Letters

PCR Amplification of Specific Alleles

Rick Weiss' Research News article "Hot prospect for new gene amplifier" (29 Nov., p. 1292) indicates that ligase chain reaction offers a general method for amplifying specific mutant or polymorphic alleles, while detection of these alleles by polymerase chain reaction (PCR) requires additional steps. He states, "PCR amplifies a stretch of DNA between two primers but tells nothing about the precise sequence of the amplified fragment; to find out exactly what you have amplified, and whether a mutation resides in that stretch, requires restriction enzyme analysis or DNA sequencing." I would like to point out that specific alleles can be selectively amplified by PCR amplification of specific alleles (PASA; also known as allele-specific amplification and ARMS). PASA uses PCR primers whose 3′ end matches a particular allele to specifically amplify that allele. A body of literature now documents the efficacy of PASA [(*1*) and references therein]. Our own experience highlights the generality of PASA; in each of 69 PASA assays attempted, specific amplification was achieved (*2*).

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REFERENCES

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2. S. S. Sommer, A. R. Groszbach, C. D. K. Bottema, *BioTechniques* **12**, 82 (1992).

The Medfly in California

There have been many attempts to explain the 1989–90 discoveries of the Mediterranean fruit fly (medfly) in Southern California. James R. Carey argues (Articles, 20 Sept., p. 1369) that the medfly is established in California. Carey first proposed his theory of medfly establishment while serving as a member of the California Department of Food and Agriculture's Science Advisory Panel (SAP) during the 1989–90 medfly eradication project. His theory was evaluated by the entire SAP and was rejected by the other four members as speculative. Carey's position was also evaluated by a "blue ribbon" committee appointed by the University of California and composed of international researchers in fruit fly biology and statistics. They concluded that (i) the medfly is not endemic, (ii) the 1989–1990 infestation could be linked to the 1988 and possibly to the 1987 West Los Angeles infestations, and (iii) the data currently available do not allow a valid assessment concerning the origin of the medfly before 1987.

Carey has no new experimental data to support his conclusions, but relies heavily on data from the quarantine interceptions of medfly larvae by the U.S. Department of Agriculture (USDA) inspectors. USDA inspectors confiscate hundreds of thousands of pounds of fruit every year and do not cut every fruit to look for larvae. The five interceptions of medfly larvae between 1985 and 1990 cited by Carey represent cases where larvae were found crawling out of fruit and were hence visible without labor-intensive fruit cutting.

The California Department of Food and Agriculture concurs with the majority of expert medfly scientists. We are confident that the appropriate strategies have been applied and that the medfly infestation has been eradicated from California. Fourteen months of high-density trapping in the