

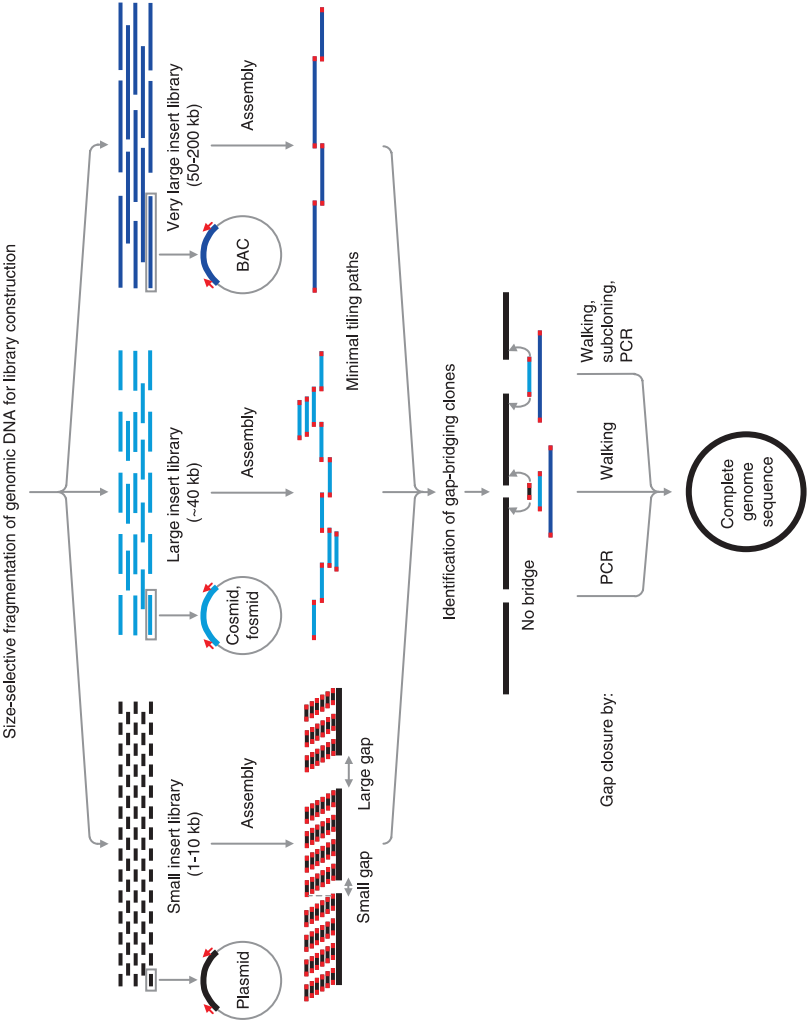


Figure 3.1. Determination of complete genome sequences by whole genome shotgun sequencing supported by large insert libraries for gap closure. Red arrows indicate pairwise end-sequencing and end-sequences are also marked in red. (The black and white version of this figure appears on page 119.)

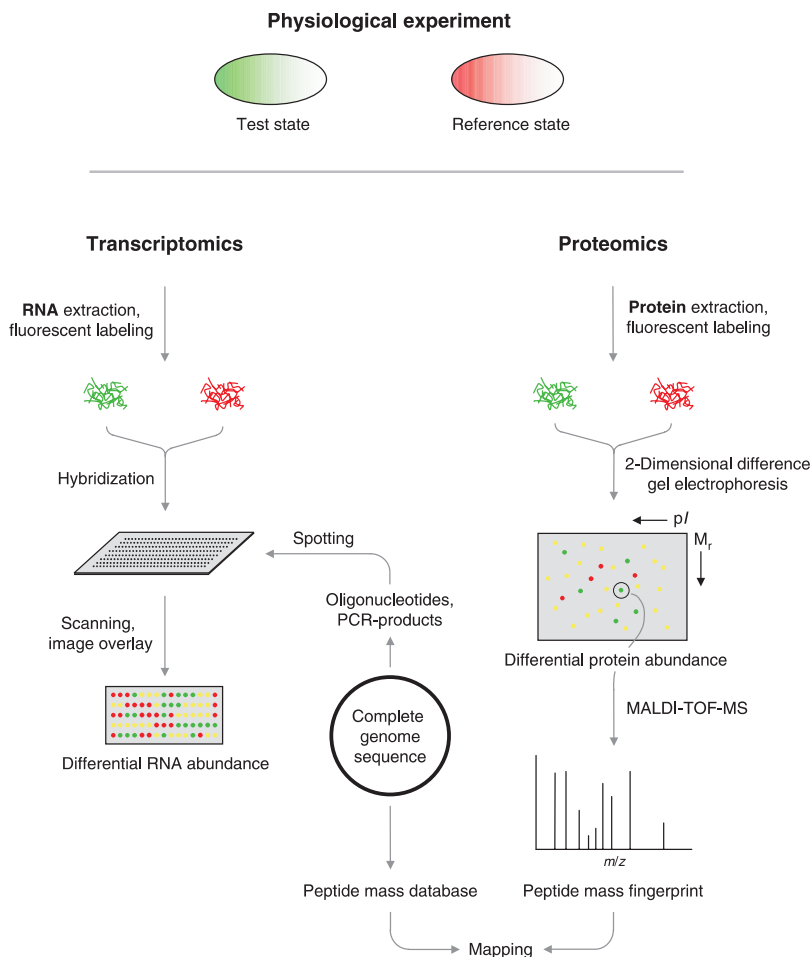


Figure 3.2. Genome-enabled workflow of transcriptomic and proteomic approaches to analyze regulatory processes. (The black and white version of this figure appears on page 122.)

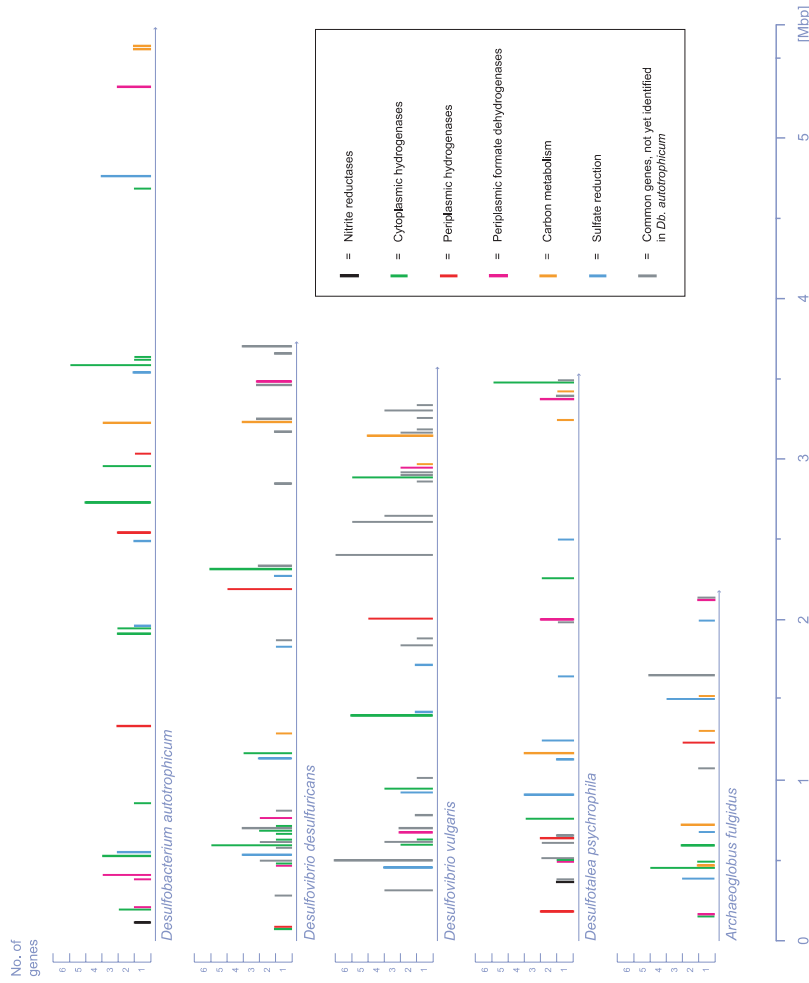


Figure 3.3. Genomic organization of genes involved in major metabolic functions in sulphate-reducing prokaryotes with known complete genome sequence. (The black and white version of this figure appears on page 130.)

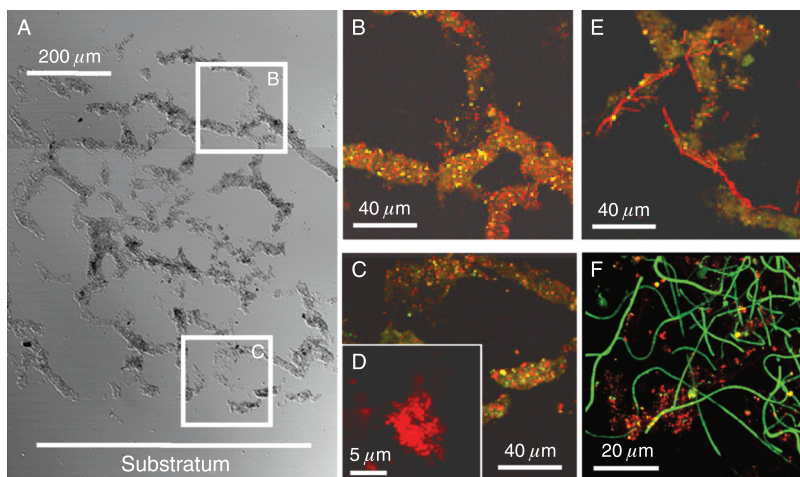


Figure 12.1. A composite differential interference contrast (DIC) image of a vertical section (20- μm -thick) of a wastewater biofilm (A). The biofilm thickness is about 1200 μm . In situ detection of *Desulfobulbus* hybridized with tetramethylrhodamine-5-isothiocyanate (TRITC)-labelled 660 probe (B) and (C) and a close-up view of SRB385 probe stained cell clusters (D). *Desulfonema* hybridized with TRITC-labelled DNMA657 probe (E). Coexistence of *Desulfobulbus* hybridized with TRITC-labelled 660 probe and *Thiothrix* hybridized with fluorescein isothiocyanate (FITC)-labelled G123T probe at the oxic/anoxic interface in the biofilm (F). (The black and white version of this figure appears on page 363.)

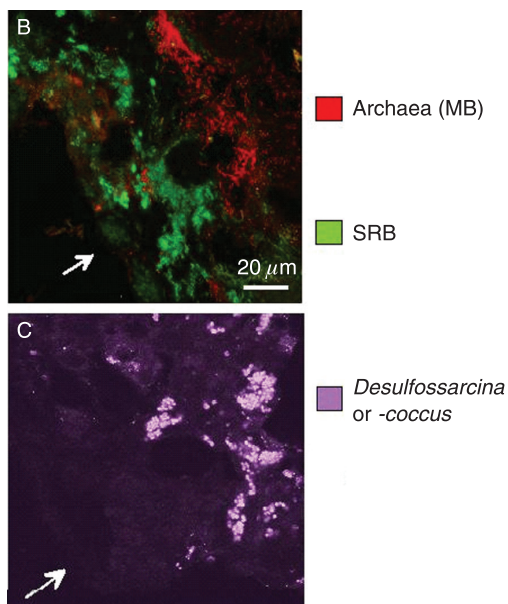


Figure 13.1. Steady state microsensor profiles and FISH analysis to localize specific SRB populations within a methanogenic-sulphidogenic aggregate (Adapted from Santegoeds *et al.*, 1999). (B) FISH analysis with general probes for sulphate reducers (SRB385, artificial colour green) and methanogens (ARC915, artificial colour red). (C) Hybridization with probe 660 (artificial colour purple). Microelectrode studies and in situ hybridizations were done by Dr. Cecilia M. Santegoeds and Dr. Dirk de Beer of the microsensor group of the Max Planck Institute of Marine Microbiology, Bremen (Germany) and Dr. Lars Damgaard from the University of Aarhus (Denmark). (The black and white version of this figure appears on page 392.)