D3 Intergration of Molecular Pathology to Modern Forensic Medicine and Forensic Autopsy

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After viewing this poster presentation, Forensic personnel will learn the implementation of Molecular Pathology to facets of Forensic Medicine is beneficial to both autopsy and research procedures. The presentation notes, in a formal content analysis, many current research plans and procedures that one may adopt to autopsy practices. In addition, a formal Normative Survey of Forensic personnel indicates that the Forensic Science community welcomes implementation procedures. This research study also indicates a symbiotic relationship between the fields of Molecular Pathology and Forensic Medicine is beneficial to scientific growth in these respective fields.

This presentation will impact the forensic community and/or humanity by demonstrating for persons wishing to conduct laboratory research in the fields of Forensic Medicine and Molecular Pathology, this study provides support to indicate that this research is welcome by the scientific community providing grounds for grant funding for research in these areas. Researching actual Molecular Autopsy methods in an academic research setting could provide the necessary information for the integration into current autopsy processes occurring in Medical Examiner's office across the United States.

The field of Forensic Medicine provides a new, under-developed outlet for testing in Molecular Pathology. The current methods in Molecular Pathology, as stated earlier, are in Clinical Medicine and Research on tissues from living subjects. However, sampling from the deceased provides a large source of pathologic samples that can be analyzed. These samples can provide additional insight to end-stage disease processes, indicating more information about the pathological processes that lead to death. Also, by studying postmortem samples, Forensic Pathologist and researchers in this field can provide statistical information about causes and manners of death as well as statistical information regarding terminal illness and genetic conditions. Sampling from the deceased is recommended to provide a continual source of samples for Molecular Pathology and Molecular Autopsy procedures.

The application of Molecular Pathology to Forensic Medicine during autopsies can also advance the field of Forensic Pathology. By applying the Molecular Autopsy to Forensic cases, Forensic Pathologist can analyze samples for specific mechanisms of death. Sampling of wounds at the histological (molecular and cellular level), as in the case presented earlier, will provide another method to analyze wound types present in Forensic cases rather then just examining wounds by the naked-eye. By using microscopic laboratory methods, Forensic Pathologist will have additional methods to diagnosis the cause and manner of death. Although integrating these methods into current autopsies would be costly, integrating these procedures to Forensic cases is recommended in order to provide a more in depth autopsy analysis in these cases. The necessary equipment and Molecular Pathologist professionals could be integrated into the larger Medical Examiner's offices with appropriate funding.

Molecular Pathology is the clinical application of biotechnology to cellular autopsies. Procedures in Molecular Pathology are both descriptive and predictive in nature. The application of the "molecular autopsy," has been limited in the field of Forensic Medicine. Main outlets for research in "molecular autopsy," procedures have been limited to Clinical Medicine and research. Molecular Pathology procedures could be beneficial to Forensic Medicine and modernize the autopsy process. By utilizing current molecular autopsy methods and researching new testing procedures, Forensic Pathologist may be able diagnosis the cause of death using these tests. Utilizing these procedures may also provide preventative information regarding disease. This research study will review current integration procedures in peerreviewed scientific studies utilizing the integration Molecular Pathology and Forensic Medicine to access the success trend of the integration of these two fields. This research study will also poll professionals and students obtaining higher-education degrees within these prospective fields to determine if integration would be accepted and promoted within these two fields.

Forensic Medicine, Forensic Pathology, Molecular Pathology

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