Platform presentation preferred

Graduate student presenter

**Characterizing Microplastic and Leachate Accumulation in Wild California Rockfish.** Z.T. Spooner, Nicklisch Lab and Pasparakis Lab, Department of Environmental Toxicology, University of California, Davis, Davis, California. With the Pacific Ocean subject to prolific levels of plastic pollution, the study of the absorption and accumulation of potentially toxic plastic monomers and other chemicals in fish of ecological and economic importance is imperative. In this study, quantitative analysis of the chemical composition of microplastics and chemical leachates found in tissues of wild-caught California rockfish (*Sebastes spec.*) will be performed using liquid-solid extractions and combined gas chromatography-mass spectrometry (GC-MS). Bisphenol A (BPA), a model plastic leachate, and DDT, a legacy California marine pollutant, will be quantified in representative tissue of metabolism (liver) and for human consumption (muscle). Homogenized muscle and liver samples will be subject to three different treatments before quantification: (1) acid/base digestion to separate microplastics from tissue (2) high temperature acid/base digestion to separate and depolymerize plastics and (3) direct analysis for chemicals in the tissue homogenate. Microplastics will undergo liquid-solid extraction to isolate analytes, and BPA will be derivatized prior to GC loading. The results of these studies will quantify relative ratios of microplastic-associated chemicals in metabolic versus edible tissue and possibly identify novel chemical metabolites in commercial rockfish species. Results from this study will be used to inform fisheries and governmental agencies about seafood safety for human consumption with respect to microplastic and chemical leachate contamination, and to inform conservationists of the threat level that these environmental pollutants and endocrine disruptors could pose towards the health and survival of California rockfish populations.