## Abstract **459**, Date **1:00 pm, Monday, February 12, 2007 (24 hours)** Session **K14: Poster**

Discrimination of Natural and Acoustically Altered Song Syllables of Normal-Hearing and Hearing-Impaired Canaries

## \*Amanda Lauer, Robert Dooling, Michelle Eisenberg

A strain of canary bred for a distinct low-pitched song, the Belgian Waterslager (BWS), has been used in many studies of song learning and production. These birds have a hereditary high-frequency hearing loss linked to inner ear abnormalities that develop before the song learning period. There are known auditory perceptual differences between BWS and normal-hearing non-BWS canaries. For instance, BWS show reduced frequency resolution and discrimination at high frequencies and enhanced temporal resolution at high sound levels. Whether these perceptual differences influence vocal communication in these birds is an open question. Here, we investigated discrimination of natural and acoustically altered BWS and non-BWS song syllables in both strains. We also tested discrimination of natural canary song syllables in three other species: zebra finches, budgerigars, and humans. BWS canaries were equally good at discriminating among BWS and non-BWS syllables, but were better than non-BWS canaries at discriminating among BWS syllables. Zebra finches, budgerigars, and humans performed equally well when discriminating among BWS and non-BWS syllables. However, all three of these species were slightly faster than canaries when making the discriminations. This enhanced performance could be due to differences in auditory perceptual abilities or in motor capabilities. [Supported by NIH DC01372, DC05450, and DC04664].