**ATTACHMENT 20**

**PLANS FOR TABULATION AND ANALYSIS AND PUBLICATION
OF THE NESARC-III DATA**

Table 1. Tabulation Plans for the NESARC-III Data

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1. Prevalence of major outcome variables cross-classified by:
(1) one another; and (2) demographic, socioeconomics, and environmental variables

 Major Outcome Variables

A. Alcohol consumption levels (e.g., quantity, frequency, duration, and volume) and drinking patterns (e.g., binge drinking and episodic drinking)

B. Alcohol use disorders and their associated disabilities

2. Demographic and Socioeconomic Variables (Cross-Tabulation Variables)

A. Age

B. Race-ethnicity

C. Sex

D. Marital status

E. Personal income

F. Household income

G. Education

H. Geographic region of residence

I. Population density of residence

J. Employment status

K. Occupation

L. Adverse childhood events

M. Stressfull life events

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**Table 2.** Weighted Allele Frequencies of Genetic Variants in the US Population by Race-Ethnicity

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **GeneSymbol** | **Gene Name[Chromosome Position]** | **Pathway** | **Variant** | **Nucleotide Position[Amino Acid Change]** | **Allele** | **Total US,%** | **Non-HispanicWhite, %** | **Non-HispanicBlack, %** | **MexicanAmerican** | **p value** |
|  *ABCB1* | ATP-binding cassette,subfamily B (MDR/TAP),member 1[7q21.1] | 13 | rs1045642 |  | T (C) |  |  |  |  |  |
|  *ACE* | Angiotensin 1 convertingenzyme (peptidyl-dipeptidase A)1[17q23.3] | 2, 12 | rs4646994 |  | ins(del) |  |  |  |  |  |
|  *ADH1B* | Alcohol dehydrogenase IB(class I), beta polypeptide[4q21-q23] | 12, 13 | rs1229984rs17033rs2066702 |  | A(G)G(A)T(C) |  |  |  |  |  |
|  *ADH1C* | Alcohol dehydrogenase IC(class I), gamma polypeptide[4q21-q23] | 12, 13 | rs1693482rs698 |  | A(G)G(A) |  |  |  |  |  |
|  *ADRB1* | Adrenergic, beta-1- receptor[10q24-q26] | 2, 3, 12 | rs1801252 |  | G(A) |  |  |  |  |  |
|  *ADRB2* | Adrenergic, beta-2- receptor,surface [5q311-q32] | 2, 3, 12 | rs1042713rs1042714 |  | A(G)G(C) |  |  |  |  |  |
|  *ADRB3* | Adrenergic, beta-3- receptor[8p12-p11.2] | 12 | rs4994 |  | C(T) |  |  |  |  |  |
|  *ALAD* | Aminolevulinate, delta-dehydratase [9q33.1] | 12, 13 | rs1800435 |  | C(G) |  |  |  |  |  |

**Table 3.** Results of Logistic Regression Analyses of Alcohol Dependencea

|  |  |  |  |
| --- | --- | --- | --- |
|  | **European American** | **African American** | **Pooled** |
| **OR (95% CI)** | ***P* Value** | **OR (95% CI)** | ***P* Value** | **OR (95% CI)** | ***P* Value** |
| Sex |  |  |  |  |  |  |
| Age, y |  |  |  |  |  |  |
| Ancestry proportion score |  |  |  |  |  |  |
| Adult traumatic events |  |  |  |  |  |  |
| Childhood adversity |  |  |  |  |  |  |
| DRD2 genotype |  |  |  |  |  |  |
| DRD2 × adult traumatic events |  |  |  |  |  |  |
| DRD2 × childhood adversity |  |  |  |  |  |  |

Abbreviations: OR odds ratio; CI, confidence interval.

a Sex, age, adult traumatic events, and childhood adversity will be used as covariates in all the models. In addition, ancestry proportion scores will be included in the pooled model.

**Table 4**. Allele and Genotype Frequencies of CNR1 Markers in European Americans

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Markers** | **Allele or Genotype** | **Control** | **DD&AD** | **DD** | **AD** | **Total SD** |
| **n** | **f** | **n** | **f** | **n** | **f** | **n** | **f** | **n** | **f** |
| SNP1 | C |  |  |  |  |  |  |  |  |  |  |
| rs1884830 | G |  |  |  |  |  |  |  |  |  |  |
|  | CC |  |  |  |  |  |  |  |  |  |  |
|  | CG |  |  |  |  |  |  |  |  |  |  |
|  | GG |  |  |  |  |  |  |  |  |  |  |
| SNP2 | A |  |  |  |  |  |  |  |  |  |  |
| rs2180619 | G |  |  |  |  |  |  |  |  |  |  |
|  | AA |  |  |  |  |  |  |  |  |  |  |
|  | AG |  |  |  |  |  |  |  |  |  |  |
|  | GG |  |  |  |  |  |  |  |  |  |  |
| SNP3 | T |  |  |  |  |  |  |  |  |  |  |
| rs6454674 | G |  |  |  |  |  |  |  |  |  |  |
|  | TT |  |  |  |  |  |  |  |  |  |  |
|  | TG |  |  |  |  |  |  |  |  |  |  |
|  | GG |  |  |  |  |  |  |  |  |  |  |
| SNP4 | A |  |  |  |  |  |  |  |  |  |  |
| rs806379 | T |  |  |  |  |  |  |  |  |  |  |
|  | AA |  |  |  |  |  |  |  |  |  |  |
|  | AT |  |  |  |  |  |  |  |  |  |  |
|  | TT |  |  |  |  |  |  |  |  |  |  |
| SNP5 | T |  |  |  |  |  |  |  |  |  |  |
| rs806377 | C |  |  |  |  |  |  |  |  |  |  |
|  | TT |  |  |  |  |  |  |  |  |  |  |
|  | TC |  |  |  |  |  |  |  |  |  |  |
|  | CC |  |  |  |  |  |  |  |  |  |  |
| SNP6 | T |  |  |  |  |  |  |  |  |  |  |
| rs806371 | G |  |  |  |  |  |  |  |  |  |  |
|  | TT |  |  |  |  |  |  |  |  |  |  |
|  | TG |  |  |  |  |  |  |  |  |  |  |
|  | GG |  |  |  |  |  |  |  |  |  |  |
| SNP7 | A |  |  |  |  |  |  |  |  |  |  |
| Rs1049353 | G |  |  |  |  |  |  |  |  |  |  |
|  | AA |  |  |  |  |  |  |  |  |  |  |
|  | AG |  |  |  |  |  |  |  |  |  |  |
|  | GG |  |  |  |  |  |  |  |  |  |  |
| SNP8 | T |  |  |  |  |  |  |  |  |  |  |
| rs806368 | C |  |  |  |  |  |  |  |  |  |  |
|  | TT |  |  |  |  |  |  |  |  |  |  |
|  | TC |  |  |  |  |  |  |  |  |  |  |
|  | CC |  |  |  |  |  |  |  |  |  |  |
| SNP9 | T |  |  |  |  |  |  |  |  |  |  |
| rs806365 | C |  |  |  |  |  |  |  |  |  |  |
|  | TT |  |  |  |  |  |  |  |  |  |  |
|  | TC |  |  |  |  |  |  |  |  |  |  |
|  | CC |  |  |  |  |  |  |  |  |  |  |
| SNP10 | T |  |  |  |  |  |  |  |  |  |  |
| rs2146274 | C |  |  |  |  |  |  |  |  |  |  |
|  | TT |  |  |  |  |  |  |  |  |  |  |
|  | TC |  |  |  |  |  |  |  |  |  |  |
|  | CC |  |  |  |  |  |  |  |  |  |  |

DD&AD, comorbid DD and AD; DD, drug dependence; AD, alcohol dependence; Total-SD, all the cases in the present study; n, number of chromosomes (for alleles) or individuals (for genotypes); f, frequency.

a*p*≤.05, b*p*≤.05, c*p*≤.007, (= α) for conventional case-control comparison.

d*p*≤.05, e*p*≤.05, f*p*≤.007, (= α) for structured association (SA) analysis using STRAT.

**Table 5**. Regression Analysis on the Association between SNP3 × SNP8 Interaction and Phenotypes in European Americans

|  |  |  |
| --- | --- | --- |
|  | **Genotype Model** | **Mixed Model** |
|  |  |  |  |  | **95% CI for OR** |  |  |  |  | **95% CI for OR** |
| **Phenotype** | **Covariates** | **β** | ***p*** | **OR** | **Lower** | **Upper** | **Covariates** | **β** | ***p*** | **OR** | **Lower** | **Upper** |
| DD&AD | Constant |  |  |  |  |  | Constant |  |  |  |  |  |
|  | Sex |  |  |  |  |  | Sex |  |  |  |  |  |
|  | Age |  |  |  |  |  | Age |  |  |  |  |  |
|  | SNP3 × SNP8 |  |  |  |  |  | SNP3 × SNP8 |  |  |  |  |  |
|  | SNP3^G/G × SNP8^T/T |  |  |  |  |  |  |  |  |  |  |  |
|  | SNP3^G/T × SNP8^T/T |  |  |  |  |  |  |  |  |  |  |  |
|  | SNP3^G/T × SNP8^T/C |  |  |  |  |  |  |  |  |  |  |  |
|  | SNP3^G/G × SNP8^T/C |  |  |  |  |  |  |  |  |  |  |  |
| DD | Constant |  |  |  |  |  | Constant |  |  |  |  |  |
|  | Sex |  |  |  |  |  | Sex |  |  |  |  |  |
|  | Age |  |  |  |  |  | Age |  |  |  |  |  |
|  | SNP3 × SNP8 |  |  |  |  |  | SNP3 × SNP8 |  |  |  |  |  |
|  | SNP3^G/G × SNP8^T/T |  |  |  |  |  |  |  |  |  |  |  |
|  | SNP3^G/T × SNP8^T/T |  |  |  |  |  |  |  |  |  |  |  |
|  | SNP3^G/T × SNP8^T/C |  |  |  |  |  |  |  |  |  |  |  |
|  | SNP3^G/G × SNP8^T/C |  |  |  |  |  |  |  |  |  |  |  |
| AD | Constant |  |  |  |  |  | Constant |  |  |  |  |  |
|  | Sex |  |  |  |  |  | Sex |  |  |  |  |  |
|  | Age |  |  |  |  |  | Age |  |  |  |  |  |
|  | SNP3  |  |  |  |  |  | SNP3 × SNP8 |  |  |  |  |  |
|  | SNP3^G/G  |  |  |  |  |  |  |  |  |  |  |  |
|  | SNP3^G/T  |  |  |  |  |  |  |  |  |  |  |  |
|  | SNP3 × SNP8 |  |  |  |  |  |  |  |  |  |  |  |
| Total SD | Constant |  |  |  |  |  | Constant |  |  |  |  |  |
|  | Sex |  |  |  |  |  | Sex |  |  |  |  |  |
|  | Age |  |  |  |  |  | Age |  |  |  |  |  |
|  | SNP3 × SNP8 |  |  |  |  |  | SNP3 × SNP8 |  |  |  |  |  |
|  | SNP3^G/G × SNP8^T/T |  |  |  |  |  |  |  |  |  |  |  |
|  | SNP3^G/T × SNP8^T/T |  |  |  |  |  |  |  |  |  |  |  |
|  | SNP3^G/T × SNP8^T/C |  |  |  |  |  |  |  |  |  |  |  |
|  | SNP3^G/G × SNP8^T/C |  |  |  |  |  |  |  |  |  |  |  |

DD&AD, DD, AD and Total. Phenotypes, Covariates, Genotype model, β, OR, CI, and E – n. Mixed model, the genotypes of SNP3 and SNP8 are in an additive and recessive
models respectively in the regression model, that is, SNP3^T/T = 0, G/T = 1, G/G = 2, SNP8^C/C = C/T = 0, and SNP8^T/T = 1.