

Methylation of ribosomal proteins in bacteria: Evidence of conserved modification of the eubacterial 50S subunit

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Methylation of the 50S ribosomal proteins from *Bacillus stearothermophilus*, *Bacillus subtilis*, *Alteromonas espejiana*, and *Halobacterium cutirubrum* was measured after the cells were grown in the presence of [1-¹⁴C]methionine or [methyl-³H]methionine or both. Two-dimensional polyacrylamide gel electrophoretic analysis revealed, in general, similar relative electrophoretic mobilities of the methylated proteins from each eubacterium studied. Proteins known to be structurally and functionally homologous in several microorganisms were all methylated. Thus, the following group of proteins, which appear to be involved in peptidyltransferase or in polyphenylalanine-synthesizing activity in *B. stearothermophilus* (P.E. Auron and S.R. Fahnestock, *J. Biol. Chem.* 256:10105-10110, 1981), were methylated (possible *Escherichia coli* methylated homologs are indicated in parentheses): BTL5(EL5), BTL6(EL3), BTL8(EI10), BTL11(EL11), BTL13(EL7L12) and BTL20b(EL16). In addition, the pentameric ribosomal com