda H, Aiko S, Imoto I, Inazawa J, Chiba K, Kamei Y, Kozuma S, Taketani Y, Matsuzawa A, Ichijo H: ASK1 and ASK2 differentially regulate the counteracting roles of apoptosis and inflammation in tumorigenesis. *EMBO Journal.* 28:843-53, 2009
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