2007.5.21-23

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76) 勢子祐貴、羽山明宏、山本竜広、横山昌幸、小野瀬絵里、川野久美、服部喜之、米谷芳枝、新規葉酸修飾カンプトテシン封入高分子ミセルの体内分布と抗腫瘍効果、第 51 回日本薬学会関東支部大会、2007.10.6

77) 古賀公子、服部喜之、米谷芳枝、悪性内分泌腫瘍の RET を標的とした siRNA による遺伝子治療、第 51 回日本薬学会関東支部大会、2007.10.6

78) 萩原彩子、服部喜之、米谷芳枝、癌細胞への siRNA 送達用脂質ナノ粒子の開発、第 51 回日本薬学会関東支部大会、2007.10.6

H．知的所有権の取得状況

１．　特許取得

なし

２．　実用新案登録

なし

３．　その他

なし

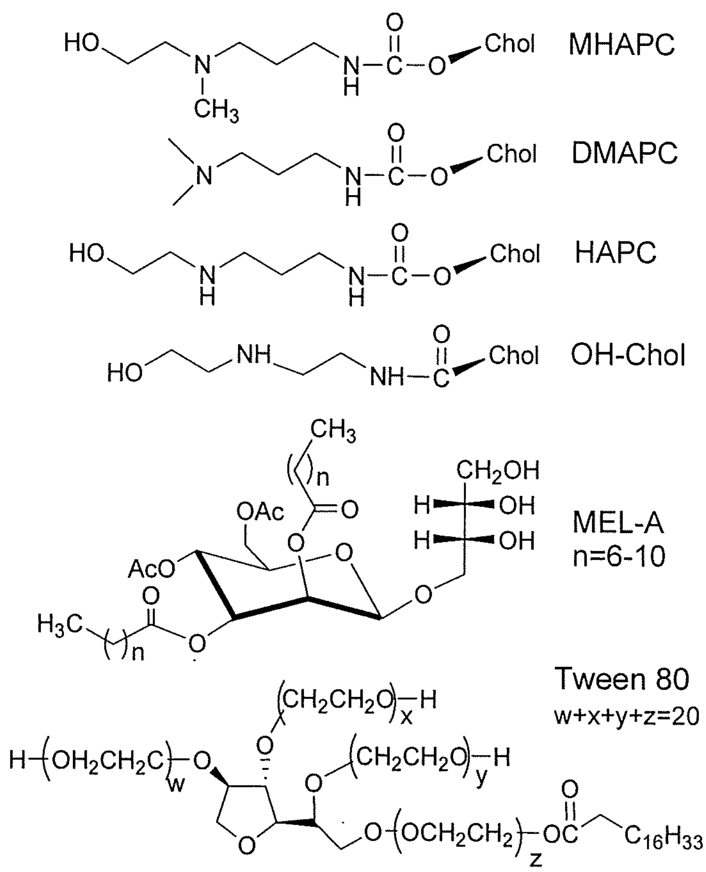


Fig.1. Chemical structures of cationic lipids and surfactants.

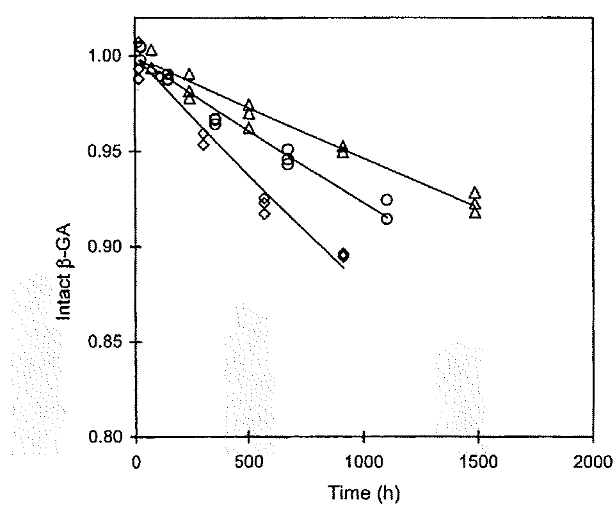


Fig.2. Degradation of β-galactoseidase in lyophilized formulations with sugars at 50 °C.
Sugar fraction: 0.33 w/w, 12%RH.

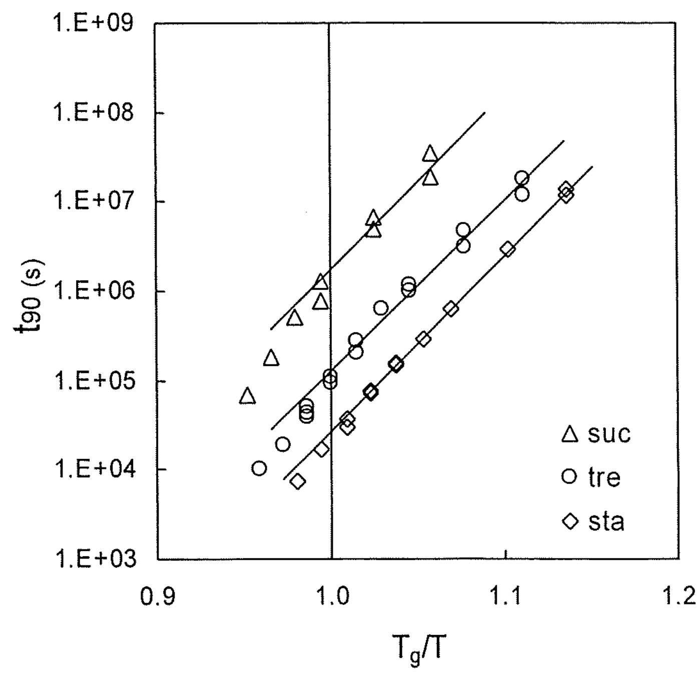


Fig.3. t_{90} for the aggregation of β-GA freeze-dried with sugars.
Sugar fraction:0.33 w/w, 12%RH.

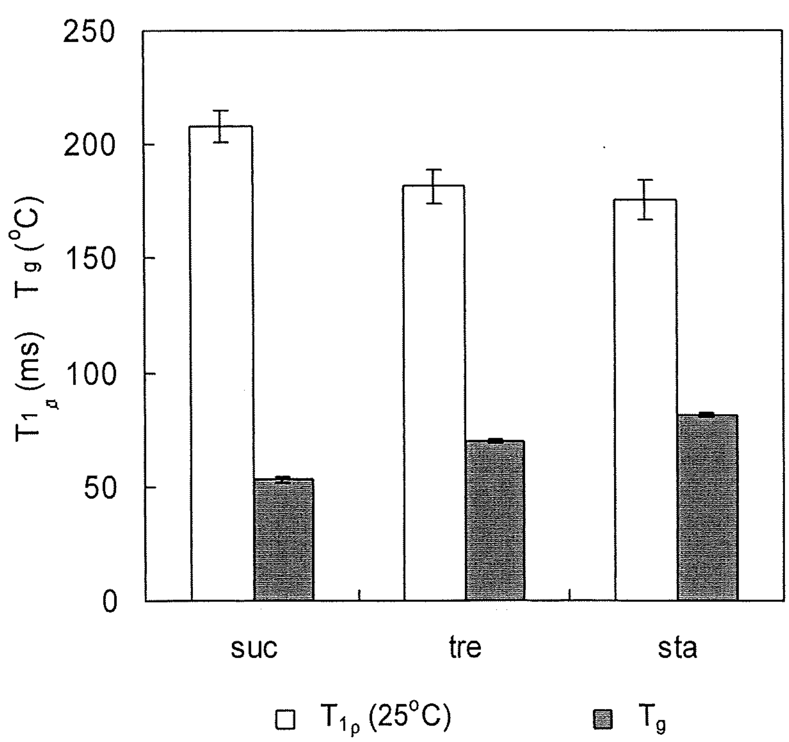


Fig.4. $T_{1\rho}$ and T_g of β-GA freeze-dried with sugars.
Sugar fraction: 0.33 w/w, 12%RH.

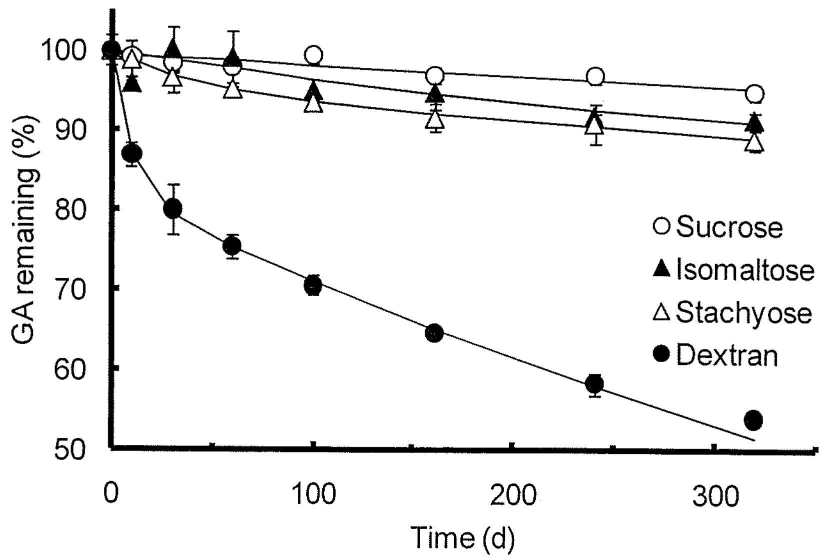


Fig.5. Degradation of β-galactoseidase in lyophilized formulations with sugars at 40 °C.
Sugar fraction: 0.33 w/w, 12%RH.

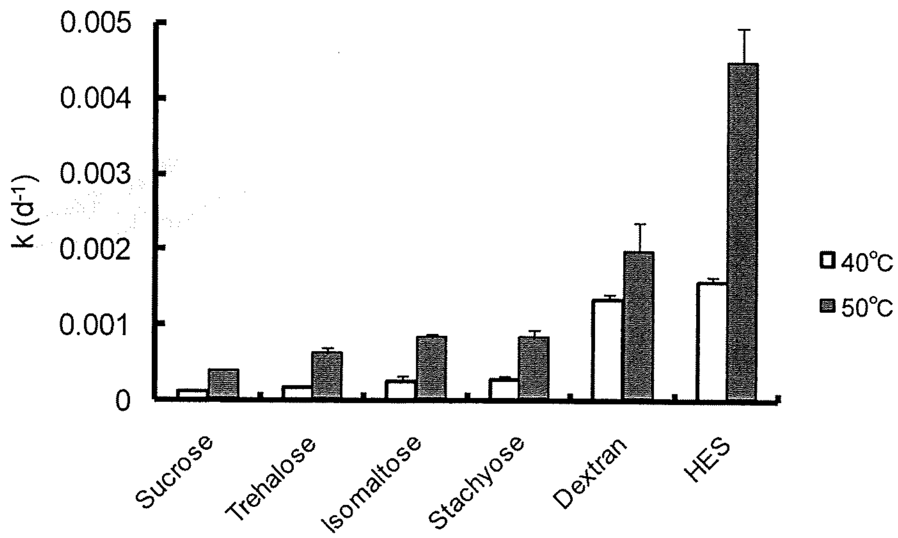


Fig.6. Degradation rate constant of β-galactosidase in freeze-dried formulations with sugars.

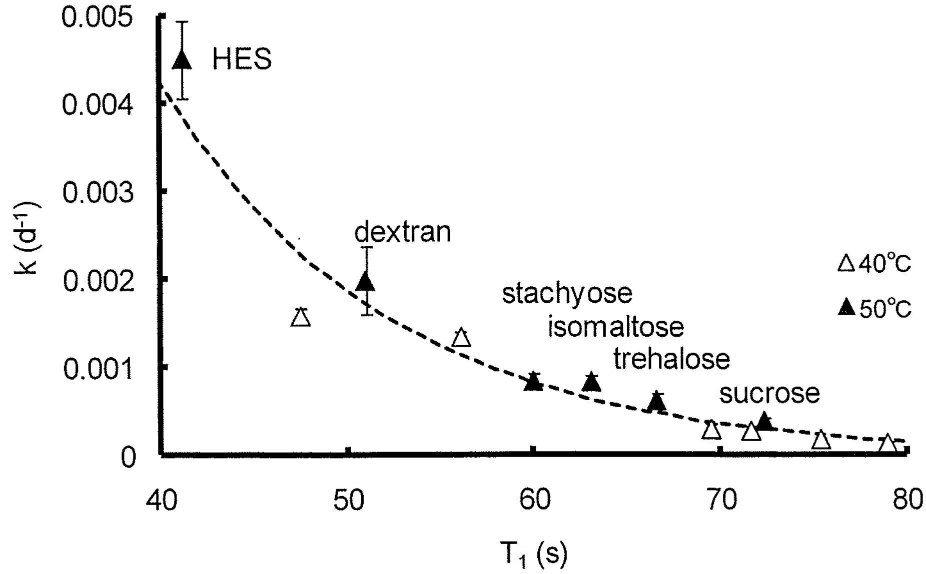


Fig.7. Correlation between degradation rate and T_1 of carbonyl carbon of β-galactosidase.

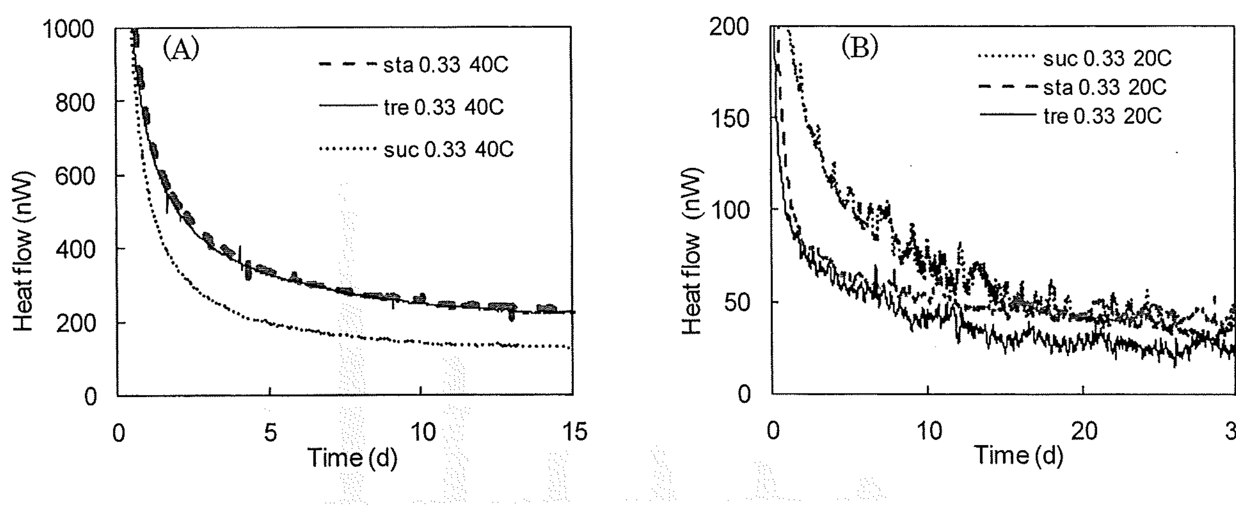


Fig.8. Heat flow curves for lyophilzed β-Galacosidase formulations with sugars.

Sugar fraction:0.33 w/w.

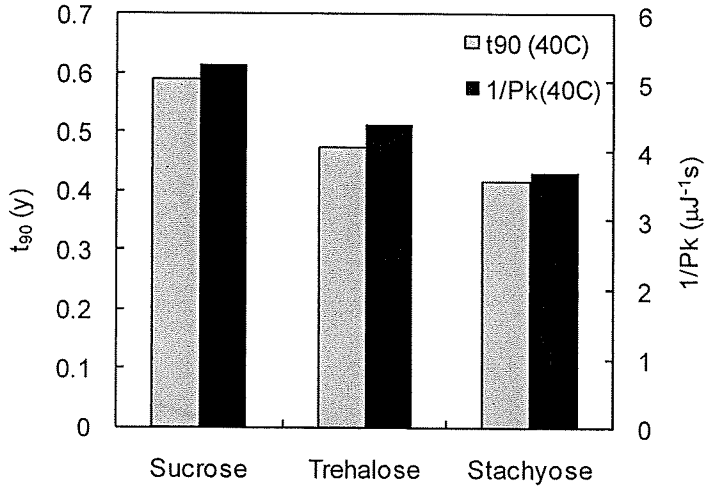


Fig.9. Comparison of Pk determined by microcalorimetry and aggregation rate (t_{90}) for lyophilized β-galactosidase formulations with sugars.
Sugar fraction: 0.33w/w.

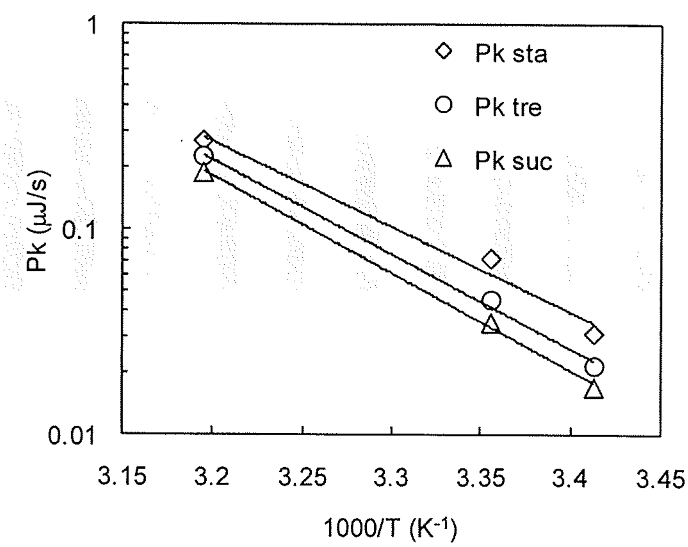


Fig.10. Temperature dependence of Pk of lyophilized β-galactosidase formulations with sugars.
Sugar fraction: 0.33 w/w

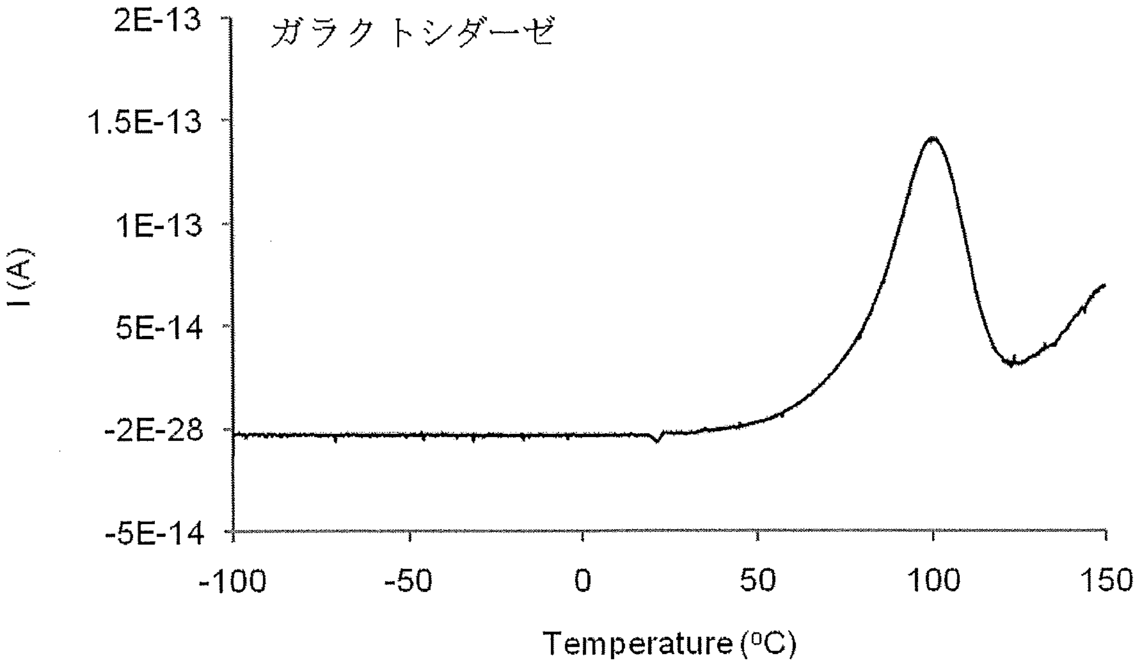


Fig.11. Typical TSC curve for lyophilized β-galacosidase.

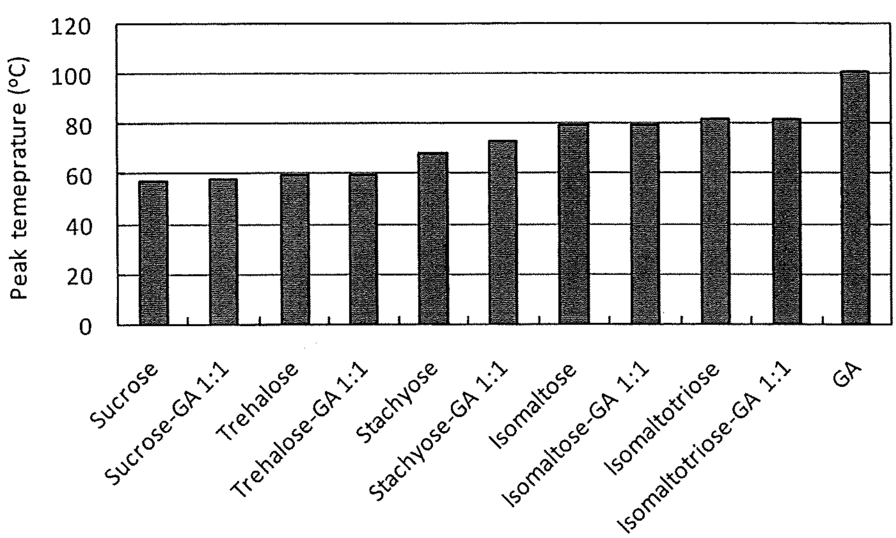


Fig.12. Peak temperature observed for TSC curves for lyophilized sugars and β-galacosidase formulations.

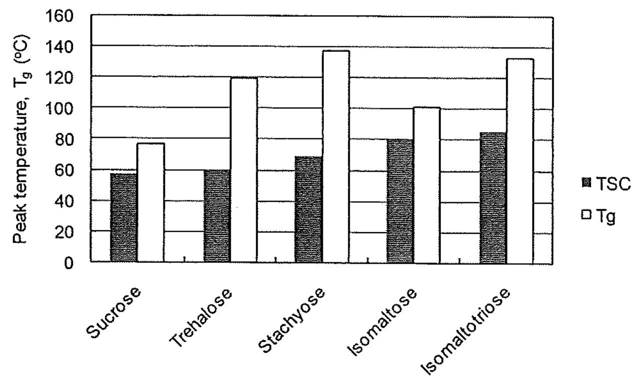


Fig.13. Comparison between Tg and Peak temperature observed for TSC curves for lyophilized sugars.

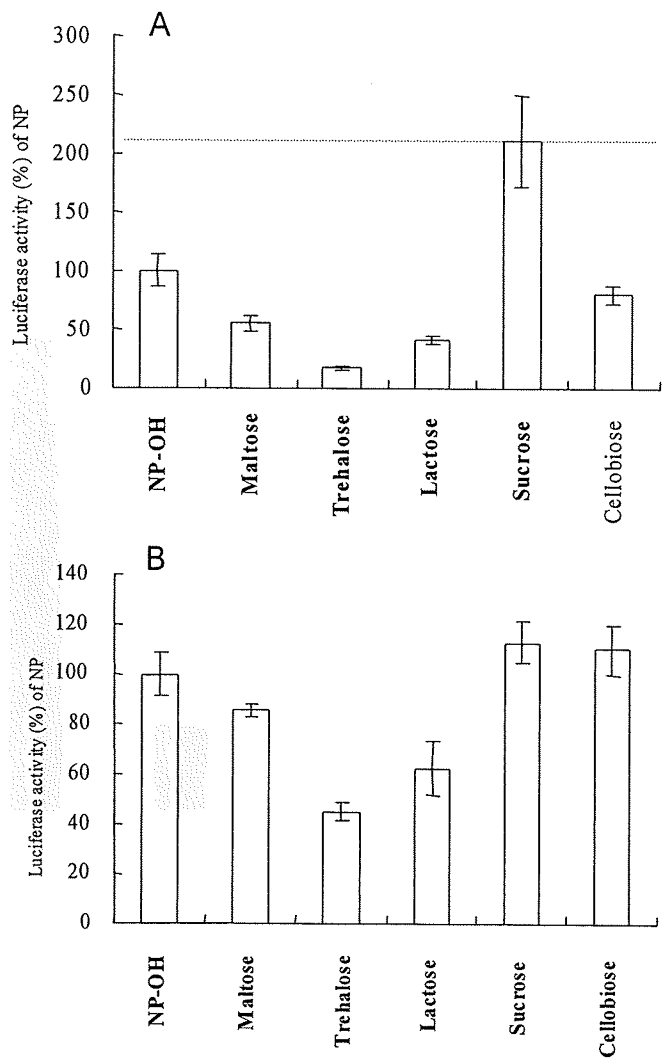


Fig.14 Effect of sugars in medium on gene expression of nanoparticle (NP-OH)

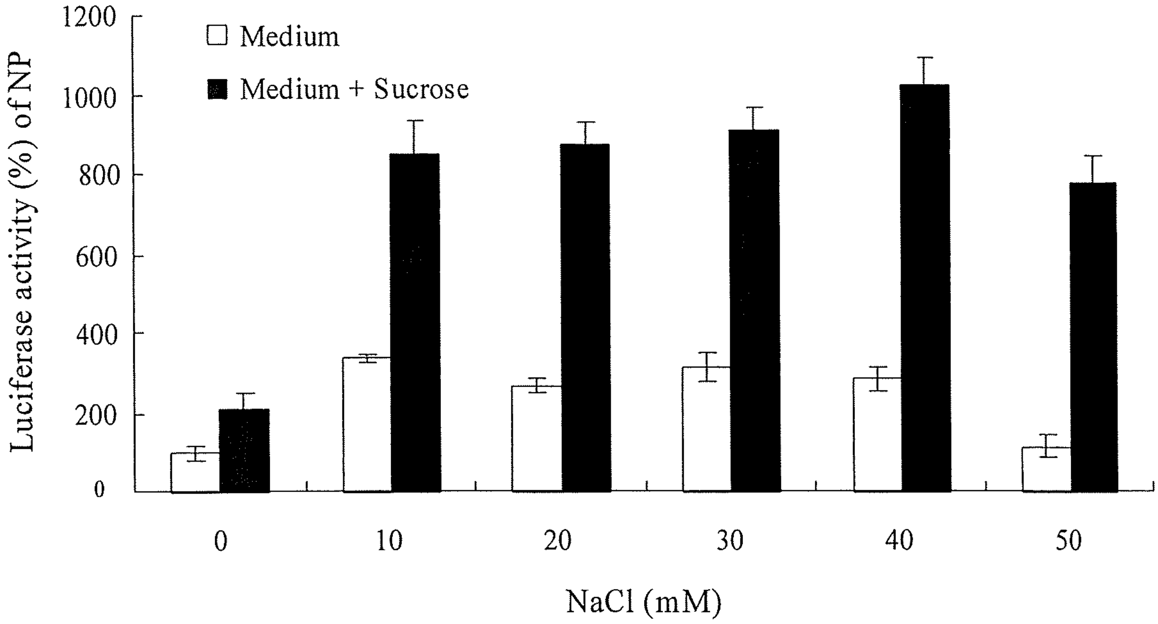


Fig. 15 Effect of NaCl concentration in medium with sucrose on gene expression of nanoparticle (NP-OH) vector in L1210 cellsvector in PC-3(A) and SKBr3 (B) cells

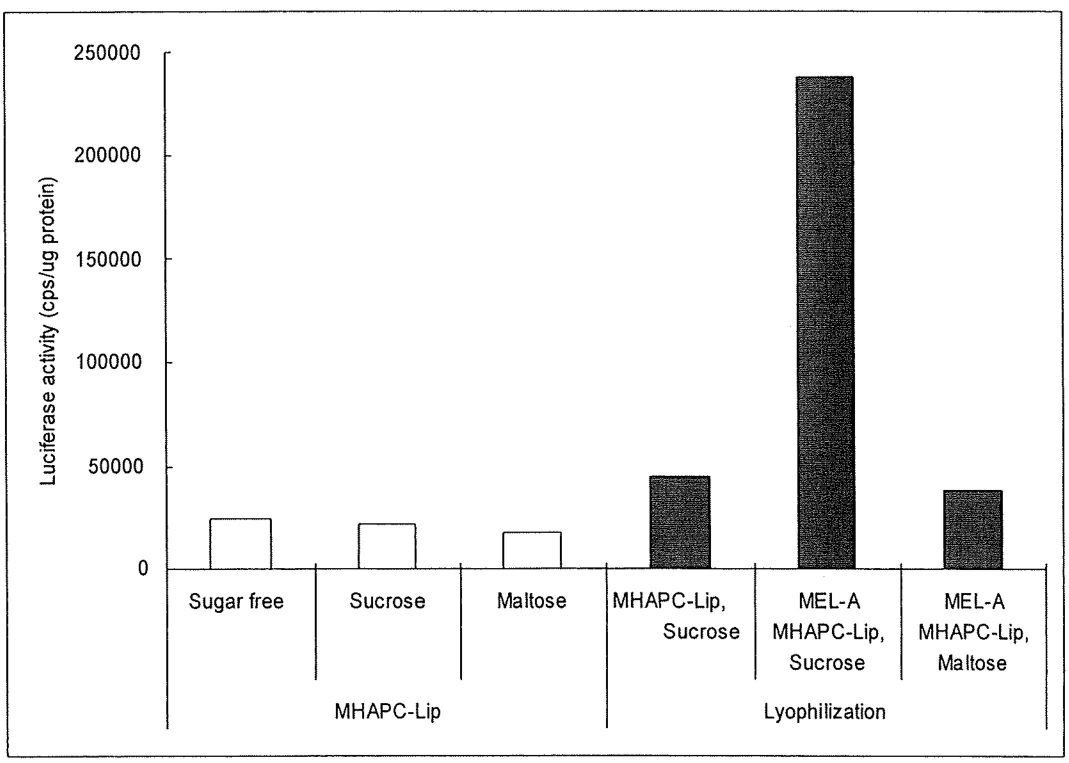


Fig16 Effect of sugars on gene expression of liposome and rehydration of lyophilized liposome vectors in A549 cells

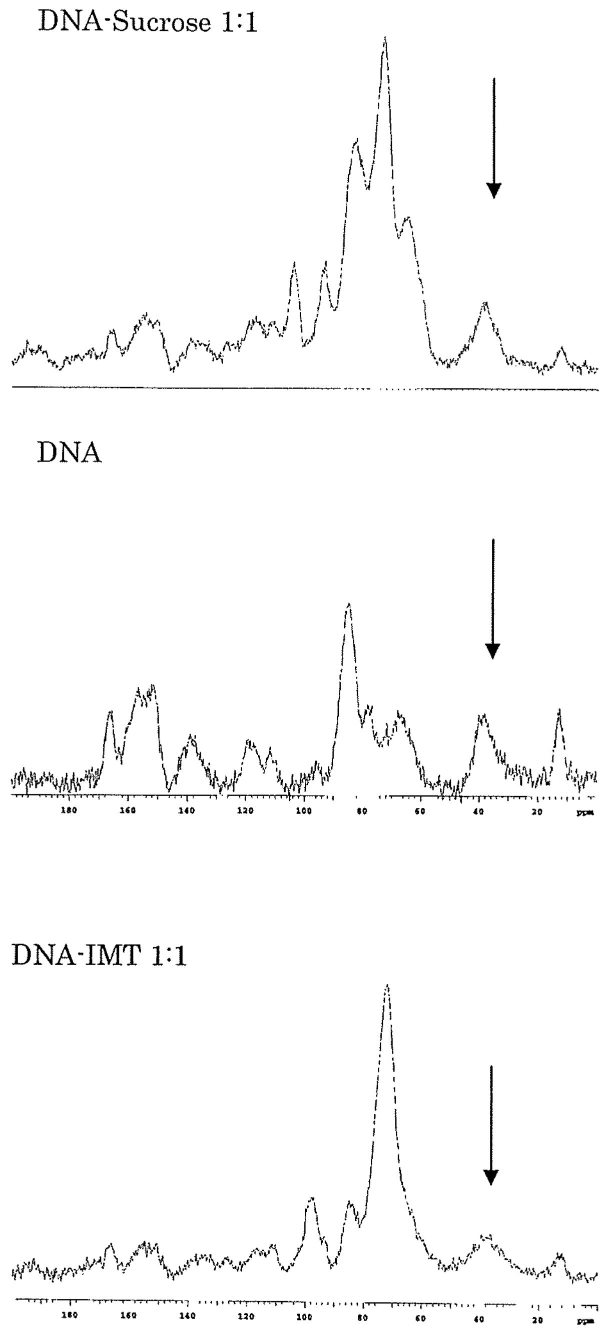
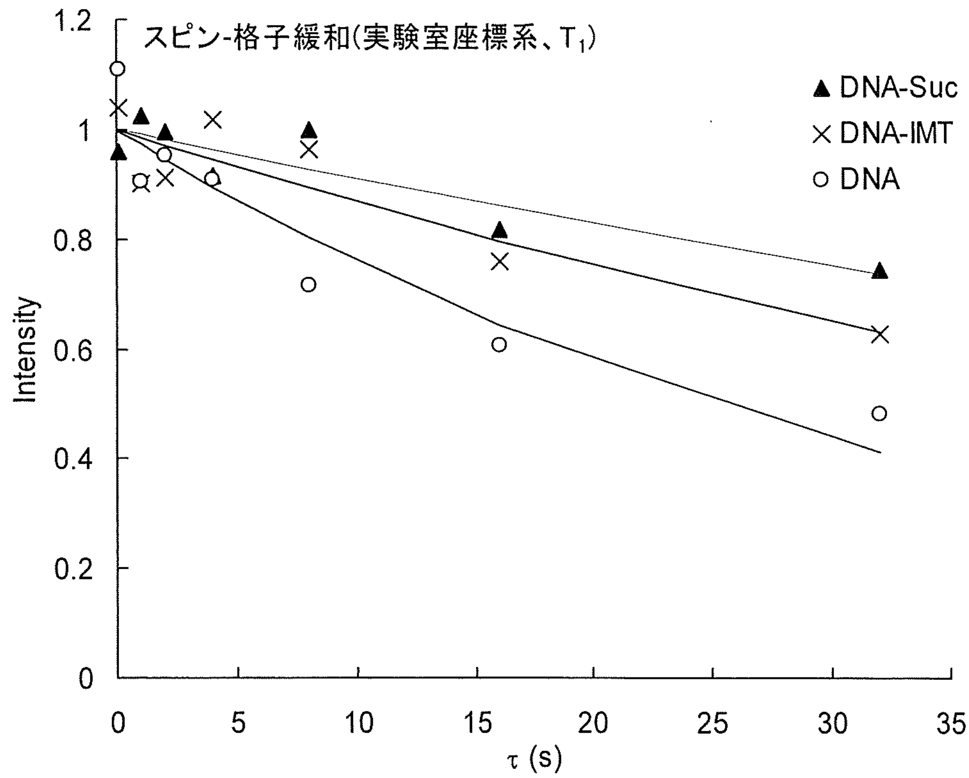


Fig.17 ^{13}C-NMR spectra of salmon DNA



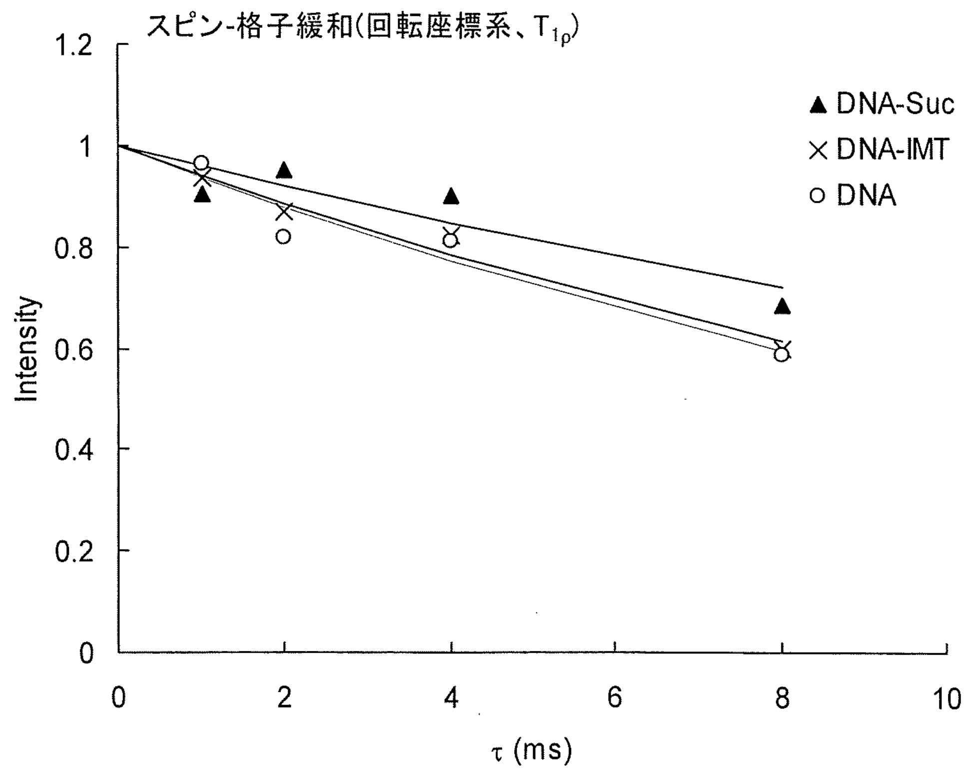


Fig.18　Spin-lattice relaxation of DNA deoxyribose carbon.

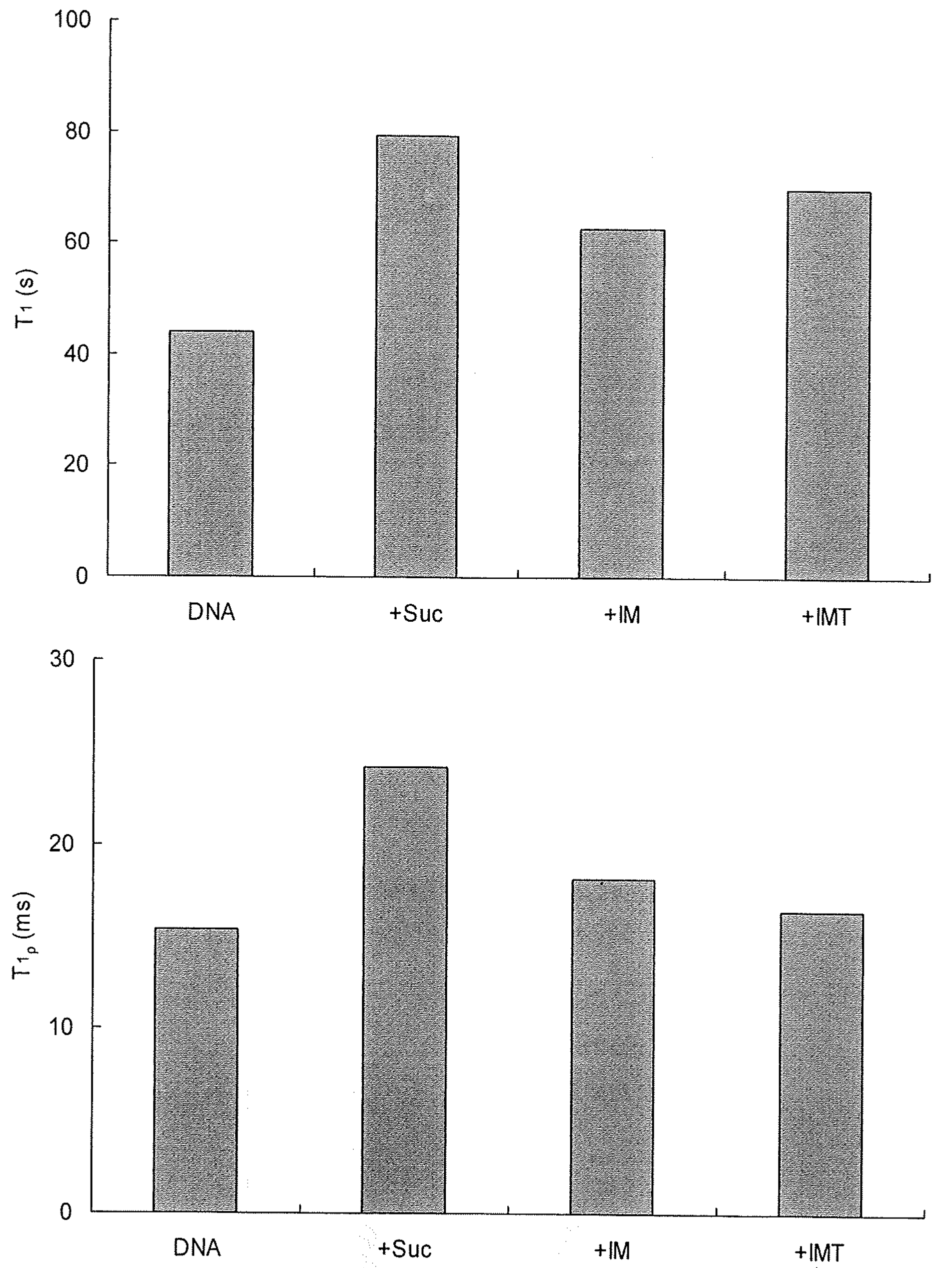


Fig.19 Effetcts of sugars on T_1 and $T_{1\rho}$ of DNA deoxyribose carbon.

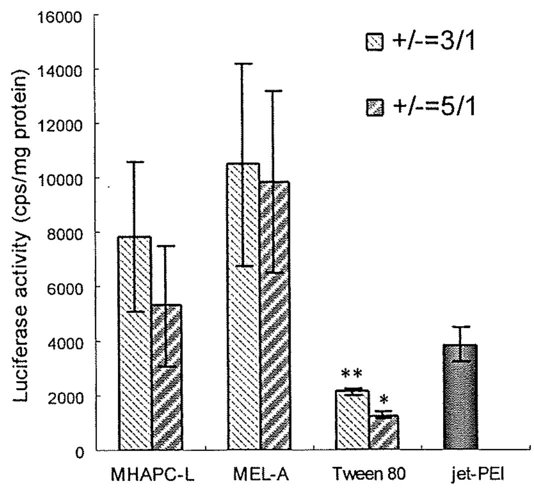


Fig.20. Gene transfections of MHAPC-lipoplexes in the lung at 24 h

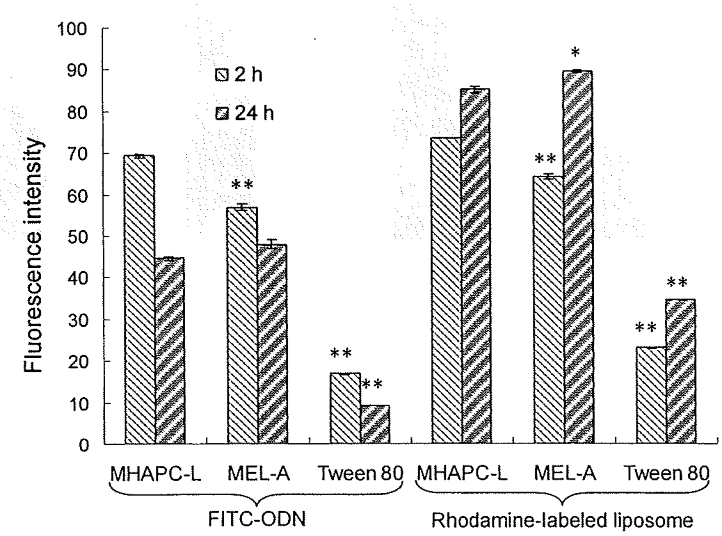


Fig.21. Cellular association of MHAPC-lipoplexes (+/-=3/1) in A549 cells.

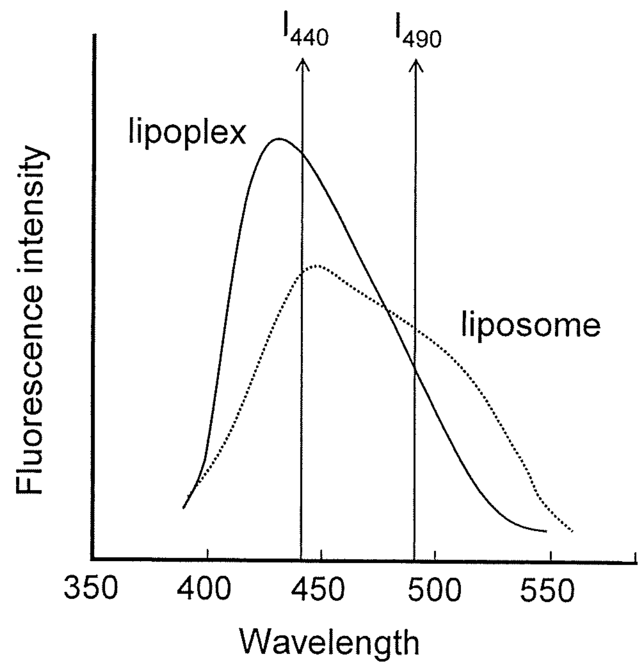


Fig.22. The representative spectrum of laurdan in liposome and lipoplex

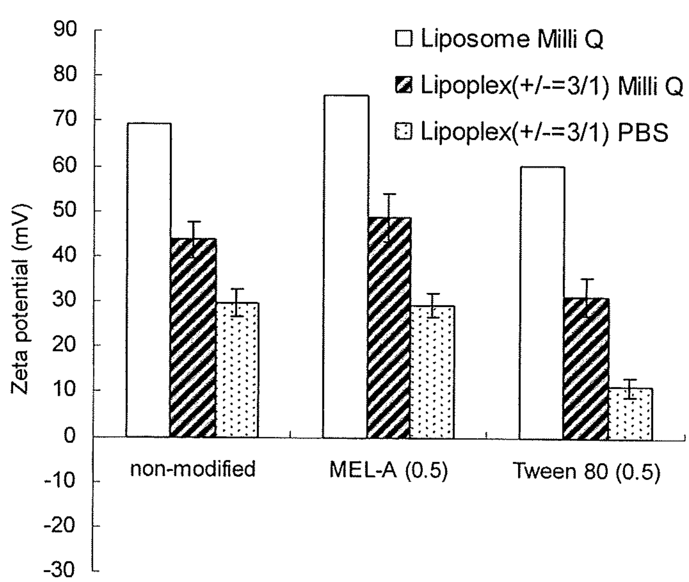


Fig.23. ζ-potential of MHAPC-liposome and –lipoplex in Milli Q and PBS.

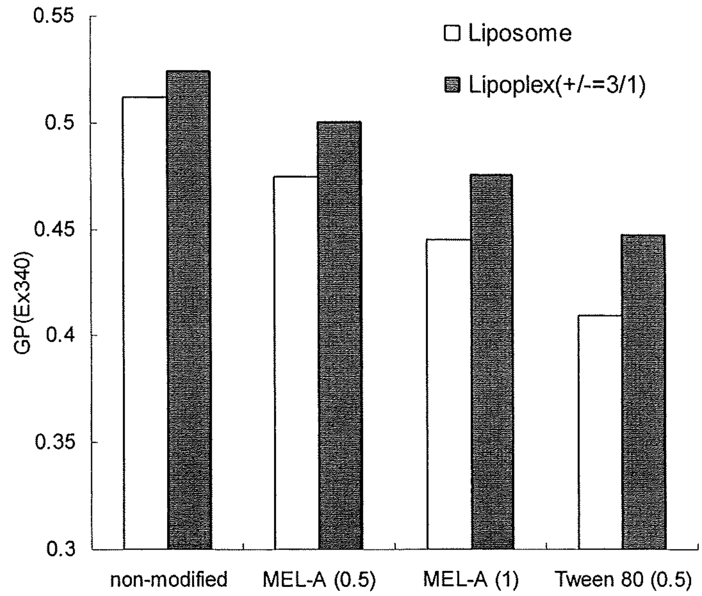


Fig.24. Change of GP values (hydration) of MHAPC-liposome and –lipoplex.

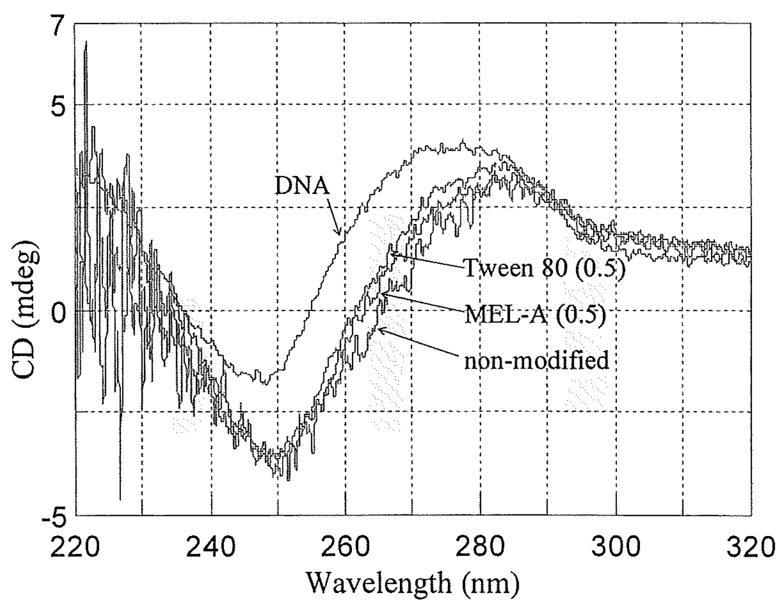


Fig.25. The CD spectrum of DNA in MHAPC-lipoplex..

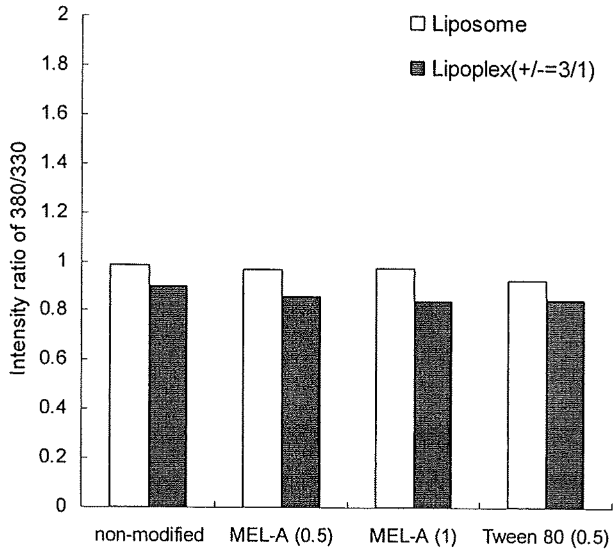


Fig.26. Change of surface pH of MHAPC-liposome and –lipoplex.

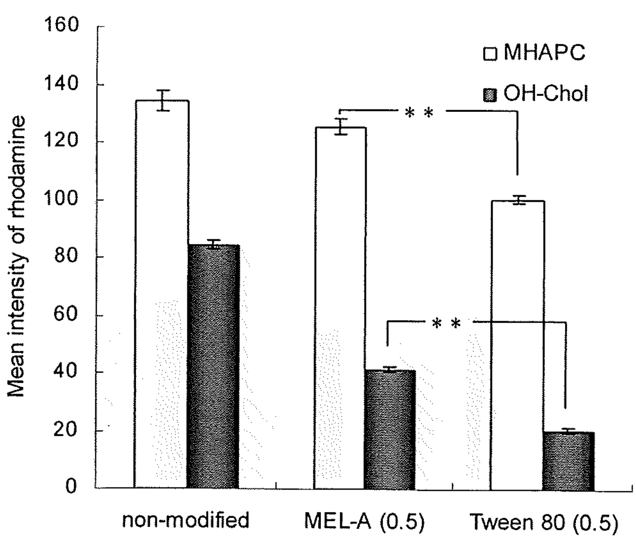


Fig.27. T Cellular association of MHAPC- and OH-Chol-lipoplex in A549 cells incubated for 2 h in PBS.

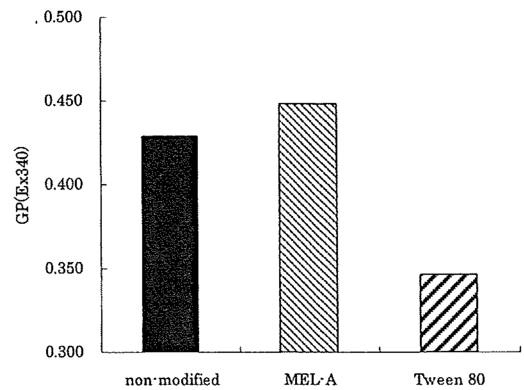


Fig.28. The change of surface hydration of liposomes as monitored by laurdan generalized polarization(GP) in PBS

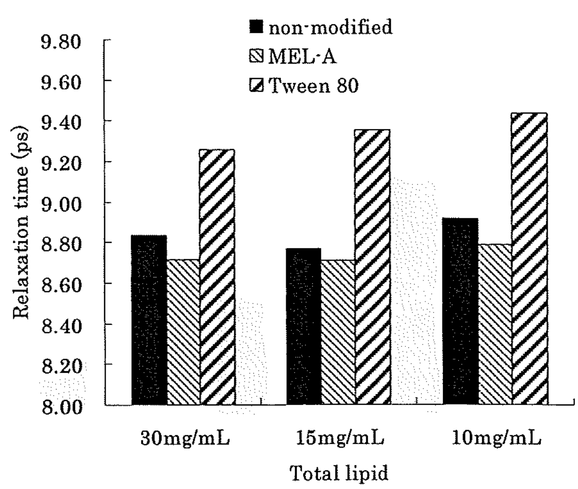


Fig.29. Dielectric relaxation of various concentrations of liposome suspension

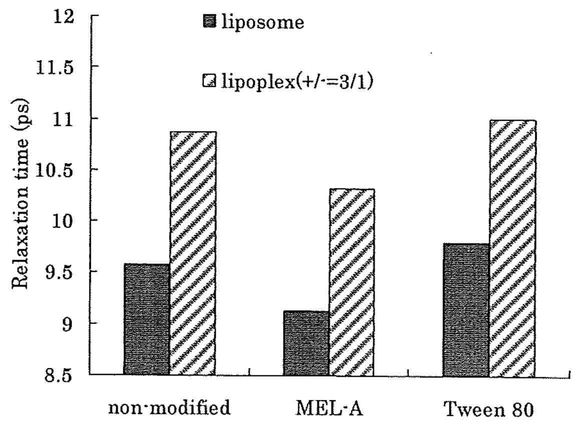


Fig.30. Dielectric relaxation of liposomes and lipoplexes

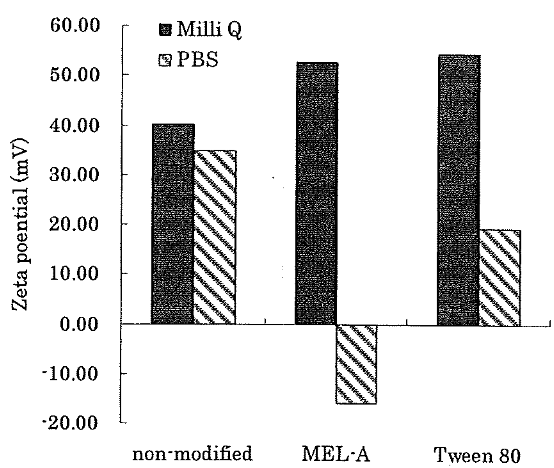


Fig.31. Zeta potentials of liposomes in Milli Q and PBS

別添４

研究成果の刊行に関する一覧表

書籍

著者氏名	論文タイトル	書籍全体の編集者名	書籍名	出版社名	出版地	出版年	ページ
阿曽幸男、吉岡澄江	非晶質の緩和と結晶化	川上亘作	難水溶性薬物の物性評価と製剤設計の新展開	シーエムシー出版	東京	2010	224-235
Hattori and Y. Maitani.	Folate-linked lipid-based nanoparticle gene delivery to the tumor,	H. S. Nalwa,	Encyclopedia of Nanoscience and Nanotechnology,	American Scientific Publishers		in press	

雑誌

発表者氏名	論文タイトル	発表誌名	巻号	ページ	出版年
Bingquan Wang, Marcus T. Cicerone, Yukio Aso, Michael J. Pikal	The impact of thermal treatment on the stability of freeze-dried amorphous pharmaceuticals: II. aggregation in an IgG1 fusion protein	*J. Pharm. Sci*	99(2)	683-700	2010
Aso, Y., Yoshioka, S., Miyazaki, T., Kawanishi, T	Feasibility of ^{19}F-NMR for assessing the molecular mobility of flufenamic acid in solid dispersions.	*Chem. Pharm. Bull.*	57	61-64	2009
Y. Hattori, M. Hakoshima, K. Koga and Y. Maitani	Increase of therapeutic effect by treating nasopharyngeal tumor with combination of HER-2 siRNA and paclitaxel	*International Journal of Oncology*			in press
K. Koga , Y. Hattori, M. Komori, R. Narishima, M. Yamasaki, M. Hakoshima, T. Fukui and Y. Maitani,	Combination of RET siRNA and irinotecan inhibited the growth of medullary thyroid carcinoma TT cells and	*Cancer Science*			in press

	xenografts *via* apoptosis				
K. Goto, Y. Chiba, K. Matsusue, Y. Hattori, Y. Maitani, H. Sakai, S. Kimura, M. Misawa	The proximal STAT6 and NF-kappaB sites are responsible for IL-13- and TNF-alpha-induced RhoA transcriptions in human bronchial smooth muscle cells	*Pharmacol Res*			in press
H. Ma, K. Shiraishi, T. Minowa, K. Kawano, M. Yokoyama, Y. Hattori, Y. Maitani	Accelerated blood clearance was not induced for a gadolinium-containing PEG-poly(L-lysine)-based polymeric micelle in mice	*Pharm Res*			in press
T. Minowa, K. Kawano, H. Kuribayashi, K. Shiraishi, T. Sugino, Y. Hattori, M. Yokoyama, Y. Maitani,	Increase in tumour permeability following TGF-β type I receptor inhibitor treatment observed by dynamic contrast-enhanced MRI	*British Journal of Cancer*	101(11)	1884-1890	2009
Y. Maitani and Y. Hattori,	Oligoarginine-PEG-lipid particles for gene delivery	*Expert Opinion on Drug Delivery,*	6(10)	1065-1077	2009
Y. Ishii, Y. Hattori, T. Yamada, S. Uesato, Y. Maitani, Y. Nagaoka	Histone Deacetylase Inhibitor Prodrugs in Nanoparticle Vector Enhanced Gene Expression In Human Cancer Cells	*European Journal of Medicinal Chemistry*	44	4603-4610	2009
Shiraishi K, Kawano K, Minowa T, Maitani Y, Yokoyama M.	Preparation and in vivo imaging of PEG-poly(L-lysine)-based polymeric micelle MRI contrast agents	*J Control Release*	136(1)	14-20	2009
Y. Chiba, S. Onoda, Y.	Upregulation of ADAM8	*Lung*	187	179-1	2009