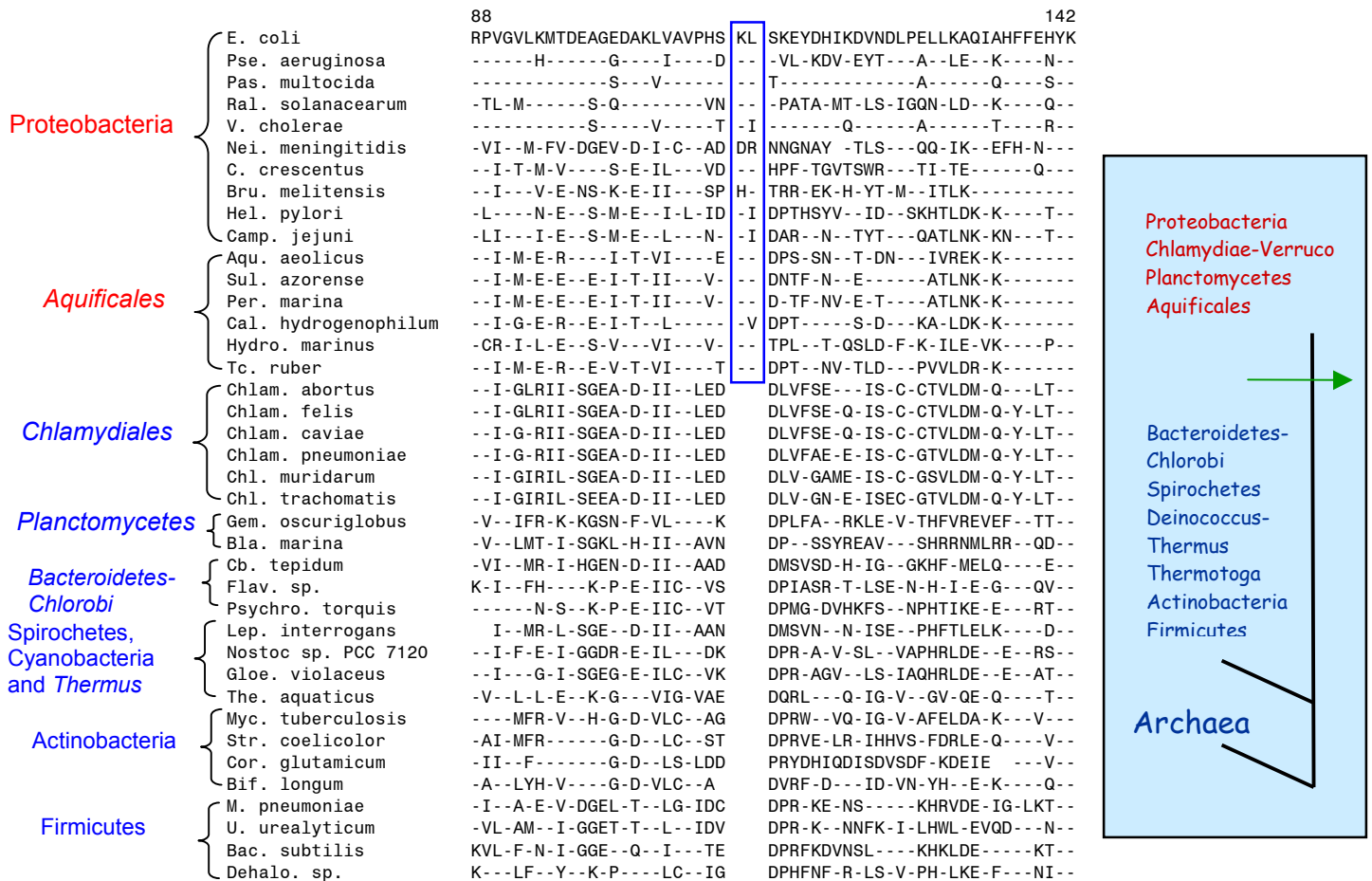


Main Line Signature in Inorganic Pyrophosphatase

Gupta, R.S.(2003) Photosynthesis Res.76:173-183;
Griffiths and Gupta (2004) Int. Microbiol. 7, 41-52



A 2 aa insert in inorganic pyrophosphatase that is commonly shared by various Proteobacteria and *Aquificales* but not found in any other phyla of bacteria. This insert provide evidence that *Aquificales* is a late branching lineage within the Bacteria, which is in accordance with signature sequences in various other proteins (e.g. Hsp70, RpoB, RpoC, Hsp60, GyraseB, FtsZ etc.). The genetic change (RGC) responsible for this insert likely occurred at the evolutionary stage indicated in the interpretive diagram. Dashes indicated identity with the amino acid on the top line. Sequence information for only representative species is shown. All other sequences from these groups behaved in the indicated manner.