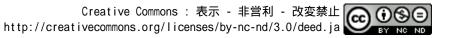
# **睾丸腫瘍における胎盤様アルカリフォスファターゼ** (PCAP-like)の研究

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雑誌名	平成3(1991)年度 科学研究費補助金 一般研究(C)
	研究成果報告書概要
巻	1989 1991
ページ	2p.
発行年	1993-03-15
URL	http://doi.org/10.24517/00067208



## 1991 Fiscal Year Final Research Report Summary

### Placental-like alkaline phosphatase in testicular tumor

Research Project

Project/Area Number
01570883
Research Category
Grant-in-Aid for General Scientific Research (C)
Allocation Type
Single-year Grants
Research Field
Urology
Research Institution
Kanazawa University
Principal Investigator
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Project Period (FY)
1989 – 1991
Keywords
Tosticular tumor / placental like / Tumor marker / Immunolocalization

Testicular tumor / placental-like / Tumor marker / Immunolocalization

#### **Research Abstract**

The role of PLAP-like as a tumor marker was evaluated in 62 cases of testicular germ cell tumors. Positive rates in different histology as well as stages were as follows ; seminoma, stage I : 42%, stages II-III, 90%, nonseminoma, stage I : 17%, stages II-III : 44%. Serum PLAP-like values in stages II-III were significantly higher than those in stage I. Tissue PLAP-like concentrations in 32 seminomas and 15 nonseminomas were also investigated. Significant differences in PLAP-like concentrations were disclosed between seminoma tissues and nonseminoma tissues as well as between the cases with elevated serum levels and the cases with normal serum levels. Serum values in stage I turned to normal within a week after orchiectomy. Half-life in the circulation was calculated at 2 days. Four out of 93 cases(4.3%), 17 of 594 samples(2.9%)in a follow-up study were regarded as false positive. Thus PLAP-like appears to be a useful marker for seminoma.

To investigate a potential use of an anti-PLAP monoclonal antibody for detecting tumors, HPMS-1 MAb labeled with I-125 was injected to athymic mice bearing tumors producing PLAP. Although accumulation rate(%dose/g tissue)was gradually decreased in the tumor, clearance of the MAb in other organs were more rapidly. Thereby an increase of tumor/organ ratio with time was observed, resulted in a clear tumor imaging after 9 days of injection. PLAP concentrations in the transplanted tumors were lower than those of primary seminomas or metastatic lymphnodes of seminoma. Therefore a potential use of the anti-PLAP MAb(HPMS-1)for detecting metastatic lesion of seminoma could be expected.

#### Research Products (9 results)

			А	II C	Other
	All	Publica	tions (9	) res	ults)
[Publications] Y.Itayashi: "Improved monoclonal immunocatulstic allays (MICAs) for human alkaline phosphatase isozymes" Jpn.J.Cl (1991)	lin Ch	em. 120	. 125-13	32	~
[Publications] K.Koshida: "Characterization of seminoma-deviced placental-like alkaline phosphatase" Urologia Internationalis. 47(Su	uppl).	96-99 (	1991)		~
[Publications] K.Koshida: "Analysis of serum placental alkaline phosphatase activity in testicular cauur and cigarette smokers" Urolo 173 (1990)	gical I	Research	n. 18. 16	9-	~
[Publications] E.Brchmer-Andersson: "Isoenzyme of allcaline phosphatase in seminomas An immunomistochemical and biochemical 982 (1990)	l study	/" APMIS	5. 98. 97	7-	~
[Publications] 西野 昭夫: "精巣腫瘍患者における血清および組織内胎盤性アルカリフォスファタ-ゼ値に関する検討" 日本泌尿器科学会雑誌. 8:	1. 150	6-1512	(1990)		~
[Publications] K.Koshida: "The role of alkaline phosphatase isoenzymes as tumor markers for testicular germ cell tumors." J.Urology	y. 146	. 57-60	(1991)		~
[Publications] K. Koshida. A, Nishinoto, H. Yamamo, T. Uchibayashi, K. Naito, H. Hisazumi, K. Hirano, Y. Hayashi, B. Wahren, L. And allcaline phosphatuse isorntymes as tumor markers for testicular germ cell tumors" J. Urology. 146. 57-60 (1991)	lusson	: "The n	ole of		~
[Publications] K. Koshida, T. Uchibayashi, H. Hisazumi: "Characterization of semonoma-dirived placental-like allcaline phosphatuse" 47(supp 1). 96-99 (1991)	Urolo	gia Inter	rnational	is.	*
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URL: https://kaken.nii.ac.jp/report/KAKENHI-PROJECT-01570883/015708831991kenkyu\_seika\_hokoku\_

Published: 1993-03-15