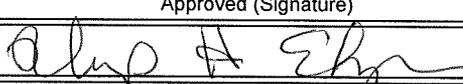


Animal

U.S. Department of Agriculture Accomplishments Report AD-421 U.S. Dept. of Agriculture, State Agricultural Experiment Stations and Other Institutions			Date (Month, Day, Year)
1. Accession 0217469	Agency Identification No. 2. CSREES 3. LA.B	5. Work Unit/Project No. LAB93968	6. Status Annual Report
7. Title Evaluation of a Candidate Marker for Selective Breeding for Disease Resistance in Oysters			
12. Investigator Name(s) (Last Name and Initials) La Peyre, J. F.			
20. Termination Date 12/31/2013		40. Period Covered (mo/da/year): 01/01/2011 TO 12/31/2011	
Outputs: The project resulted in one peer-reviewed journal article.			
Outcomes/Impacts: The second most abundant protein of eastern oyster plasma was purified, characterized and named Segon. The 40 kDa protein as determined by SDS-PAGE under reducing conditions made up about 17% of plasma proteins and was found to be expressed in hemocytes by in situ hybridization. Its function has not yet been determined but ICP metal analysis of the purified protein indicated high association with iron suggesting the protein may play a role in the oyster host defense. The potential role of this novel protein in depriving the oyster protozoan parasite Perkinsus marinus of iron is being assessed.			
Publications: Itoh N, Xue Q G, Schey KL, Li Y, Cooper RK and La Peyre JF. 2011. Characterization of dominin, the major plasma protein of eastern oysters (<i>Crassostrea virginica</i>). <i>Comparative Biochemistry and Physiology</i> 158B:9-22.			
Participants: J. LaPeyre (PI), Q. Xue, R. Cooper, S. Casas, LSU AgCenter; J. Gauthier, Loyola University; K. Schey, Vanderbilt University.			
Target Audiences: Potential users of the information from this research include commercial oyster growers seeking to develop new seed sources with increased dermo resistance through hatcheries, and managers interested in conservation and restoration of this oyster species. Our findings may also lead to the use of these proteins by the biotechnology industry.			
Project Modifications: Nothing significant to report during this reporting period.			
Approved (Signature)		Title	Date
			3-23-12