drying chamber was operated at near atmospheric pressure. The dry particles were collected on membrane filter at the bottom of the drying chamber. Several processing parameters such as flow rate, temperature, pressure, solid concentration and processing scale were accessed using NaCl, human serum albumin, and granulocyte-colony stimulating factor as model pharmaceuticals. Free flowing micronized particles were obtained with high production yield. These particles can be used in the medical fields such as the effective pulmonary administration of pharmaceuticals and drug formulation research. ["This study was supported by a grant of the Korea Health 21 R&D Project, Ministry of Health & Welfare, Republic of Korea (02-PJ1-PG11-VN01-SV01-0036)."]

[PE1-32] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Anti-gelling Effect of Poly(methacrylic acid, methyl methacrylate) on Cefuroxime Axetil Composition

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Cefuroxime axetil, a broad spectrum antibiotic, has been known to form a gelatinous mass in contact with aqueous media, which could lead to poor dissolution. Therefore, this study was conducted for removing the gelling phenomenon and thereby obtaining a favorable dissolution profile. We have found that the addition of poly (methacrylic acid, methyl methacrylate) could not only inhibit the tendency of cefuroxime axetil to form a gel but also showed the good dissolution profile compared to the formula without poly (methacrylic acid, methyl methacrylate). This effect can be obtained in the range of 15% to 100% based upon the amount of cefuroxime axetil. It is assumed that the anti-gelling effect of poly (methacrylic acid, methyl methacrylate) could be due to preventing cefuroxime axetil particles from bridging each other.

[PE1-33] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Enhanced Thermal Stability of a Novel Human Thrombopoietin Mutein under the Various Temperature Conditions

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DaeWoong co.Ltd

DWP40458 is a novel human thrombopoietin mutein with two additional N-linked glycosylation site. The thermal stability of DWP40458 in both solution and lyophilized form was studied in the temperature range of 4 - 50℃, compared with recombinant human TPO (rhTPO). When the aggregation or degradation pattern of DWP40458 and rhTPO solution was characterized by using SDS-PAGE, gel permeation chromatography (GPC) and reverse phase HPLC, it was found that thermostability of DWP40458 was significantly different to rhTPO in the temperature at 25, 30, 40, 50℃. For example, rhTPO was dropped by 2.9%, compared to DWP40458 of 65.0% after 16 days at 40℃. Furthermore, the difference of thermostability between DWP40458 and rhTPO was also observed in lyophilized form with the similar pattern of solution. However, the potency difference between DWP40458 and rhTPO at 50℃ was not significant compared to physical instability in the normal mouse model. SDS-PAGE and GPC analysis have demonstrated that DWP40458 and rhTPO show different aggregation and degradation kinetic. Taken together, the results suggest that DWP40458 has enhanced physical thermostability compared with rhTPO.

[PE1-34] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Fibrous composite matrix of chitosan/PLGA for tissue regeneration

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Tissue engineering may be adequately defined as the science of persuading the body to regenerate or repair tissue that fail to regenerate or heal spontaneously. In the various techniques of cartilage tissue engineering, the

use of 3-dimensional polymeric scaffolds implanted at a tissue defect site is usually involved. These scaffolds provided a framework for cells to attach, proliferate, and form extracellular matrix(ECM). The scaffolds may also serve as carriers for cells and /or growth factors. In the ideal case, scaffold absorb at a predefined rate so that the 3-dimensional space occupied by the initial scaffold is replaced by regenerated host tissue. In this study, for polymeric material for tissue engineering scaffold, PLGA and chitosan was selected. PLGA were most often utilized for tissue engineering with biocompatible and bioabsorbable, and among the few synthetic polymers with U.S. Food and Drug administration approval for human clinical use. But polylactides have been limited in further biomedical application due to lack of cell affinity owing to their hydrophobicity and no available functional groups to attach specific cell-recognizable ligand and their acidic metabolite. Chitosan has its structure similarity to glycosaminoglycan and neutralizing capacity for PLGA acidic metabolite. The objective of this study was to develop new biodegradable tissue engineering scaffolds chitosan/PLGA fibrous composite matrix functions as high biocompatible and bioactive scaffold for cartilage regeneration. Gene expression showed that seeded chondrocytes retained their biochemical phenotype-specific characteristics (GAG, aggrecan, collagen type II) for cartilage formation throughout the entire culture period. Increased content of chitosan shows high level of phenotype specific markers. Biodegradable PLGA/ chitosan fibrous composite matrix demonstrated good cellular compatibility and cartilage regenerative potential.

[PE1-35] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Effect of Rhus verniciflua strokes acetone extracts and its components on the proliferation, collagen synthesis, and hepatic fibrosis related proteins mRNA levels in rat hepatic stellate cells

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Hepatic stellate cells (HSC) and the derived myofibroblasts are known to play a central role in liver fibrogenesis. Rhus verniciflua Strokes (RVS) has traditionally been used in Korea herbal medicine for a stomachic tonic. In this study, we observed the effect of RVS acetone extract (Ra) and its five major components on the proliferation, the collagen synthesis, and hepatic fibrosis related proteins mRNA levels in HSC-T6 cells which is a fully activated rat hepatic stellate cell line. Ra inhibited the proliferation and decreased the content of collagen in the HSC-T6 cells. The mRNA levels of TGFb1, Timp-1 and procollagen 1a1 were reduced by Ra treatment. We determined five components of Ra which are butein, fustin, sulfuretin, ficetin and 3,4-dihydroxyphenol. The anti-fibrotic activity of each component of Ra did not excellence compared with that of total Ra judging by collagen excretion and mRNA levels of hepatic fibrosis related proteins. Collectively, Ra inhibited hepatic stellate cell proliferation and collagen synthesis that might have a protective role against liver fibrosis.

[PE2-1] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Risperidone pharmacokinetics in relation to CYP2D6 and MDR1 in healthy male Korean subjects

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The purposes of this study were to evaluate the relationship between the genetic polymorphisms in CYP2D6*10 allele, MDR1 (exon 21 and 26) gene and risperidone pharmacokinetics in healthy male Korean subjects. A single dose of 2 mg risperidone tablet was given orally to 23 healthy male Korean volunteers. Blood samples were taken during the 12 hours after the dose. Serum concentrations of risperidone and 9-hydroxyrisperidone were measured using HPLC with UV detector. 23 subjects were genotyped for CYP2D6*10 allele, MDR1 G2677T and C3435T by polymerase chain reaction-restriction fragment length polymorphism(PCR-RFLP). Of the 23 individuals analyzed, 6 were homozygous for CYP2D6*1, 10 for *10, while the remaining 7 subjects were heterozygous for these alleles. MDR1 G2677T genotyping revealed that homozygous wild-type (G/G) heterozygous (G/T) and