

***Robert Zatorre, PhD***

James McGill Professor of Neuroscience  
Montreal Neurological Institute  
McGill University  
and BRAMS Laboratory

“Music in the Brain: Pitch, Plasticity,  
Imagery and Emotion”

Monday, January 30, 2012  
4:30–6:00 pm  
A53 Baker Hall/Steinberg Auditorium

How does the brain allow us to perceive music? How do we imagine musical sounds? Why does music elicit emotion? Neuroscientists are increasingly interested in such questions because music can be a powerful way to reveal the inner workings of the nervous system. The lecture will touch on three topics. First, we discuss functional and structural brain imaging data which identify specializations for pitch perception in right auditory cortex. These specializations are relevant to plasticity because they can also be modified by musical training. Second, we deal with studies of musical imagery. Using experimental tasks which require active retrieval and imagery of melodies, we can identify auditory cortical regions recruited both by real and imagined music. The final topic, music and emotion, is of interest because emotion is such an integral part of music. We have concentrated on musical pleasure; findings from these studies indicate that strong positive emotion in music seems to be mediated via the mesolimbic dopaminergic system, typically concerned with biological reward and motivation. Further, we can dissociate distinct dorsal and ventral striatal contributions to anticipatory vs. experiential components of music processing, respectively.

*All lectures are open to the public.  
For more information, call 412-268-3151.*