

Supplementary Material

Characterizing Clinical and Neuropathological Traits of *APOE* Haplotypes in African Americans and Europeans

Supplementary Table 1. Analysis of *APOE* haplotypes in individuals with mild cognitive impairment. A) Haplotype analysis individuals of European descent (EU) in NACC. B) Haplotype analysis in ROSMAP. C) Haplotype analysis of African Americans (AA) in NACC. Odds ratios and *p*-values are obtained from a logistic regression model controlling for confounders and the dosages of the different haplotypes. ε3 is taken as the reference haplotype.

A) Haplotype analysis individuals of European descent in NACC

| Name | Haplotype | Age of onset | MCI | CTR | OR | 95% CI | P value |
|--------------|-----------|--------------|-------|-------|------|-------------|----------|
| E3 | GTC | 78.2 | 0.731 | 0.77 | | | |
| E2 | GTT | 79.9 | 0.061 | 0.075 | 0.8 | [0.62-1.03] | 8.60E-02 |
| E4 Ancestral | GCC | 73.6 | 0.04 | 0.034 | 1.75 | [1.28-2.40] | 5.30E-04 |
| E4 European | ACC | 73.5 | 0.168 | 0.122 | 1.87 | [1.57-2.22] | 1.40E-12 |
| | | | 677 | 3797 | | | |

B) Haplotype analysis in ROSMAP

| Name | Haplotype | Age of onset | MCI | CTR | OR | 95% CI | P value |
|--------------|-----------|--------------|-------|-------|------|-------------|----------|
| E3 | GTC | 88.2 | 0.797 | 0.804 | | | |
| E2 | GTT | 91.3 | 0.065 | 0.104 | 0.58 | [0.41-0.83] | 3.10E-03 |
| E4 Ancestral | GCC | | 0.026 | 0.019 | 1.65 | [0.88-3.09] | 1.20E-01 |
| E4 European | ACC | 85.8 | 0.112 | 0.073 | 1.69 | [1.22-2.33] | 1.40E-03 |
| | | | 362 | 674 | | | |

C) Haplotype analysis of African Americans in NACC

| Name | Haplotype | Age of onset | MCI | CTR | OR | 95% CI | P value |
|--------------|-----------|--------------|-------|-------|------|-------------|----------|
| E3 | GTC | 75.3 | 0.541 | 0.697 | | | |
| E2 | GTT | 73.4 | 0.122 | 0.121 | 1.26 | [0.64-2.49] | 5.10E-01 |
| E4 Ancestral | GCC | 74 | 0.286 | 0.156 | 2.86 | [1.66-4.92] | 1.60E-04 |
| E4 European | ACC | 73.8 | 0.051 | 0.025 | 3.02 | [1.10-8.25] | 3.10E-02 |
| | | | 49 | 714 | | | |