

## **ABSTRACT**

**In order to get the information on the bone healing, three different medicines with anticoagulant activities were injected to the rats having fractured bones. These medicines with anticoagulant activities are used for shortening the healing period of the fractured bones. The medicines used in this study are standard heparin, enoxaparine and fondaparinux. The control group consisted of rat bones with natural healing of the bone fracture. The rats were sacrificed after bone healing. Several analytical techniques on the healed parts of fractured bones were applied. SEM studies showed great morphological differences on the bones varying with the three types of medicines. X-Ray diffraction techniques also revealed either new phases and/or the change in the amount of available crystallographic structure. Although mechanical studies in micro level are still going on, it is clear that crack initiation and propagation depend on the phases available in the**

**system and also interfaces of the phases. Thus various medicines with anticoagulant activities play role after healing process o the fracture mechanics point of view.**