

FALL 2004  
F21 C/Food Science & Engineering Unit  
**SEMINAR SERIES**

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**TITLE: THE TENDON TO BONE INSERTION SITE: INJURY AND REPAIR**

**ABSTRACT:** Tendon to bone insertion site injuries are a leading cause of pain and disability in elderly as well as young populations. Healing of these tendon to bone repairs has not been studied extensively. At the rotator cuff, no repair technique has been immune from recurrent tears. Our studies in the rat rotator cuff showed a lack of fibrocartilage formation and poor integration of tendon to bone at the healing insertion. The biomechanical function of the repaired tissue was vastly inferior to that of the normal insertion. Our future studies will use fetal development and fetal wound healing as motivation for promoting a regenerative healing response over the normal scar mediated healing response. In one set of studies, the expression of the three TGF- $\beta$  isoforms will be controlled to mimic the expression pattern seen during fetal wound healing. In a separate set of studies, biofactors unique to fetal tendon development (e.g., BMP-12, scleraxis) will be applied in to enhance adult tendon to bone healing.

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**Tuesday, October 26 2004, 4:00pm,**  
**AG ENGR Bldg. 105**  
**Refreshments Will Be Served**