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10. Forensic Science

Northeastern State University

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Abstracts from the 2015 Oklahoma Research Day

Held at Northeastern State University

05. Mathematics and Science

10. Forensic Science

05.10.01 A Bio-Forensic Study of the P63 Protein during the Stages of Wound Healing and Postmortem: A Fourier Transform Infrared (FTIR) Spectroscopy, histopathology, and immunohistochemistry protocol.

Mohamed,khadiri *University of Central Oklahoma*

Wound healing and wound age determination remain as some of the most challenging areas of both clinical and forensic pathology research. Cutaneous wounds and injuries are any intrusions or damages to the body's epidermal tissue surface. When it comes to cutaneous wounds, there is a great deal of knowledge that ought to be understood and later used for valuable applications both in a clinical and in a forensic setting. However, there are many challenges both medically and forensically facing the research behind wounds and wound healing pushing one to further explore many aspects of such topic. In the medical field there are many challenges in terms of wound treatment especially that of chronic wounds due to the diverse health conditions under which the healing process exists, progresses, and/or stops. In the forensic field however, the challenge is to closely determine the timing of wounds and injuries. In this study we are investigating a Post Mortem Interval (PMT) of wounds and wound vitality in terms of the inflammation and the proliferation of tissue before and after death using a protocol that combines the Fourier Transform Infrared Spectroscopy (FTIR), histopathology, and Immunohistochemistry techniques.