KINSHIP PREDICTION AND ANALYSIS

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A novel new feature of the Symbolic Kinship Program of DNA-VIEW, "Kinship Simulation", makes predictions, in advance of genetic testing, as to its likely usefulness.

The Kinship Program has been in wide use for several years for such problems as odd-ball paternity cases, inheritance cases, and disaster identifications. Given the genetic types of an arbitrary set of individuals, it makes the likelihood ratio computations to decide among different possible ways they might be related. However in complicated or unusual cases, where there is little experience to serve as a guide, it has up to now been guesswork how many reference relatives will be needed, whether exhumation is necessary or worth the bother, how many DNA systems to test, and indeed whether the problem is even worth attempting.

The Kinship Simulation program, recently developed as an adjunct to WTC identifications, answers these questions by computer-generating random but typical simulated DNA profiles, and then computing the likelihood ratios. Multiple simulations thus give a range of expectable results, and also permit experimenting with various assumptions about who is tested and with what systems. It is an interesting tool for particular cases and also for research.