Structure of a 12-Heme Cytochrome *c* from *Geobacter sulfurreducens*

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The recent publication of the genome sequence of *Geobacter sulfurreducens* [1] has revealed that the organism has over 100 genes which encode *c*-type cytochromes. Furthermore, most of these cytochromes contain two or more heme groups, with one possessing 27 hemes. This abundance of cytochromes is of great significance in the construction of electron transport networks, and confers considerable respiratory flexibility upon the organism. One of these multi-heme cytochromes (GSU1996) is a dodecaheme protein, but is believed to consist of four triheme cytochrome c_7-like domains [2]. The protein has been crystallized and the structure solved by multi-wavelength anomalous dispersion. The position of the 12 heme groups is of great interest, and the implications of the arrangement will be discussed.

[1] Methé *et al.* (2003) *Science* **302**, 1967-1969.
[2] Pokkuluri *et al.* (2004) *Protein Science* **13**, 1684-1692