

# Nucleotide sequence of a tRNA cluster from *Mycoplasma pneumoniae*

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The DNA sequence of a 2.3 kilobase *HincII* fragment from cosmid pcosMPF11 (1), which hybridizes with total labeled *Mycoplasma pneumoniae* tRNA, was determined and revealed the presence of a tRNA gene cluster coding for five different tRNAs. The gene order for the tRNAs is: Tyr(GUA) – Gln(UUG) – Lys(UUU) – Leu(UAA) – Gly(UCC), and the first four genes are similar to a part of a tRNA gene cluster found in *Mycoplasma capricolum* (2). The sequence similarity between homologous tRNA genes of *M. pneumoniae* with those of *M. capricolum* is high (from 76 to 82%), but much more variation (from 0 to 43 nucleotides) in *M. pneumoniae* spacer length is observed. The tRNA gene cluster is preceded by a putative promoter structure and followed by a probable termination signal. Since no such characteristic features are found in the largest spacer region, the reported cluster is likely to consist of a single

transcription unit. The sequence that extends 300 bp upstream and 450 bp downstream of the cluster was also determined, but no other tRNA gene was found.

## ACKNOWLEDGEMENTS

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## REFERENCES

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2. Andachi,Y., Yamao,F., Iwami,M., Muto,A. and Osawa,S. (1987) *Proc. Natl. Acad. Sci. USA* **84**, 7398–7402.

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          30                               60                               90
TACCGGGTCAAAATTGTTAAGATCATTAAGTATAATTTTGTAAATATCTTTTGC'TGGTTATTGGACAGGTAGCGAAGTGGCTAAACG
          120                               150                               180
CTTCTGACTGTAGATCAGACACCTTCATGGTTTCGGGAGTTCGAATCTCTCCCTGTCCACCATTTATTGGGATGTAGCCCAGCGGTAAGG
          ***
          210                               150                               270
CAATAGACTTTGACTCTATCATGCGATGGTTTCGATCCCATCCATCCCAGCCAGTAAAAAGCATTCATAAAATGACAGGGGCAACCCCTGT
          ***
          300                               330                               360
TTATTGACTCACTAGCTCAGCGGTAGAGCATTTGACTTTTAAATCAAAGGGTCCCGAGTTCGATCCTCGGGTGAGTCACCAGCCCAAGTGG
          ***
          390                               420                               450
CGGAATGGTAGACGCATGGGATTTAAGATCCCACGCTAGCAATAGCGTGCCGGTTCAAGTCCGGCTTTGGGCACCAAGTTC'TGCGAGTAT
          ***
          480                               510                               540
AGTTT'TAGTGGTAGAACATCAGTCTTCCAAGCTGATCGTGTCCGGTTCGATTCCGATTACTCGCTCCAGTTTAAACATTTCCAAAAGAAGGT
          ***
          570
TAGCACCTGCTTAGCGGGTGCTTTTATTATCGCTTAACCTCTATTTTGA
          - - - - -

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Dotted lines or arrows indicate possible transcription signals; the coding sequence for the tRNAs are underlined by arrows; anticodon positions are marked by asterisks.

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