

# Letters to Nature

*Nature* **220**, 368-371 (26 October 1968) | doi:10.1038/220368a0; Received 3 September 1968

## Ribosome Formation from Subunits: Dependence on Formylmethionyl-transfer RNA in Extracts from *E. coli*

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### Abstract

RIBOSOMES from bacterial, plant and animal cells consist of two subunits: a larger one (in *E. coli* the 50S subunit) and a smaller one (in *E. coli* the 30S subunit)<sup>1</sup>. Apparently a 30S and a 50S subunit associate to form a 70S ribosome in *E. coli* when the synthesis of a protein molecule is initiated; the ribosome persists during the synthesis and dissociates into subunits when the synthesis is completed<sup>2-7</sup>. There is suggestive evidence for the occurrence of the following events during the process of peptide chain initiation. First, a 30S subunit forms a complex with messenger RNA and formylmethionyl-*t*RNA (F-Met-*t*RNA) in the presence of GTP and initiation factors; subsequently, a 50S subunit is attached to this complex<sup>5-13</sup>.

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