

title	Rapid detection of pathogenic <i>Vibrio parahaemolyticus</i> by real-time PCR
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additional	
department	Biological Sciences
proj_desc	Sensitive, specific and timely detection of pathogenic <i>Vibrio parahaemolyticus</i> is of paramount importance for public health regulatory agencies and food industry to reduce and control infections caused by this seafood-borne pathogen. This project will utilize an advanced molecular technique, real-time PCR, to detect and to quantify total and pathogenic <i>V. parahaemolyticus</i> in pure cultures and in food matrices. Students who take part in this project will gain experience in common microbiological skills and molecular techniques, designing experiments involving conventional and real-time PCR.
inter_desc	This project bridges classical microbiology, molecular biology and bioinformatics. Common microbiological knowledge and techniques are essential to prepare media and buffer and to culture <i>V. parahaemolyticus</i> . Preparation for PCR requires basic molecular biology technique. Students will also learn the molecular principles of PCR in order to understand and interpret results. Designing primer and probe sets for real-time PCR requires data mining from GenBank and other sequence databases. Consequently, students will be exposed to some aspects of bioinformatics.
links	
students	1
majors	MCRO, BIO, CHEM
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