

formation was initiated from the periphery to the center of the defect and no adverse inflammatory reaction was observed. These microgranules also have potential as drug delivery systems to accelerate bone healing and cell proliferation.

Poster Presentations – Field E2. Pharmacokinetics

[PE2-1] [ 04/18/2003 (Fri) 09:30 – 12:30 / Hall P ]

**Bioavailability of tolperisone in human plasma using a simple HPLC.**

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We aimed at determining bioavailability of tolperisone, a muscle relaxant, and developing a simple analysis in human blood using HPLC. A rapid and sensitive HPLC method was developed and validated using reverse-phase C18 column with retention time and limit of quantification of tolperisone being 7.3 min and 20 ng/ml, respectively. Quantification was performed at 260 nm with chlorphenesin as internal standard. The method involved a simple extraction. In order to study blood level profile in time, eight volunteers were enrolled and orally took 450 mg tolperisone once. The blood sample were collected from 0 to 9 h after the drug administration. Mean AUC and C<sub>max</sub> value were 556.31±359.2473 (ng/ml·hr) and 353.96±163.5683 (ng/ml), respectively. And Mean T<sub>max</sub> and T<sub>1/2</sub> value were 0.94±0.42 (hr) and 1.14±0.27 (hr). From the results we determine the bioavailability of tolperisone using a newly developed and useful HPLC method.

[PE2-2] [ 04/18/2003 (Fri) 09:30 – 12:30 / Hall P ]

**A Simple and Rapid Determination of Theophylline in Human Serum by High-Performance Liquid Chromatography and its Application to Pharmacokinetics of Theophylline in Volunteers**

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A simple and rapid method for the determination of theophylline (THP) in human serum was developed by a high performance liquid chromatography/UV detector and applied to pharmacokinetic study of THP in human volunteers.  $\beta$ -Hydroxyethyltheophylline as internal standard was added to 200  $\mu$ l of human serum and the mixture was centrifuged at 13000 rpm for 10 min. The supernatant was transferred to Ultrafree-MC centrifugal filter units (0.22  $\mu$ m) and centrifuged at 1500 rpm for 3 min. 10  $\mu$ l of the filtrate was injected to the HPLC system. Kromasil C<sub>18</sub> (4.6 mm x 150 mm, 5  $\mu$ m) column and acetonitrile/10 mM acetate buffer (8: 92, v/v%) as