

Biology

Contract #	Term	Course	Contract Title	Contract Description
221030	Fall 2014	BIOL-3215K	Astrocytes and Hormones	My contract will consist of a lab experiment in which I will measure how the growth of astrocytes is affected by different amounts of female hormone. I will research the amounts of hormones females have over different age intervals and use that information to determine how much hormone to treat the astrocytes with.
227011	Fall 2014	BIOL-3216K	Gene-targeted mutagenesis in Yeast	I will carry out a proof-of-concept project in which I will identify new mutations in the ADE2 gene of yeast. Mutations in the ADE2 gene produce a bright red colony color instead of the normal white color of yeast. There are other genes that can cause this mutation so in order to ensure that it is the ADE2 gene, I will generate a diploid heterozygous strain of yeast that has one normal copy of ADE2 and one copy of a knockout gene in place of the other ADE2 allele. Because the mutation in the ADE2 gene is recessive, any mutation in the one good ADE2 gene will now be visible. Any other genes that can present the mutation will be present in two good copies so that I will be certain that the red color mutation is due to a mutation in the ADE2 gene. I will then carry out isolations of the new mutants by UV mutagenesis using tetrad dissection and segregation analysis to confirm that they are produced by the desired alleles of ADE2.
221012	Fall 2014	BIOL-5515U	Poster Design showing Effects of Acrylamide and Caffeine on Crayfish and Earthworms	Rebecca Moody and I, Raquel Hand, will be working together with Dr. Hughes to design a class poster showing the results of our lab experiment dealing with the neurotoxic effects of caffeine and acrylamide on earthworms and crayfish. We will organize the data recorded on the invertebrates resulting from the different concentrations of caffeine and acrylamide they are subjected to. We will gather and combine each student's individual data recorded, put it all onto a poster using graphs and summaries. We will design a beautiful and scientific poster before the end of the term! :)
221017	Fall 2014	BIOL-5515U	Neuroscience class research poster	This semester in our Neuroscience class, we are conducting two experiments involving nerve activity. One will measure the neurotoxicity of caffeine, and the other will measure the neurotoxicity of acrylamide. We will be conducting both of these experiments on earthworms and crayfish. To present what we found, all the members of our class will be completing a difference section of our poster. Raquel Hand and I will be working with Dr. Hughes to collect the class's summaries as a whole and organize them into a poster for presentation in the spring.
221035	Fall 2014	BIOL-5515U	Comparison of Histological Special Stains on Small Intestine or Appendix	We will stain small intestine or appendix tissues using: Hematoxylin and eosin, alcian blue, Mayer's mucicarmine, and Gomori trichrome. These 4 different types of staining are used in order to show different components within the tissue.