

Effect of the early rhythmic training upon linguistic skills and ERP responses. Above panel: the graphs show the preliminary data of the gain obtained by infants who participated in the early rhythmic intervention (N =13, red lines) compared to infants who did not participate to the intervention (N =14, blue lines) upon raw scores relative to expressive (on the left) and receptive (on the right) language. Below panels: the graphs show the preliminary data of the ERP responses in the non-speech multi-feature oddball paradigm (standard stimuli, STD and difference waveforms obtained subtracting the ERP responses to the deviant stimuli for frequency minus the ERP responses to standard stimuli, MMRF). The figures on the left show the typical developmental changes in the ERP waveforms (6 vs. 12 vs. 24 months) in infants who did participated in the early rhythmic intervention (N =14) whereas figures on the right show the same developmental changes (6 vs. 12 months) in infants who participated in the early rhythmic intervention (N =13). Overall, the graphs show more mature ERP responses in 12-month-old infants who participated to the intervention, both respect to the latency of the P1 peak in response to STD stimuli and to the P2/MMR complex. Interestingly, these patterns of responses resemble those of 24-month-old children.

