

IDENTIFICATION OF MURDERED VICTIMS FROM ILLEGAL CEMETERIES IN ALAGOAS, BRAZIL, BY THE USE OF SHORT TANDEM REPEATS (STR).

Luiz A F da Silva, Tiago G de Andrade, Daniel L G Gitaí, Luiz A S Barros, Simone S Santos, Beatriz J Pimentel.

Universidade Federal de Alagoas, Depto. de Biologia - Maceió-AL-Brasil



Illegal cemeteries have been found in several places in the state of Alagoas, Northeast of Brasil. Many bone remains from murdered victims have been found. The main difficulty to find out the murders is that it is impossible to identify those skeletal materials using the standard forensic methods. As a way to contribute to solve these cases, the Federal University of Alagoas and the State Police of Alagoas made an official agreement to establish DNA typing methods. Since then our laboratory has made analysis in criminal cases with DNA obtained from bones. To extract DNA, we have employed organic extraction associated with the QIAquick PCR purification Kit (QUIAGEN). Bone powders (1-3g) were generated by sawing femur and skull bones. The powder was dissolved into extraction buffer (4-12ml) incubated at 37°C for 12-16 hours and extracted with phenol/chloroform. DNA was precipitated with isopropanol, dissolved in TE and purified on QIAquick column. DNA analysis was made by PCR amplification of STR loci (multiplex, SilverSTR™ III, D16S539, D7S820, D13S317; FFv, FESFPS, F13A01, vWA; CTT, CSF1PO, TPOX, TH01 and the monoplex LPL, F13B, HPRTB - Promega, USA). Amplified DNA was separated in polyacrylamide denaturing gels and stained by silver nitrate. Utilizing the described methodology we have made human identification comparing the victim's sibs, parents or offspring DNA. To calculate the genetic relationships probabilities we have used database frequencies from the State of Alagoas. In our experience STRs have been an efficient tool in human identification.

