ABSTRACT

Bacteria of the genus *Wolbachia* (Proteobacteria, Rickettsiales, Rickettsiaceae) are maternally inherited intracellular symbionts of many species of arthropods (Arthropoda) and filarial nematodes (Nematoda, Secernentea). Due to the ability of *Wolbachia* to induce reproductive anomalies in their hosts and to reduce their infection by pathogenic organisms and viruses, they are profoundly studied. This bachelor thesis is a summary of available information regarding interactions of *Wolbachia* with mosquitoes (Diptera, Culicidae) and sand flies (Diptera, Psychodidae, Phlebotominae), vectors of many important infectious pathogens, and possibilities of their use in the control of pathogen transmission.

Key words: *Wolbachia*, Phlebotominae, Culicidae, vector-borne diseases, symbiosis, vector control method