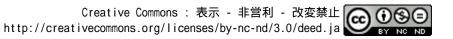
低用量EPAおよびDHA投与によるDMBA誘発ラット乳癌 におよぼす影響

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著者別表示	Noguchi Masakuni
雑誌名	平成9(1997)年度 科学研究費補助金 基盤研究(C)
	研究成果報告書概要
巻	1996 1997
ページ	2p.
発行年	1999-03-15
URL	http://doi.org/10.24517/00066152



1997 Fiscal Year Final Research Report Summary

The influence of low-dose EPA and DHA to rat breast carcinogenesis induced by DMBA

Research Project

Project/Area Number
08671345
Research Category
Grant-in-Aid for Scientific Research (C)
Allocation Type
Single-year Grants
Section
一般
Research Field
General surgery
Research Institution
Kanazawa University
Principal Investigator
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Project Period (FY)
1996 – 1997
Keywords
breast cancer / cancer invasion / cyclooxygenase (COX) / metalloproteinase (MMP)

Research Abstract

We investigated influence of EPA and DHA to breast carcinogenesis. On the other hand, EPA and DHA are known as inhibitors of cyclooxygenase (COX) : enzyme, which regulated resolution of arachidonic acids. Recently, expressions of COX were reported in the tissue of breast cancer, gastric cancer, and colon cencer. Then, we studied significance of COX expression in breast cancer cell and relation to invasiveness of cancer cells in vitro.

When cancer cells invade to capillary vessles or lymphatics, matrix metalloproteinases (MMPs) which resolve constructive protein of basement membrane and connective tissue are necessary. At present ten and few spices were isolated as MMPs product by ancer cells. MMP-2 and MMP-9 were known as showing enzyme activity resolve gelatin and type IV collagen, and the relation to breast cancer wes reported. However, there was no report that the relation between MMP and COX was evaluated, Therefore, we evaluated the relation between MMP-9 expression and COX using Hs578T,human breast cancer cell line. Hs578T cells showed induction of COX activity by addition of TPA to the culture medium. By Western blot analysis, COX-2 was overexpressed in the Hs578T cells. Gelatin zymography revealed expression of MMP-9 after addition of TPA.MMP-9 expression was reduced by indomethacin (IM) : inhibitor of COX.In conclusion, COX-2 activity plays an important role in expression of MMP-9.

Research Products (12 results)

					All	Other
		All	Pub	lications	; (12 r	esults)
[Publications] 野口 旨	昌邦: "Dietary Fat and Breast Cancer : A contiovertial issue" Breast Cancer. 4-2. 67-75 (1997)					~
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	長義.野口 昌邦: "The effects of high dietary fat and indomethacin on 7,12-dimethylbenz(a)anthracene-ir Oncology Reports. 3. 305-312 (1996)	lduce	ed ma	ımmay		~
	-夫.野口 昌邦: "Effects of linoleic acid eicosapentaenoic acid and docosahexaenoic acid on the growth a ansplan in mice" International Journal of Oncology. 8. 575-581 (1996)	nd m	ietast	asis of M:	IM48	~
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[Publications] Nogu	chi, M.: "Dietary fat and breast cancer : a controversial issue." Breast Cancer. 4. 67-75 (1997)					~
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URL: https://kaken.nii.ac.jp/report/KAKENHI-PROJECT-08671345/086713451997kenkyu_seika_hokoku