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Complete nucleotide sequence of a 16S ribosomal RNA gene from *Pseudomonas aeruginosa*

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A complete ribosomal (rRNA) operon from *Pseudomonas aeruginosa* has been cloned (1) in pHE 3 (2). As a part of this project we have reported previously on the physical organization of the rRNA genes of the four rDNA operons (3), the primary structure of a gene coding for the 23S rRNA (4) and the secondary structure with its implication for biological function (5). Here we present the primary structure of one 16S ribosomal RNA gene. Oligonucleotides were produced by the phosphoramidite method (6), using an automated DNA synthesizer (Applied Biosystems model 380A). DNA sequencing was performed on both strands by employing the M13/dideoxy method (7). We used in addition a modified protocol essentially based on the one reported for extended sequencing (8). The 16S rRNA is composed of 1537 nucleotides, whereas the 16S rRNA derived from the rrnB operon of *Escherichia coli* displays 1542 nucleotides. Contrary to the data of Shine and Dalgarno (9), we do find sequence homology within the fifteen 3`-proximal nucleotides of *Pseudomonas aeruginosa* and *Escherichia coli* 16S rRNA. The details of the secondary structure will be presented elsewhere (10).

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1    GAACTGAAGA GTTTGATCAT GGCTCAGATT GAACGCTGGC AGCAGGGGCC TTCAACACAT GCAAGTCGAG CTTATGAAGG
81   GAGCTTGCCT TGGATTCAGC GGCGGACGGG TGAGTAATGC CTAGGAATCT GCCTGGTAGT AGGGGGATAA CGTCCGGAAA
161  CGGCCGCTAA TACCGCATAC GTCCTGAGGG AGAAAGTCGG GGATCTTCGG ACCTCACGCT ATCAGATGAG CCTAGGTCGG
241  ATTAGCTAGT TGGTGGGGTA AAGGCCTACC AAGGCGACGA TCCGTAACTG GTCTGAGAGG ATGATCAGTC ACACTGGAAC
321  TGAGACACGG TCCAGACTCC TACGGGAGGC AGCAGTGGGG AATATTGGAC AATGGGCGCA AGCCTGATCC AGCCATGCCG
401  CGTGTGTGAA GAAGGTCTTC GGATTGTAAA GCACTTTAAG TTGGGAGGAA GGGCAGTAAG TTAATACCTT GCTGTTTGAC
481  GTTACCAACA GAATAAGCAC CGGCTAACTT CGTGCCAGCA GCCGCGGTAA TACGAAGGGT GCAAGCGTTA ATCGGAATTA
561  CTGGGCGTAA AGCGCGCGTA AGTGGTTCAG CAAGCTTGAT GTGAAATCCC CGGGCTCAAC CTGGGAACTG CATCCAAAAG
641  CTACTGAGCT AGAGTACGGT AGAGGTGGTG AATTTCCTGT GTAGCGGTGA AATGCGTAGA TATAGGAAGG AACACCAGTG
721  GCGAAGGCGA CCACCTGGAC TGTACTGACA CTGAGGTGCG AAAGCGTGGG GAGCAAACAG GATTAGATAC CCTGGTAGTC
801  CACGCCGTAA ACGATGTCGA CTAGCCGTTG GGATCCTTGA GATCTTAGTG GCGCACGTAA CGCGATAAGT CGACCGCCTG
881  GGGAGTACGG CCGCAAGGTT AAAACTCAAA TGAATTGACG GGGGCCCGCA CAAGCGGTGG AGCATGTGGT TTAATTCGAA
961  GCAACGCGAA GAACCTTACC TGGCCTTGAC ATGCTGAGAA CTTTCCAGAG ATGGATTGGT GCCTTCGGGA ACAGAGACAC
1041 AGGTGCTGCA TGGCTGTCGT CAGCTCGTGT CGTGAGATGT TGGGTTAAGT CCCGTAACGA GCGCAACCCT TGTCCTTAGT
1121 TACCAGCACC TCGGGTGGGC ACTCTAAGGA GACTGCCGGT GACAAACCGG AGGAAGGTGG GGATGACGTC AAGTCATCAT
1201 GGCCCTTACG GCCAGGGCTA CACACGTGCT ACAATGGTCG GTACAAAGGG TTGCCAAGCC GCGAGTGGGA GCTAATCCCA
1281 TAAAACCGAT CGTAGTCCGG ATCGCAGTCT GCAACTCGAC TGCGTGAAGT CGGAATCGCT AGTAATCGTG AATCAGAATG
1361 TCACGGTGAA TACGTCCCCG GGCCTTGTAC ACACCGCCCG TCACACCATG GGAGTGGGTT GCTCCAGAAG TAGCTAGTCT
1441 AACCGCAAGG GGGACGGTTA CCACGGAGTG ATTCATGACT GGGGTGAAGT CGTAACAAGG TAGCCGTAGG GGAACCTGCG
1521 GCTGGATCAC CTCCTTA
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