

Name: \_\_\_\_\_

For the final two-week lab experience, we will determine the genotype and phenotype for caffeine metabolism of human participants. Humans are fast, intermediate, or slow metabolizers of caffeine. Students enrolled in the class may volunteer to participate. Your grade in this class is not effected by your decision to or not to provide samples for genotype and phenotype analysis. Volunteering to provide samples does not guarantee that you will be selected to provide samples for the lab experience.

To determine the genotype of participants, saliva will be collected. Genomic DNA will be extracted with identifying information. The DNA region upstream of the CYP1A2 gene will be amplified by PCR again with identifying information. These amplified DNA fragments will be used to determine the genotype of the of the participant. After the conclusion of the lab, all genomic DNA and amplified DNA material will be destroyed by digestion with DNase treatment. Identifying participant information with genotype results for the DNA region upstream of the CYP1A2 gene will be reported in laboratory notebooks including the possibility of residing in a lab partner's notebook. Information contained in lab notebooks will not be destroyed at the conclusion of this class.

To determine the phenotype of participants, saliva will be collected. Participants are asked to refrain from consuming caffeine for 12 hours prior to the start of lab. At the start of lab, a baseline saliva sample will be collected followed by the ingestion of a commercial 200 mg caffeine tablet. Saliva samples will be collected at 30 minute intervals. The caffeine concentration in salvia will be quantified. After the conclusion of the lab, all samples will be destroyed by autoclave treatment. Identifying participant information with phenotype results for the rate of caffeine metabolism will be reported in laboratory notebooks including the possibility of residing in a lab partner's notebook. Information contained in lab notebooks will not be destroyed at the conclusion of this class.

Students with certain medical conditions should not participate in activities where saliva is collected and studied in a teaching laboratory. Students with certain medical conditions should not consume caffeine. If you have questions about your ability to participate in this lab experience, you should contact a licensed physician familiar with your medical history.

\_\_\_\_\_ I am ***willing*** and ***able*** to participate in this caffeine metabolism genotype and phenotype lab experience and give my consent.

\_\_\_\_\_ I am ***unwilling*** or ***unable*** to participate in this caffeine metabolism genotype and phenotype lab experience and give my dissent.

\_\_\_\_\_ I abstain from responding.

Signature: \_\_\_\_\_

Date: 04/17/2019