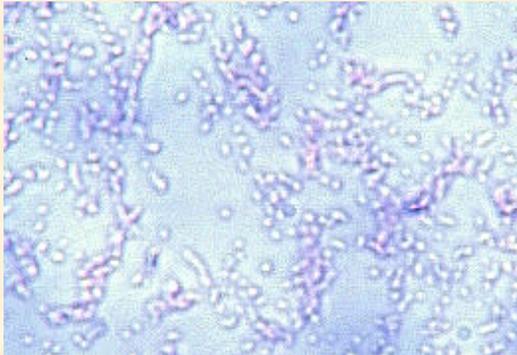


Genomes To Life: Bacterial Cell Growth of *Rh. palustris*

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Rhodospseudomonas palustris at
400X, stained

Rhodospseudomonas palustris (RhPal), a photoautotrophic alpha-proteobacterium of the purple non-sulfur group, is one of two microorganisms whose protein complexes are the focus of the Genomes To Life Center for Molecular and Cellular Systems; it is already the focus of DOE Microbial Cell Projects (MCP), and the Center will leverage the MCP to characterize the complexes within RhPal.

We have begun growth studies of RhPal under both anaerobic photoheterotrophic and aerobic heterotrophic conditions. An initial 7 gram pellet of cell paste, produced using dark, aerobic conditions and separated via centrifugation, is being used to develop further fractionation and processing steps required for proteome analysis.

Microbial proteome expression (the entire suite of proteins) as well as individual protein complexes will be examined under different growth and metabolic conditions. RhPal is of interest because it can grow under a wide variety of metabolic states and has a presumed equally wide variety of proteomes.



Rhodospseudomonas palustris grown under dark aerobic growth conditions; broth attains a pink tint