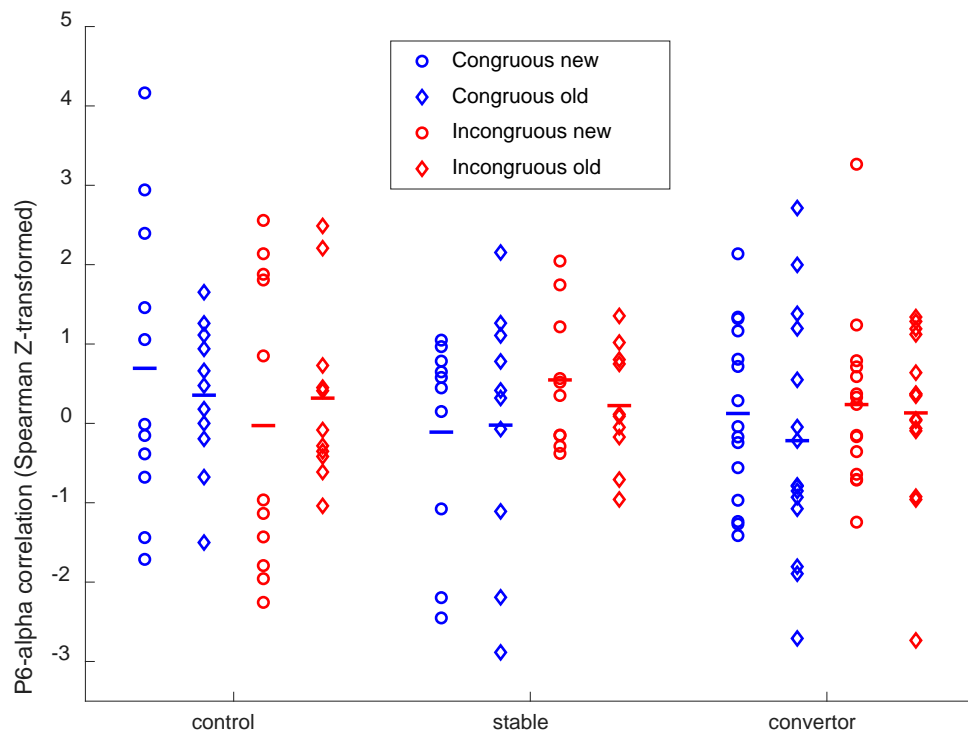


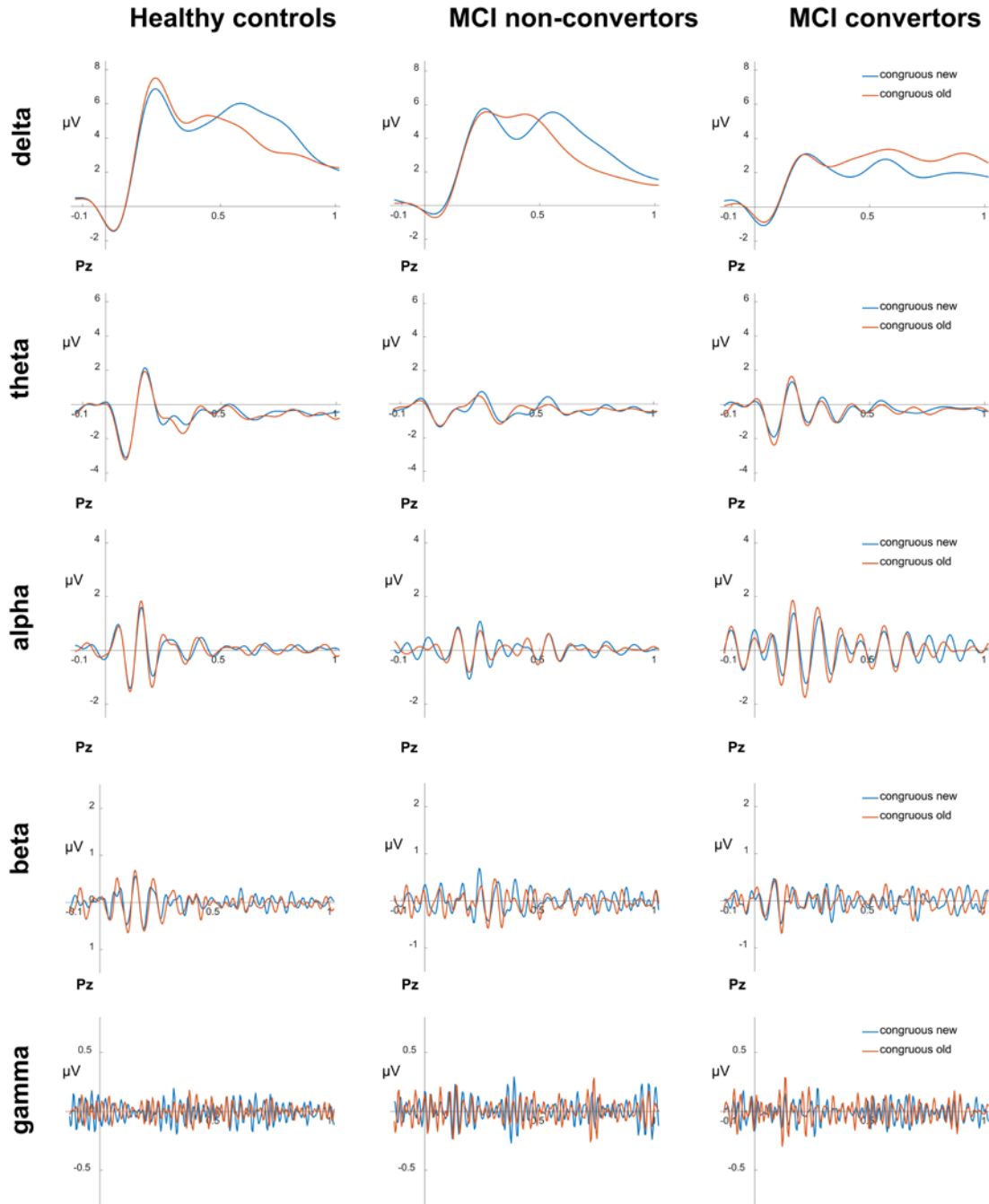
Supplementary Table 1. Pearson correlations between the EEG/ERP measures and CVLT scores across all subjects separated for congruency.

California Verbal Learning Test	P600 repetition effect						Alpha repetition effect						Theta-alpha/beta coupling					
	Overall		Congruous		Incongruous		Overall		Congruous		Incongruous		Overall		Congruous		Incongruous	
	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
Age	-.05	.780	-.16	.358	.08	.650	.03	.844	-.08	.636	.12	.498	.11	.544	.33	.053	-.21	.228
Education	-.27	.117	-.28	.105	.27	.114	.01	.948	.17	.320	-.17	.333	.16	.341	.13	.439	.11	.532
List A, trials 1-5	.49**	.003	.55***	<.001	.06	.74	-.40*	.016	-.21	0.22	-.39*	.02	-.32	.059	-.53**	.001	.20	.248
Short Delay Free Recall	.35*	.038	.43**	.009	.08	.66	-.45**	.006	-.24	0.16	-.43*	.01	-.20	.251	-.50**	.002	.31	.070
Short Delay Cued Recall	.39*	.018	.53**	.001	.13	.45	-.40*	.017	-.23	0.17	-.33*	.05	-.21	.230	-.46**	.004	.26	.134
Long Delay Free Recall	.42*	.011	.55**	.001	.09	.60	-.44**	.008	-.26	0.13	-.36*	.03	-.23	.169	-.51**	.002	.27	.110
Long Delay Cued Recall	.42*	.011	.59***	<.001	.12	.50	-.47**	.004	-.29	0.09	-.39*	.02	-.20	.238	-.49**	.002	.29	.087
discriminability	.41*	.012	.53**	.001	.04	.83	-.33*	.047	-.27	0.11	-.23	.18	-.18	.289	-.54**	.001	.37*	.027

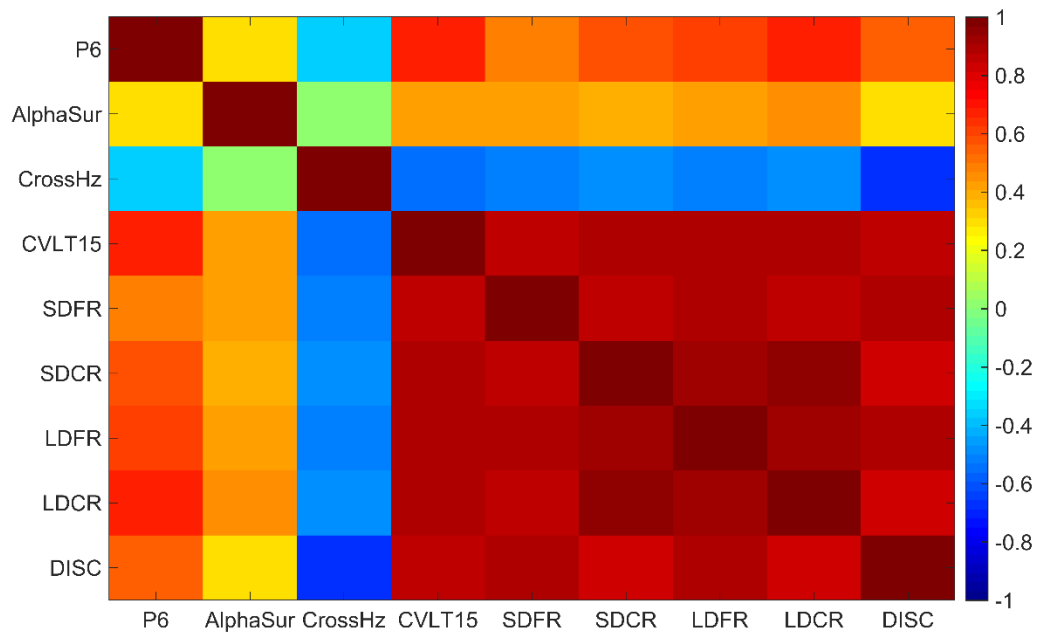
p* < .05; *p* < .01; ****p* < .001



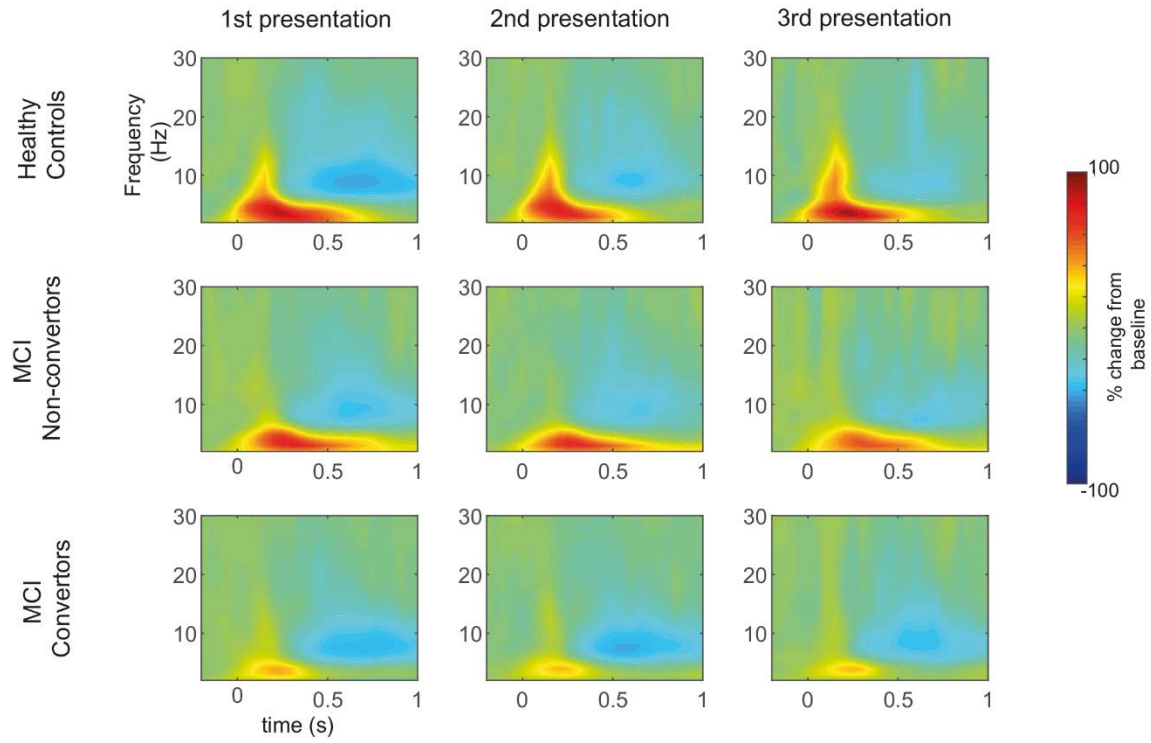
Supplementary Figure 1. Z transformed trial-by-trial correlation coefficients between P600 and alpha power change (Pz) for each participant separated for congruency (congruous vs incongruous), repetition (old vs new), and participant group (control, MCI stable, MCI convertor). Horizontal lines represent the mean correlation for each condition and each group.



Supplementary Figure 2. Bandpass-filtered ERP waveforms elicited by new and repeated semantically congruous words at electrode site midline parietal (Pz) for the 3 groups.



Supplementary Figure 3. Correlation coefficients (r) between all EEG/ERP and CVLT measures across all participants. Abbreviations: P600 congruous repetition effect (P600), alpha suppression repetition effect (AlphaSur), cross-frequency coupling (CrossHz), CVLT list A, trial 1-5 (CVLT15), CVLT short delay free recall (SDFR), CVLT short delay cued recall (SDCR), CVLT long delay free recall (LDFR), CVLT long delay cued recall (LDCR), CVLT discriminability (DISC).



Supplementary Figure 4. Time-frequency representations of percentage change in power following word onset, after the first, second and third presentations.