

Acknowledgement: This work is supported by the grant from Pacific Corporation.

[PE1-13] [10/19/2001 (Fri) 09:00 – 12:00 / Hall D]

Induction of apoptosis in human ovarian cancer cells by liposomal bcl-2 antisense oligonucleotides

Shim JinYoung^o, Yoon NaYoung, Kim JinSeok

College of Pharmacy, Sookmyung Women's University, Korea

The anti-apoptotic protein Bcl-2 is prevalent in many solid tumors. Over-expression of the Bcl-2 protein potentially contributes to not only inhibition of apoptosis but resistance to drugs. Liposome is a very useful tool to deliver the antisense oligonucleotides into the cells in culture.

In this study, reverse-phase evaporation method was used for the encapsulation of bcl-2 antisense oligonucleotides in various liposome formulations, such as DPPC/Chol/stearylamine and DPPC/Chol liposomes. The phosphorothioated bcl-2 antisense and scrambled oligo were 5'-AAT CCT CCC CCA GTT CAC CC-3' and 5'-TCC CAC CTC ACC TAC ATC CG-3', respectively. Formed liposomes were characterized in terms of morphology, size and encapsulation efficiency. Results from cytotoxicity, down-regulation of Bcl-2 protein and induction of apoptosis by the liposomal bcl-2 antisense oligonucleotides in human ovarian cancer cell line(SK-OV-3) will also be presented.

[PE1-14] [10/19/2001 (Fri) 09:00 – 12:00 / Hall D]

Preparation and evaluation of multivitamin emulsion

Lee MoonSeok^o, Cho HeaYoung, Shim YoungSun, Her SuHee, Lee YongBok

College of Pharmacy and Research Institute of Drug Development, Chonnam National University, Kwangju 500-757, Korea

The physical and chemical stability of multivitamin o/w emulsion was investigated. Multivitamin emulsion composed of water, soybean oil (10%, v/v), vitamin A, D, E, K, B2, B6, B12 and panthenol. To make a stable o/w emulsion, the egg lecithin (2%, w/v) and glycerin (2.5%, w/v) were used for emulsifier and thickening agent, respectively. The oil in water emulsion system was manufactured by microfluidizer and evaluated the physical and chemical stability. Average particle size and interfacial tension was measured. From the result of interfacial tension tested, critical micelle concentration of the egg lecithin was 0.1% (w/v) and optimal concentration for the preparation of emulsion was 2% (w/v). The mean particle size was about 0.4 μ m which was suitable for injections. Short-term accelerated stability, as physical stability study, was tested by centrifuging and freeze-thawing the emulsion samples. The additions of vitamins cause the increment of particle size and reduction of physical stability of emulsion. But it is not an enormous problem for stability of emulsion. Also we have performed long-period preservation stability test for the vitamins. All vitamins were analysed by HPLC. The result of storage under 4°C and dark, at least 12 weeks all vitamins were maintained stable, except for vitamin B12.

[PE1-15] [10/19/2001 (Fri) 09:00 – 12:00 / Hall D]

Enhancing water-solubility of poorly soluble drug, itraconazole with water-soluble polymer using supercritical fluid processing

Nam Kyung-wan^o, Hwang Sung-Joo, Woo Jong Soo

College of Pharmacy, Chungnam National University