Nearshore Health & Nonpoint Source Pollution

Focus Area

Nearshore Health & Nonpoint Source Pollution

Innovative Rapid Identification of Lake Erie Fecal Sources

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US EPA GLRI project

- Title: Innovative Rapid Identification of Lake Erie Fecal Sources

- Duration: 7/1/2010 – 12/31/2011 (18 mon)

Project goals

We are developing a new molecular tool to identify and quantify the principal contamination sources at Lake Erie beaches. This new method, together with beach sanitary surveys, will elucidate human versus waterfowl impacts on the beaches. It will enable targeted remediation plans and will ultimately reduce human health risks associated with swimming.

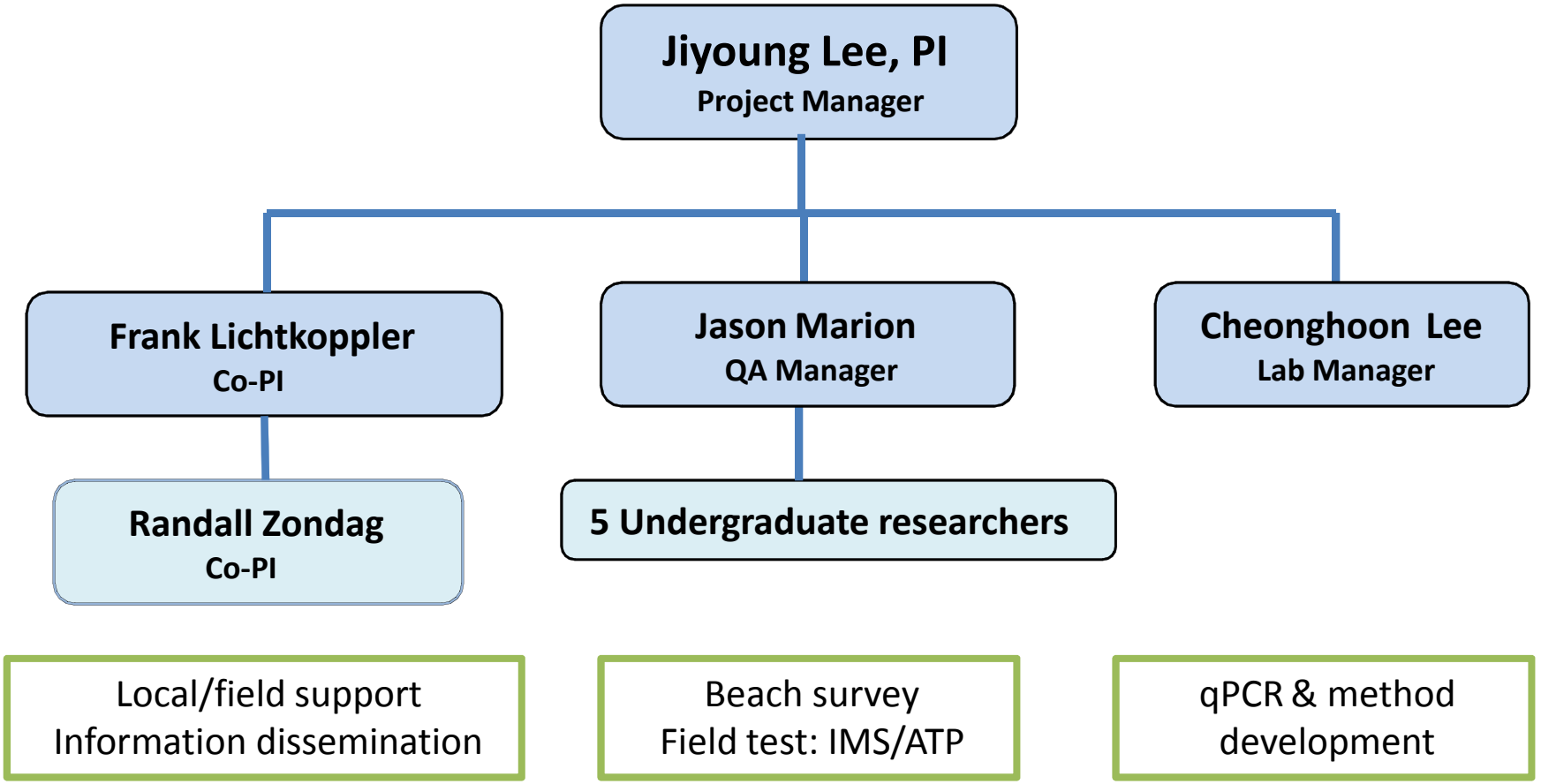
Objectives

1) to investigate contamination sources impacting Lake Erie by developing an innovative duplex human-specific and waterfowl-specific source-tracking tool.
2) to compare two rapid methods, IMS/ATP and qPCR, with regard to their ability to rapidly quantify human-specific fecal sources.
3) to determine associations between routine sanitary and water quality surveys with levels of source-specific fecal contamination measured by 1) and 2), thereby permitting data-driven remediation planning.

Study sites

4 sampling locations
July, August, September 2010

Project Team



Supporting Agencies

Ohio Department of Natural Resources: Scott Fletcher
Lake County General Health District: Nancy Niehus

Other ongoing beach-related research

- New Fecal & Pathogen Indicators and Development of Rapid Detection Method for Protecting Health from Recreational Waterborne Illnesses

- Rapid Detection of viable B. fragilis in Lake Erie beaches

- Protecting Public Health at Ohio Inland Beaches: Water Quality Indicators for Recreational Microbial Exposure

Environmental Microbiology Group

- Postdoctoral researchers:



- Doctoral student researchers:



- Master student researchers:


E. Park P.S. Agidi

- Undergraduate researcher:

Thank you

Questions?

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