Project Leader (PI): Attila Karsi

Co-PI(s): Mark Lawrence

Collaborator(s): None

Objectives:
- Identify differentially expressed high-risk *L. monocytogenes* genes before and after catfish fillet attachment

Milestones for FY 2016-17:
Title: Identification of genes involving in *Listeria monocytogenes* attachment to catfish fillets

Milestones fully met

Progress Report:
We completed the objective of our project successfully during the extension period. Briefly, all catfish fillet attachment experiments were completed, and total RNAs from the fillet-attached and media-grown *Listeria* were isolated. After successful rRNA depletion and sequencing library preparation, RNA sequencing (RNA-Seq) analysis was conducted successfully and data were analyzed to determine differentially expressed genes.

Accomplishments
RNA-Seq analysis was conducted successfully. 336 genes were upregulated, and 43 genes were downregulated in the fillet-attached group compared to media-grown control group. Flagellar genes were among the highly expressed genes (Fig. 1).

Significant Activities that Support Special Target Populations:
With the completion of highly challenging RNA-Seq experiments, we will have a clear understanding of the genes that may be required by *L. monocytogenes* to attach fish fillets.

Technology Transfer:
None

International Cooperation / Collaboration
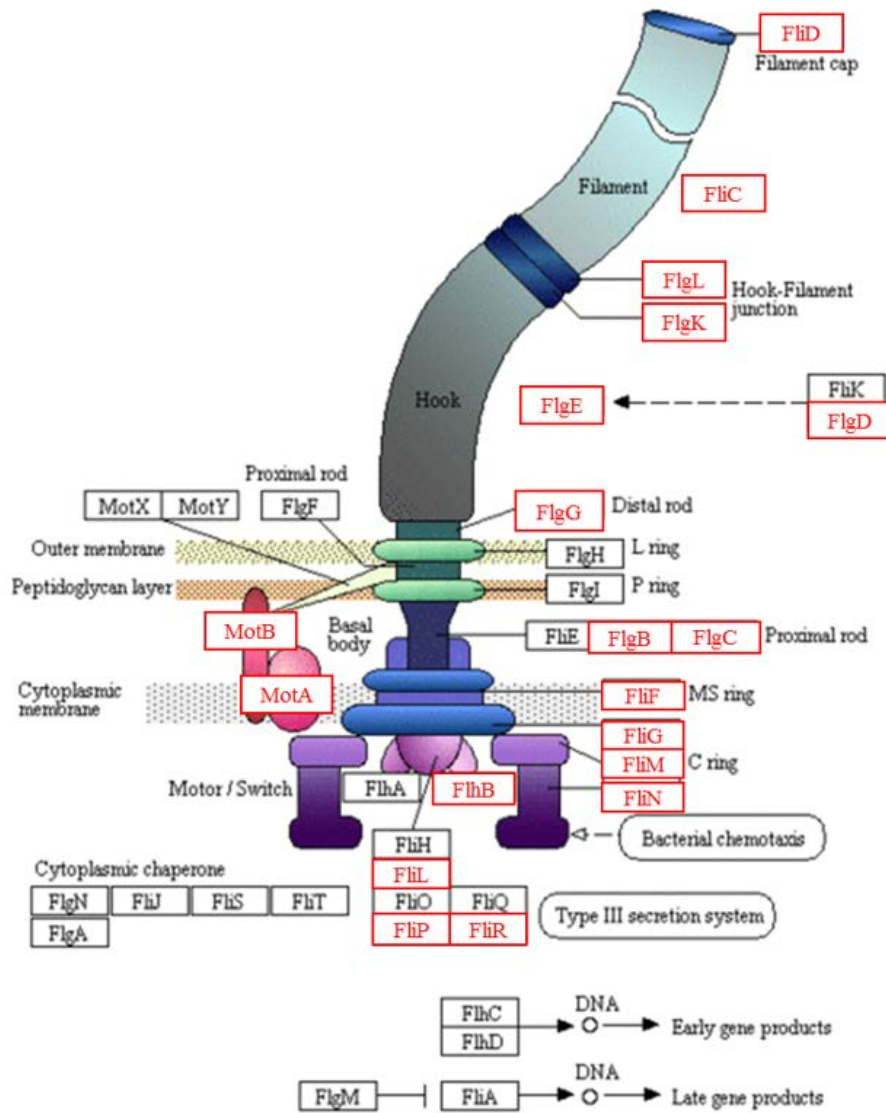None

Publications:
In preparation

Figure:

Fig. 1. *L. monocytogenes* flagellar structure. Red labels indicate highly expressed genes during catfish fillet attachment.