

Cover Figure Legend: The cover visualizes the emergence of a protein structure from a DNA sequence. The DNA sequence is that of mouse histone protein H3 (*Mus musculus* H3 histone, family 3A; FASTA format; gen bank accession number BC092043.1). The protein dimer is a ribbon representation of the high resolution structure of a DNA binding protein (*Drosophila* TATA Box binding protein associated factor (TAF); Protein Data Bank accession number 1TAF) as obtained by protein crystallization and x-ray diffraction analysis. TAF functions in transcription as a cofactor in RNA polymerase complexes and is structurally homologous to histone H3-H4 dimers (Xie et al., Structural similarity between TAFs and the heterotetrameric core of the histone octamer, *Nature* 380, 316, 1996). Analyzing the structural similarities such as those found between histone proteins controlling chromosome packing and proteins facilitating gene expression is a central theme of bioinformatics.

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