

Genome analysis of the haloalkaliphilic bacterium *Rhodobaca barguzinensis*

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This PhD thesis final report presents results of a research focused on the evolution of phototrophy in the bacterial order *Rhodobacterales* with a special regard to its haloalkaliphilic representatives. The photoheterotrophic bacterium *Rhodobaca barguzinensis* alga05 was used as an organism of choice. Its phylogeny, genome organization, and metabolic potential were characterized. The main result of the thesis is that phototrophy is a genuine trait among the haloalkaliphilic representatives of the *Rhodobacter-Rhodobaca* group inside the *Rhodobacterales* clade.