

nanofibrous matrix chondrocytes well maintained spherical morphology and formed dense layer of cartilaginous tissue. In chondrocyte culture, cells attached selectively on nanofibers. Collagen nanofiber effectively induced chondrocyte migration on matrix and activated chondrocytes to secrete ECM proteins such as collagen type II.

[PE1-13] [ 2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function ]

### **Enhanced controlled transdermal release of quinupramine from the ethylene-vinyl acetate**

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In case of oral application of quinupramine, antidepressants, it may cause adverse effects such as diarrhea, nausea due to transient high blood concentration. Ethylene vinyl acetate (EVA) which is heat-processible, flexible, inexpensive material was used for transdermal drug delivery. The purpose of this study was to develop the new transdermal delivery system of quinupramine using EVA polymer matrix that can provide sustained release and avoid the side effects. The EVA matrix containing quinupramine was prepared by solvent-evaporation method. The release profiles of drug from the EVA matrix were studied as a function of temperature, drug concentration. Some kinds of plasticizers such as the citrates, phthalates, sebacates were used for making the pore and increasing the flexibility of EVA matrix. Also we used some types of penetration enhancer to increase the flux of drug through skin like the glycols, non-ionic surfactants, fatty acids. Permeation study using mouse skin was performed at 37°C using 0.02M-phosphate buffer as a receptor medium. In case of the plasticizers, diethyl phthalate showed the best effects. Among the enhancers used, polyoxyethylene 2-oleyl ether showed the best enhancing effect. The polyoxyethylene 2-oleyl ether as an enhancer could be used for development of quinupramine-EVA matrix.

[PE1-14] [ 2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function ]

### **Effect of Dry Granulation Process on Flowability of Erdosteine**

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Erdosteine, an expectorant, has been known to show a very poor flowability. Furthermore, high dosing amount (300mg/cap) and bulk density make it more difficult to fill in a capsule less than No. 0 size as bulk state. We have studied the possibility of dry granulation process in purpose of getting a better flowability and manufacturing efficiency. A roller compactor was introduced for this purpose and the applicability of laboratory result into commercial scale instrument was also experimented. Roller compacting process was very favorable to obtain the granules with good flowability and improved density profiles. As a result of micromeritic analysis the compacted granules showed nearly 2 – fold higher bulk and tapped density than a drug itself, which could enable to be filled even in No. 2 capsule. In addition, compacted granules represented a significant rise of Kawagita constant b more than 3 – fold, which means much higher packing velocity, indirectly showing an improved flowability compared to bulk drug.

[PE1-15] [ 2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function ]

### **Development of analytical method capable of identifying the chemically or biologically oriented variants of human growth hormone by capillary electrophoresis**

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The therapeutic use of protein pharmaceuticals produced by recombinant DNA technology is increasing in recent decades. In order to investigate the quality of recombinant proteins, it is important to identify and assign the impurities produced in the process of recombination or in storage conditions. Capillary Electrophoresis is