

# 胃癌患者における脾臓の免疫学的役割の解明：脾細胞のサイトカイン産生能からの検討

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# 1999 Fiscal Year Final Research Report Summary

## Analysis of the immunological role of spleen in gastric cancer patients - from the viewpoint of cytokine producing ability of splenocytes -

Research Project

### Project/Area Number

10671167

### Research Category

Grant-in-Aid for Scientific Research (C)

### Allocation Type

Single-year Grants

### Section

一般

### Research Field

Digestive surgery

### Research Institution

Kanazawa University

### Principal Investigator

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### Project Period (FY)

1998 - 1999

### Keywords

gastric carcinoma / splenocyte / Th1 / Th2 / IL-12 / IFN-γ / OK-432 / tumor bearing state / cytokine

### Research Abstract

Cytokine production from splenocytes of healthy mouse induced with OK-432 differs depending their genetic background. In C57BL/6 mice with B16 melanoma, splenocytes derived from the middle stage of tumor bearing produced IL-2, IL-6, IL-10 and IFN-γ. There was little spontaneous IL-12 production from tumor bearing mice splenocytes. All cytokine production were reduced in their later stage of tumor bearing. Splenocytes derived from the middle stage of tumor bearing mice could produce IL-12 when activated with OK-432 in vitro. Furthermore, in vivo treatment with OK-432 tend to inhibit tumor growth of B16 melanoma, which was accompanied by IL-12 and IFN-γ production of splenocytes. Regarding the splenocytes of gastric cancer patients, production of IL-4, IL-6 and IFN-γ was observed but we need further

investigation because there exist individual differences between the patients.

In the ascitic mouse model, OK-432 could induce Th1 cytokine production such as IL-12 and IFN- $\gamma$  in the ascites. In human treatment of gastric cancer, we have tried to administer MMC and OK-432 to control peritoneal carcinomatosis, and there were responder cases with increasing I L-2, IL-12, IL15 and IFN- $\gamma$  in their cancerous ascites. There was a correlation between their favorable prognosis and their Th1 cytokine production after the OK-432 treatment.

## Research Products (10 results)

All Other  
All Publications

[Publications] 藤本敏博、他: "癌性胸腹膜炎に対するOK-432局所投与の抗腫瘍効果と作用機序について"Biotherapy. 12巻11号. 1479-1485 (1998) ▼

[Publications] 藤本敏博、他: "Th1 inducerとしてのOK-432の役割"Therapeutic Research. 19巻7号. 113-119 (1998) ▼

[Publications] Fujimoto, T. et al.: "The effect of OK-432 on the cytokine production of the tumor bearing mouse splenocytes"Biotherapy. (in press). (2000) ▼

[Publications] 藤本敏博、他: "新しい癌免疫化学療法の指針、QOLを重視した癌薬物療法"医薬ジャーナル社. 291 (1999) ▼

[Publications] 藤本敏博、他: "肝転移、メカニズムと臨床"医学書院. 228 (2000) ▼

[Publications] Fujimoto T, Hirano K, Nomura H, Ohta T, Takahashi Y, Mai M and Minami S: "Antitumor effect and immune mechanism of local OK-432 administration against pleuro-peritoneal carcinomatosis."Biotherapy. 12(11). 1479-1485 (1998) ▼

[Publications] Fujimoto T, Mai M and O'Donnell MA: "Streptococcal preparation OK-432 works as a Th1 inducer."Therapeutic Research. 19(7). 2187-2193 (1998) ▼

[Publications] Fujimoto T and Mai M: "Local administration of OK-432 against peritoneal carcinomatosis. New therapeutic guideline of immunochemotherapy for cancer." (Saji S and Toge T ed.) Iyaku-journal, Tokyo. 81-84 (1999) ▼

[Publications] Wang X, Fujimoto T, Zhang B, Shimizu A and Mai M: "The effect of OK-432 on the cytokine production of the tumor bearing mouse splenocytes."Biotherapy. (in press). ▼

[Publications] Fujimoto T: "Immunotherapy for liver metastasis. Liver metastasis- Its mechanism and clinical experience. (Mai M, Seiki M and Takahashi Y ed.)"Igaku-shoin, Tokyo. 212-219 (2000) ▼

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