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## GENETICS AND THE BIOLOGICAL UNDERPINNINGS OF HUMAN MUSICALITY AND LANGUAGE

**Reyna L. Gordon, Ph.D**
Associate Professor, Otolaryngology, Vanderbilt University Medical Center, Director of Music Cognition Lab

### Abstract

I will discuss the Musical Abilities, Pleiotropy, Language, and Environment (MAPLE) framework in this talk, and make a case that it will fill a key gap in our understanding of the etiology of individual differences in language development and skill. MAPLE posits that musical and language-related abilities likely share some common genetic architecture (i.e., genetic pleiotropy) in addition to some degree of overlapping neural endophenotypes. I will present new genomic and and epidemiological findings in support of MAPLE's predictions, suggesting rhythm-language pleiotropy and associated neurobiology may account for some of the behaviorally measured inter-individual variation we see in language and reading-related skills

### Biosketch

I am an integrative scientist interested in the brain mechanisms and genetic architecture of individual differences in musicality and how musicality relates to language, health, and social interaction. I hold Bachelor of Music in Vocal Arts, an M.S. in Neuroscience, and a Ph.D. in Complex Systems and Brain Sciences. In my Associate Professor position in the Department of Otolaryngology - Head & Neck Surgery at Vanderbilt University Medical Center, I direct the Music Cognition Lab. I am also Co-Founder and Co-Chair of the Musicality Genomics Consortium.

**April 26th**
Friday at 10:30h

Hosted by: **Marc Via Garcia**
mvia@ub.edu

**Faculty of Psychology**
Campus Mundet | Aula Sala de Graus