

# Molecular insight of cancer metastasis of gastrointestinal tract -strategies of therapeutic implication

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# 2002 Fiscal Year Final Research Report Summary

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## Molecular insight of cancer metastasis of gastrointestinal tract - strategies of therapeutic implication

Research Project

### Project/Area Number

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12470254

### Research Category

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Grant-in-Aid for Scientific Research (B)

### Allocation Type

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Single-year Grants

### Section

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一般

### Research Field

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Digestive surgery

### Research Institution

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Kanazawa University

### Principal Investigator

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### Project Period (FY)

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2000 – 2002

### Keywords

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Matrix metalloproteinase / angiogenesis /  $\beta$ -catenin / Cancer oteinases metastasis / Angiogenic inhibitor / liver metastasis

### Research Abstract

Metastasis is the most threatening event for cancer patients. In considering the main steps in the process of tumor invasion and metastases, the mechanism for invasion of the tumor cells through tissue barriers of the extracellular matrix(ECM) and neovascularization are not well understood, but they appeared to modulate the stromal microenvironmental events in the cancer host.

To clarify molecular mechanism of cancer metastasis, especially matrix metalloproteinase and angiogenesis using clinical materials, and to inhibit metastasis. We already reported that MT1-MMP expressed in the cancer cell membrane modulates and induces active MMP-2 existed in cancer stroma such as fibroblast or macrophages resulting in degradation of ECM in the process of cancer invasion and metastasis. We also reported that enhanced production of MMP-7 is implicated in the metastasis prognosis of human gastric and colorectal cancer. On the other hand, angiogenesis is essential for tumor growth and metastasis and dep ...▼ More

## Research Products (14 results)

All Other

All Publications (14 results)

- [Publications] Takahashi Y, et al.: "α-difluoromethylornithine Induces Apoptosis as well as Anti-angiogenesis in the Inhibition of Tumor Growth and Metastasis in a Human Gastric Cancer"International Journal of Cancer. 85. 243-247 (2000) ▼
- [Publications] Takahashi Y, et al.: "Prolonged stable disease effects survival in patients with solid gastric tumor : Analysis of phase II studies of doxifluridine"International Journal of Oncology. 17. 285-289 (2000) ▼
- [Publications] Fujimoto T, et al.: "Evaluation of intraoperative intraperitoneal cytology for advanced gastric carcinoma"Oncology. 62. 201-208 (2002) ▼
- [Publications] Takahashi Y, et al.: "The angiogenic switch of human colon cancer occurs simultaneous to initiation of invasion"Oncology Report. 10. 9-13 (2003) ▼
- [Publications] Ougolkov AV, et al.: "Oncogenic β-catenin and MMP-7 (matrilysin) cosegregate in the late-stage clinical colon cancer"Gastroenterology. 122. 60-71 (2002) ▼
- [Publications] Minamoto T, et al.: "Gene mutation as target for early detection in cancer diagnosis"Crit Rev Oncol Hematol. 40. 195-213 (2001) ▼
- [Publications] 磨伊正義: "肝転移-メカニズムと臨床"医学書院,東京. 228 (2000) ▼
- [Publications] Takahashi, Y, Mai, M., Nishioka, K.: "α-Difluoroethylornithine Induces Apoptosis as well as Anti-angiogenesis in the Inhibition of Tumor Growth and Metastasis in a Human Gastric Cancer Model."International Journal of Cancer. 85. 243-247 (2000) ▼
- [Publications] Takahashi ,Y, Mai, M., Taguchi, T, Urushizaki, I., Nishioka, K.: "Prologed stable disease effects survival in patients with solid gastric tumor: analysis of phase II studies of doxifludine."International Journal of Oncology. 17. 285-289 (2000) ▼
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- [Publications] Minamoto, T, Ronai, Z.: "Gene mutation as target for early detection in cancer diagnosis."Crit Rev Oncol Hematol. 40. 195-213 (2001) ▼
- [Publications] Mai, M.: "Hepatic metastasis-mechanisms and clinical implication (Editor and author)"Igaku-shoin Tokyo. 1-228 (2000) ▼

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