UNIVERSITY OF LEICESTER

Universal tissue sampling device

Investment opportunity for manufacturers, suppliers and users of medical devices

Challenge

- Currently DNA sample collection is undertaken during post-mortem examination using scalpel and forceps. This means tissue samples cannot be taken and stored immediately at the scene
- Our new device overcomes this and is therefore more suitable for forensic and military settings as well as situations of mass fatalities
- It is a rapid, reliable approach for the collection and preservation of tissue for DNA analysis.

- **Simple to use**
- **Rapid**
- **Reliable**

Solution

The University of Leicester has developed an integrated soft-tissue sample collection and preservation device that is equally effective at collecting soft tissue samples from any human, animal or plant material.

- **Simple to use:** It is straightforward and quick to use in any environment
- **Time-saving:** It functions effectively as a DNA sampling, storage and transport unit as well as reducing the time taken in the laboratory to generate results
- **Safe and reliable:** It eliminates the use of scalpels, forceps and additional storage units and results in the safe collection and preservation of tissue samples

Project Part-Financed by the European Union

European Regional Development Fund

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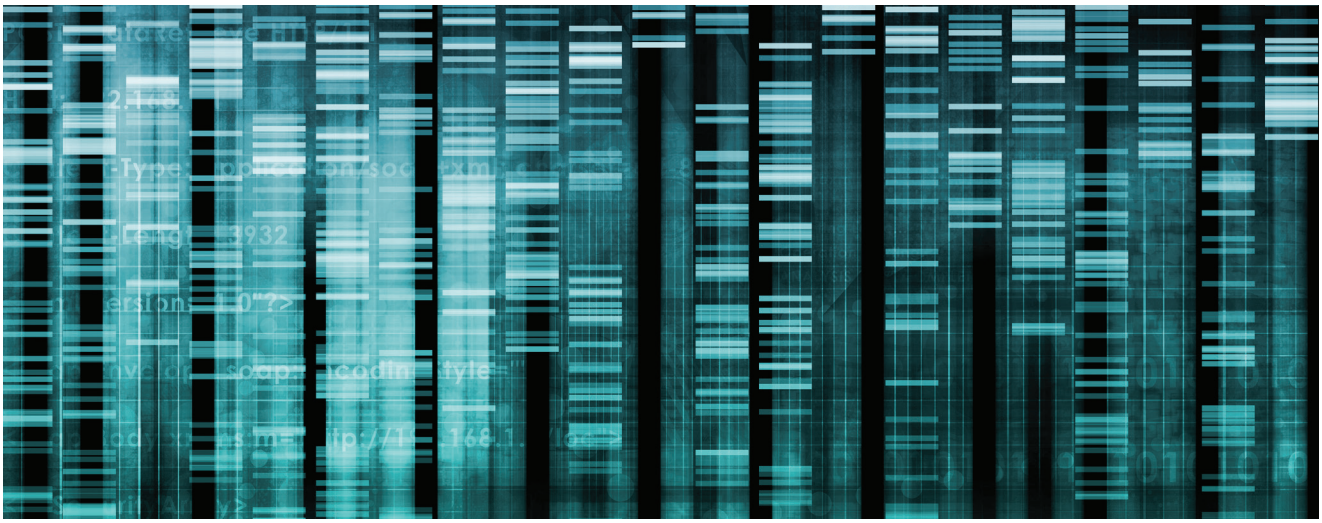

DNA is the 'gold standard' for identification purposes in the forensic arena. However, the current technique used for collection of DNA samples during post-mortem examination is cumbersome. Two separate tools (scalpel and forceps) are used in a procedure requiring several manipulations to complete the process. Furthermore, samples must be collected and preserved quickly to prevent DNA degradation.

Benefits

- The Universal tissue sampling device provides an all-in-one collection, preservation and transport tool for DNA identification purposes
- Applications include the forensic and military arena as well as incidences associated with mass fatalities such as natural disasters and terrorist attacks
- Safe and easy to use in any environment
- Speeds up sample collection and laboratory processes
- No requirement for additional material or equipment
- The device has been tested in house on fresh, burnt and decomposed tissue; independently/externally tested on human and deer tissue; tested in actual forensic identification cases with coroner's permission
- The test produces results that are identical to traditional methods with a laboratory timesaving of 2-5 hours
- The device has been developed to the pre-manufacture prototype stage

This project was funded by EMDA/ERDF

Market

The main market for use of the tool is in the area of forensics. Incidences involving murders, fires, and fragmented bodies (for example, terrorist attacks and military personnel identification), and other incidences requiring coroner autopsies can make use of the tool.

The total number of people killed in natural disasters such as earthquakes and tsunamis from 2000 to 2008 was 770,313 (EM-DAT database). This figure, combined with the increasing trend for the occurrence of disasters, provides a market for the use of the tissue sampling tool by the western populations in such incidences.

The market could also be extended to applications involving animals and plants.

IP status

US patent has been granted. Patent applications have been filed in Europe with a priority date of 24 July 2007 (from PCT application WO2009/013548).

Are you company supplying medical devices into the forensics market looking for an investment opportunity?

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