

New product for identifying burn victims

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A University of Adelaide forensic dentist is on a mission to help identify victims of fatal burn injuries, developing a new product that dramatically reduces the time it takes to identify burn victims.

Dr John Berketa, from the University of Adelaide's Forensic Odontology Unit, developed a glue spray which stabilises incinerated remains, preserving the structure of burnt teeth and gums. The spray forms a type of cast over the victims' jaw, which prevents damage during transportation and reduces the time it takes to identify a burn victim to just hours.

Dr John Berketa says when it comes to burn victims, dental records are often the most accurate means of identification.

"When someone tragically dies in a bushfire, house fire, plane crash or incinerated car, visual identification usually isn't possible, and fingerprints and DNA are destroyed in temperatures of more than 250 degrees Celsius," says Dr Berketa. "Teeth are the most resilient part of the body and in cases of severe burn victims, dental remains are the fastest and most reliable way in which to reveal the victim's identity.

"When examining a burn victim's dental remains we look at things like fillings, crowns and roots. We also look at the distance between teeth, the size of roots and teeth, and their curvatures. We compare all of this information with [dental records](#) to identify a deceased person," he says.

Dr Berketa says there has long been a need for a product like his

stabilising spray because dental remains often come apart during transportation.

"One of the key issues with incinerated victims' dental remains is that they can get damaged, or fragments can become separated during transportation from the scene to the laboratory. And when remains become fragmented, it can take days to identify a victim," says Dr Berketa.

"What makes this stabilising spray unique and highly effective, is that it doesn't contaminate evidence or interfere with x-rays. What I have come up with, after years of research, is a naturally-derived glue based product," he says.

Dr Berketa is hoping to eventually develop a premixed version of the spray which police can carry in their cars.

"I have commenced training South Australian Police (SAPOL) in how to prepare the stabilising spray for scene examination, and I'm also teaching them how to correctly apply it to a deceased burn victim; however, a premixed version of the product will save time and encourage police officers to use it," says Dr Berketa.

"I'd like to eventually see this stabilising [spray](#) in every Australian police forensic kit. This will make the job of forensic dentists much easier, and will reduce errors and delays when it comes to providing the coroner and family and friends with a victim's identity," he says.

Provided by University of Adelaide

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