

**Commentary on:** Fregean CJ, Vanstone H, Borys S, McLean D, et al. AmpF $\ell$ STR Profile Plus and AmpF $\ell$ STR Cofiler analysis of tissues stored in GenoFix, a new tissue preservative solution for mass disaster DNA identification. J Forensic Sci 2001;46(5):1180–90

Sir:

In a recent issue of the *Journal of Forensic Sciences*, Fregeau et al. (1) described intriguing data on preservation of DNA from biopsy tissues by addition of GenoFix, a new alcohol-based tissue fixative. GenoFix ensured storage of tissues samples for short term tandem repeat DNA typing analysis even at room temperature for up to one year and seven months, or at  $-20^{\circ}\text{C}$  in a freezer for up to 3 ½ years. Certainly, GenoFix would exert an additive or even synergistic action along with RNA tissue preservatives to guarantee intact nucleic acid sequences in tissues awaiting either criminal investigations or mass disaster identifications. Prospective investigators would better ascertain the alcohol-based GenoFix was compatible with the commercially available aqueous stabilization solutions (RNAlater; Ambion).

Addition of fixatives like GenoFix and/or RNAlater (Ambion) would be of immense usage to surgeons and allied health care personnel in developing countries in preserving numerous surgically excised tissues awaiting different DNA or RNA based molecular investigations even at far-off locations. In such countries, adverse environment seriously affects even the ordinary biochemical or immunological assays. Variations in the ambient temperatures affect venous glucose concentration after glucose tolerance tests. Quantification of glucose level among 1030 pregnant females on a standardized 75 g glucose tests revealed no difference in the mean fasting values. Nevertheless, the post-load values did. The adjusted mean 2 h glucose concentration was 1.03 mmol/L lower at lower ( $5-14^{\circ}\text{C}$ ) than at higher ( $25-31^{\circ}\text{C}$ ) temperatures ( $p < 0.001$ ) (2). Furthermore, there have been insurmountable problems in offering quality kits and reagents for diagnosing and monitoring HIV/AIDS. The sensitivity and specificity of HIV assays decline if

they are inappropriately stored or used after their expiry date. This decline compromises the reliability of blood testing for HIV before blood transfusions (3).

Tissue nucleic acid stabilizers (1) would be of immense utility, apart from practitioners of forensic sciences, for infectious diseases practitioners in developing countries for a sensitive and specific diagnosis of microbes even in viable but nonculturable state. The adverse environment triggers the microbial survival mechanism when they were viable but unable to grow *in-vitro* (4). RNA/DNA characterization of efficiently preserved tissue aspirates or biopsy bits from internal organs should establish the putative role of any non-cultivable microbes in pathogenesis of diseases of cryptic pathology.

## References

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