



## When the brain is out of tune

Isabelle Peretz

International Laboratory for Brain, Music, and Sound Research,  
BRAMS, and University of Montreal, Canada

Musical abilities are generally regarded as an evolutionary by-product of more important functions, such as those involved in language. However, there is increasing evidence that humans are born with musical predispositions that evolve spontaneously into sophisticated knowledge bases and procedures that are unique to music. Neuropsychological findings also suggest that the brain is equipped with music-specific neural networks and that these can be selectively compromised by a congenital anomaly. Such a neural anomaly results in a disorder, congenital amusia, that appears limited to the processing of music. The condition appears genetically determined and arises as a consequence of poor processing of pitch-related information. The neural correlates of congenital amusia do not point to a dysfunction of the auditory cortex but to abnormal connectivity with frontal regions. Recent electrical evidence further suggests that the amusic brain is in tune but is unaware of it.

