

glucosamine administration which allowed for ensuing comparison. The following stage was administering glucosamine to the same subjects for a period of 5 days to reach steady state or stable plasma level. The final stage is a replicate of the first stage where a single dose of diacerein was administered, the blood samples obtained were analyzed and pharmacokinetic parameters were calculated for post-glucosamine administration stage.

Diacerein initially undergoes intestinal elimination where it is hydrolyzed to its active metabolite rhein. Once in the systemic circulation, rhein is hepatically metabolized to glucuronide form and sulphate form, both of which are eliminated mainly by kidneys, as well as the unchanged form (Louchahi et al., 1991).

The pharmacokinetic parameters of diacerein (area under the plasma concentration time curve from time zero to the last sampling time and to infinity) were calculated for each subject pre- and post-glucosamine administration in order to assess whether there was an actual effect, if any, on the metabolism of diacerein induced by the prior administration of glucosamine and determine whether ultimately the bioavailability level of diacerein was modified.

The calculated significance of the difference in the pharmacokinetic parameters of diacerein was determined by comparing results obtained upon the administration of diacerein in the first stage as discussed earlier.

Humans were used as the test subjects compared to rats which were used in previous research performed. Rats are the second most commonly used test subjects in medicine research while mice are the most commonly used test subjects (Porter, 2000). The short life span of rats, ease of handling and similarity in genetic material with humans make them favorable test subjects. However, as good as this is, it is not always the case that the results obtained from animal research do indeed apply to humans. There are differences