

Urmi Ghosh-Dastidar, Short-term visitor, February & June, 2011

Project Title: *Study and analysis of aquatic pathogenic transmission*

Urmi Ghosh-Dastidar and Suzanne Lenhart worked on optimal vaccination strategies in an epidemic model of cholera. The effect of seasonality in pathogen transmission on vaccination strategies was investigated under several types of disease scenarios, including an endemic case and a new outbreak case. The model is an extension of a general water-borne pathogen model. This work involves optimal control problem formulation, analysis and numerical simulations, and should be completed later this year and a paper will be submitted to a mathematical biology journal.