demonstrating a second reaction pathway superimposed on the amide cleavage reaction. The second pathway involves two successive phosphoester transfer reactions: first, miscleavage by the ribozyme at a DNA phosphoester adjacent to the amide linkage (*1*, figure 2); second, attack by the 3′ hydroxyl of the miscleavage product at a phosphate immediately preceding a non-encoded nucleotide that is present at the 3′ terminus of a small proportion of ribozyme molecules that are produced by in vitro transcription. The resulting ribonucleoside-terminated product has nearly identical electrophoretic mobility compared with the amide-terminated product of the amide cleavage reaction when analyzed in a denaturing polyacrylamide gel at pH 8.3. The two products can be separated by polyacrylamide gel electrophoresis at pH 6.5, revealing that the second pathway dominates over amide bond cleavage. The rate of RNA-catalyzed amide cleavage is about 50-fold slower than we reported, thus representing only about a 10^2-fold rate acceleration when compared with the uncatalyzed reaction. The amide- and ribonucleoside-terminated products are derivatized with sulfosuccinimidyl-6-(biotinamido) hexanoate at approximately the same rate when incubated at pH 8.5 (*1*, figure 3). The amine-, but not the ribonucleoside-terminated product is reactive with ninhydrin and can be derivatized with dansyl chloride, in accordance with the behavior of the authentic amine-terminated compound. The ribonucleoside-terminated product can be converted to an all-deoxynucleotide molecule, one residue shorter in length, by oxidation of the 2′,3′-diol to a dialdehyde and subsequent β-elimination.

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References

1. X. Dai, A. De Mesmaeker, G. F. Joyce, *Science* **267**, 237 (1995).

Corrections and Clarifications

During editing, an error was introduced in the caption of the figure accompanying Barry Cipra's article "A proof to please Pythagoras" (Research News, 22 Mar., p. 1669). The equation in line 2 should have read, "$y^2 = x^3 - 36x$."

In figure 5A (p. 781) of the article "Intercalation, DNA kinking, and the control of transcription" by M. H. Werner *et al.* (9 Feb., p. 778), a methyl group was inadvertently placed at the C5 position of the cytosine base and omitted from the thymine base (that is, the A·T base pair was depicted as an A·U base pair and the G·C base pair as a G·5-methylC base pair). Thus, the C base should have a proton at the C5 position and the T base a methyl group at the C5 position. The hydrogen bonding depicted for the two base pairs was correct.

Letters to the Editor

Letters may be submitted by e-mail (at science_letters@aaas.org), fax (202-289-7562), or regular mail (*Science*, 1333 H Street, NW, Washington, DC 20005, USA). Letters are not routinely acknowledged. Full addresses, signatures, and daytime phone numbers should be included. Letters should be brief (300 words or less) and may be edited for reasons of clarity or space. Letter writers are not consulted before publication.