



## Biomedical Engineering Department Seminar

**Friday, October 5, 2007**

**Location: Cullimore Hall, Lecture Hall 3**

**Time: 11:30 AM – 12:30 PM**

Microglial Effects on Cholinergic Neuronal Differentiation

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Microglia, immune regulators embedded within the central nervous system, are well known for their inflammatory responses following traumatic brain injury, stroke, as well as autoimmune or neurodegenerative disorders. However, though ubiquitous in the embryonic brain, their role there is puzzling. In studies designed to investigate factors that affect neuronal differentiation in the developing basal forebrain of rats, we have found that a factor or cocktail of factors from cultured microglia promotes cholinergic differentiation from undifferentiated precursors there. Our studies have taken on new significance in light of recent data suggesting that prenatal inflammation may play a role in the etiology of autism and schizophrenia.

I will, therefore, discuss the data that have led to our findings, show pretty pictures of microglia in the embryonic brain, and discuss our data in light of the role of inflammation in a number of neurodevelopmental disorders.

**Refreshments will be served.**