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RETRACTION

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This is in reference to the paper by Nitta et al. published in *RNA* in March, 1998 (Nitta et al., 1998a).

In this article we reported that AcPhe-Phe was produced from AcPhe-tRNA and Phe-tRNA in the presence of 23S ribosomal RNA obtained by in vitro transcription using T7 RNA polymerase. The product was detected by TLC (silica plate with a solvent system consisting of *n*-butanol, acetic acid and water, 4:0.9:1).

However, in the past four months we have encountered considerable difficulty in reproducing the results of the paper and finally noticed that the spot on the TLC plate (previously identified as AcPhe-Phe) might consist mainly of AcPhe-OMe or AcPhe-OEt (the esters formed by AcPhe-tRNA with methanol or ethanol). Similar observations have been made by Khaitovich et al. (1999) (see Letter to the Editor in this issue). Ethanol or methanol may have been introduced into the reaction mixtures by the 23S rRNA or tRNA samples because either ethanol or methanol were used in their preparation. The spot was produced even when Phe-tRNA or 23S rRNA was omitted, as long as AcPhe-tRNA and a small amount of alcohol (0.1% or less) was present in the reaction mixture. It seems that the AcPhe moiety of AcPhe-tRNA may react much more easily with alcohol than with the Phe moiety of Phe-tRNA, probably because of much higher concentration of alcohol (in the millimolar range) as compared with that of Phe-tRNA (0.05–1 μM) in the reaction mixture. Thus, the lack of reproducibility in the TLC experiments could be ascribed to the different preparations of 23S rRNA and/or AcPhe- and Phe-tRNA used in these experiments.

In more recent experiments using mass spectrometry, TLC, and HPLC (TSK O DS-80Ts column with a solvent consisting of 0.1% TFA and 25% CH_3CN), we observed that chemically synthesized AcPhe-OMe, AcPhe-OEt, and AcPhe-Phe, all of which were well separated by HPLC and verified as to molecular weight by mass spectrometry, migrated to the same position on TLC plates. It is still uncertain whether any AcPhe-Phe is produced by 23S rRNA, although we observed a very small amount of radioactivity derived from the labeled Phe in the same position as that of AcPhe-Phe in the HPLC pattern when the reaction was carried out in the presence of 23S rRNA. Moreover, we still do not understand how product misidentification could explain the systematic variations in the relevant TLC spot in the presence of peptidyl transferase inhibitors, 23S rRNA mutants that interfere with peptide bond formation, or different domains of the 23S rRNA (Nitta et al., 1998a, 1998b). These problems can only be resolved in future experiments.

In light of the above observations, as well as those of Khaitovich et al. (1999), we would like to retract the paper of Nitta et al. (1998a) until questions about the data and their reproducibility are unambiguously resolved.

We apologize to our colleagues for any trouble caused by this error.

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