

WHAT IS CLAIMED IS:

1. A method of determining whether or not an individual drinks ethanol, comprising the steps of:
 - determining the methylation status of at least one CpG dinucleotide in a biological sample from the individual; and
 - correlating the methylation status of the at least one CpG dinucleotide to determine whether or not the individual drinks ethanol,
 - wherein a position of the at least one CpG dinucleotide comprises position 71389896 of chromosome 10,
 - wherein demethylation at position 71389896 of chromosome 10 is indicative of previous or current ethanol drinking, and
 - wherein remethylation at position 71389896 of chromosome 10 is indicative of less or no ethanol drinking.
2. The method of claim 1, wherein the determining step comprises:
 - contacting DNA in the biological sample with bisulfite under alkaline conditions to produce bisulfite-treated DNA;
 - optionally, amplifying the bisulfite-treated DNA to produce amplified bisulfite-treated DNA;
 - contacting the bisulfite-treated DNA with at least one oligonucleotide that is complementary to a sequence comprising the at least one CpG dinucleotide; and
 - detecting the methylation status of the at least one CpG dinucleotide.

3. The method of claim 2, wherein the at least one oligonucleotide detects the CpG dinucleotide in the bisulfite-treated DNA in the unmethylated state.
4. The method of claim 2, wherein the at least one oligonucleotide detects the CpG dinucleotide in the bisulfite-treated DNA in the methylated state.
5. The method of claim 1, wherein the biological sample is selected from the group consisting of peripheral blood, lymphocytes, urine, saliva, and buccal cells.
6. The method of claim 1, wherein the methylation status of the at least one CpG dinucleotide is determined using bisulfite-treated DNA.
7. The method of claim 1, further comprising obtaining self-report data from the individual regarding whether or not the individual is drinker of ethanol.
8. A computer implemented method for determining whether or not an individual drinks ethanol, the method comprising:
 - obtaining measured data associated with the drinker, the measured data comprising one or more measured CpG methylation status;
 - generating a predictive score based on the obtained measured data; and
 - providing a likelihood of ethanol drinking by the drinker based on the predictive score, wherein a position of at least one CpG dinucleotide comprises position 71389896 of chromosome 10, wherein demethylation at position 71389896 of chromosome 10 is indicative of previous or current ethanol drinking, and wherein

remethylation at position 71389896 of chromosome 10 is indicative of less or no ethanol drinking.

9. The method of claim 8, further comprising:
determining the CpG methylation status for the drinker.
10. The method of claim 8, further comprising:
outputting a predicted level of ethanol drinking based on the predictive score.