SINGING ABILITIES IN CONGENITAL AMUSIA  Jean-François Giguère¹, Simone Dalla Bella², Isabelle Peretz¹; ¹University of Montreal, ²University of Finance and Management in Warsaw – Congenital amusia is a developmental music disorder mainly diagnosed on the basis of pitch perception. However, a recent study (Ayotte et al., 2002) showed that amusics’ sung performance was qualitatively judged as impaired with respect to controls. In the present study we examined congenital amusics’ singing abilities using quantitative methods. To this aim, 8 congenital amusics and 8 matched-controls were asked 1) to sing a well-known familiar tune twice and 2) to hum the same melody twice on “ta ta ta”. For each performance, objective measures of pitch and rhythm were obtained using a computer-assisted method. Results showed that all amusics could sing the tune but only half of them were able to hum it. Additionally, performance in both conditions indicated that amusics differed from controls. Pitch measures in singing condition were impaired in all but two amusics as compared with controls. For example, amusics made more pitch errors (M = 4) and contour deviations (M =11) as compared to controls (M = 1 and 4, respectively). Yet, rhythm measures (i.e. the number of rhythm errors) were impaired in about half of the amusics as compared with controls. Similar results were obtained in the humming condition. These results confirm that congenital amusics’ sung production is impaired. Interestingly, the amusics’ deficit in sung performance cannot be completely accounted for by their perceptive deficits, as assessed using a standardized diagnostic battery of amusia. This suggests that separable brain mechanisms may be involved in the perception and production of music.