

# MEMORANDUM

Agenda Item No. 9(A)(2)

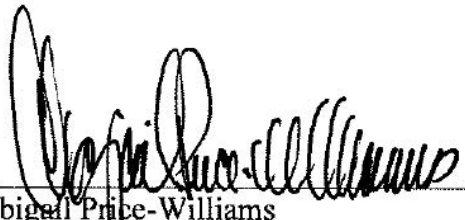
**TO:** Honorable Chairwoman Audrey M. Edmonson  
and Members, Board of County Commissioners

**DATE:** October 6, 2020

**FROM:** Abigail Price-Williams  
County Attorney

**SUBJECT:** Resolution retroactively authorizing the County Mayor's action in applying for, receiving, and expending grant funds in the amount of \$250,000.00 for a two-year project from the United States Department of Justice, Office of Justice Programs Paul Coverdell Forensic Science Improvement Grants Program to implement the project titled "Using Low Dose Full Body X-Ray Technology in a Forensic Setting to Determine Death Certification;" and authorizing the County Mayor to (1) allocate from the general fund \$89,995.00 as a local match; (2) apply for, receive, and expend any additional grant funds that may become available under this program; (3) execute and extend such contracts, agreements, memoranda of agreement, and amendments as may be required by program guidelines; and (4) exercise any termination and modification clauses

The accompanying resolution was prepared by the Medical Examiner Department and placed on the agenda at the request of Prime Sponsor Commissioner Joe A. Martinez.

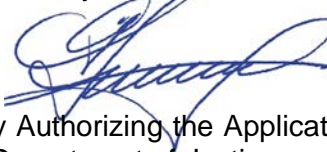
  
Abigail Price-Williams  
County Attorney

APW/uw

**Date:** October 6, 2020

**To:** Honorable Chairwoman Audrey M. Edmonson  
and Members, Board of County Commissioners

**From:** Carlos A. Gimenez  
Mayor



**Subject:** Resolution Retroactively Authorizing the Application for and Acceptance of Grant Funds from the United States Department of Justice under the Paul Coverdell Forensic Science Improvement Grant Program

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## **RECOMMENDATION**

It is recommended that the Board of County Commissioners (Board) approve the attached resolution retroactively authorizing the County Mayor or the County Mayor's designee's action in applying for, receiving, and expending grant funds in the amount of \$250,000.00 for a two year project from the United States Department of Justice, Office of Justice Program's Paul Coverdell Forensic Science Improvement Grants Program to implement the project titled "Using Low Dose Full Body X-ray Technology in a Forensic Setting to Determine Death Certification;" and authorizes the County Mayor or the County Mayor's designee to allocate from the General Fund an amount not to exceed \$89,995.00 as a local match. The County Mayor or the County Mayor's designee is further authorized to apply for, receive, and expend any additional grant funds that may become available under this program, to execute such contracts, agreements, memoranda of agreement, and amendments as may be required by program guidelines, to extend such contracts, agreements, and memoranda of agreement as may be required by program guidelines, and to exercise any termination and modification clauses contained therein.

## **SCOPE**

The grant will support countywide services.

## **DELEGATION OF AUTHORITY**

The County Mayor or County Mayor's designee is authorized to apply for, receive, and expend grant funds, and execute related documents to implement the grant program, which may be required by grant guidelines or to further the purpose described in the funding request. Also, the County Mayor or County Mayor's designee is authorized to execute any necessary amendments and/or modifications to the application documents that relate to receiving grant funds. The County Mayor or County Mayor's designee is also authorized to allocate \$89,995.00 from the General Fund.

## **FISCAL IMPACT/FUNDING SOURCE**

The grant award is for \$250,000.00. Although not required, to cover the cost of the equipment, \$89,995.00 will be allocated from the General Fund as a local match to pay the difference between the grant award maximum and the total equipment cost of \$339,995.

## **TRACK RECORD/MONITOR**

This grant will be monitored by Darren Caprara, Director of Operation of the Medical Examiner's Department, to ensure compliance with grant requirements.

## **BACKGROUND**

The County, through the Medical Examiner Department, requested grant funds to implement the project titled "Using Low Dose Full Body X-Ray Technology in a Forensic Setting to Determine Death Certification" in the amount of \$250,000. The funding provided by the grant, along with the local cash match of \$89,995.00 will be used to purchase a low dose full body digital x-ray scanner which will significantly reduce the amount of time that is spent conducting a full body x-ray from hours to minutes, and increase the number of cases on which the Department conducts x-rays from 30 cases/month to 200 cases/month.

Low dose full body digital x-ray technology is faster, less expensive, and safer than conventional x-rays and can significantly improve medicolegal death investigations by: reducing the number of gross autopsies performed; reducing time spent performing full body scans using conventional x-rays in medicolegal death investigation examinations; decreasing exposures to biohazards by staff; honoring our nation's diverse cultural traditions; and increasing the amount of diagnostic information that is captured and retained electronically. It can innovatively detect natural disease in a decomposed body, the presence of retained projectiles, radio-opaque foreign bodies, and subtle bone fractures in the body and decomposed body of a trauma victim; and document abnormal heart size, lung collapse, and the presence of calcific atherosclerosis in major vessels, all without having to perform an autopsy.

Unfortunately, the Miami-Dade County Medical Examiner Department does not currently have the technology needed to conduct x-rays on the whole body at one time. It currently takes department staff hours to conduct a full body conventional x-ray without the ability to conduct lateral x-rays. Acquiring this technology will significantly improve the department's capacity to achieve reductions to the average number of hours/days spent conducting a full-body x-ray in postmortem investigations and reduce the number of backlogged forensic cases by increasing the number of cases that is processed each month using x-ray technology.

The short turnaround time imposed by the application deadline did not allow sufficient time for the processing of the resolution and its submission to the Board prior to submission of the grant application and the receipt of the grant award.



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Maurice L. Kemp  
Deputy Mayor



## MEMORANDUM (Revised)

**TO:** Honorable Chairwoman Audrey M. Edmonson  
and Members, Board of County Commissioners

**DATE:** October 6, 2020

**FROM:** Abigail Price-Williams  
County Attorney

**SUBJECT:** Agenda Item No. 9(A)(2)

Please note any items checked.

- ☐ "3-Day Rule" for committees applicable if raised
- ☐ 6 weeks required between first reading and public hearing
- ☐ 4 weeks notification to municipal officials required prior to public hearing
- ☐ Decreases revenues or increases expenditures without balancing budget
- ☐ Budget required
- ☐ Statement of fiscal impact required
- ☐ Statement of social equity required
- ☐ Ordinance creating a new board requires detailed County Mayor's report for public hearing
- ☐ No committee review
- ☐ Applicable legislation requires more than a majority vote (i.e., 2/3's present \_\_\_\_, 2/3 membership \_\_\_\_, 3/5's \_\_\_\_, unanimous \_\_\_\_, CDMP 7 vote requirement per 2-116.1(3)(h) or (4)(c) \_\_\_\_, CDMP 2/3 vote requirement per 2-116.1(3)(h) or (4)(c) \_\_\_\_, or CDMP 9 vote requirement per 2-116.1(4)(c)(2) \_\_\_\_ to approve
- ☐ Current information regarding funding source, index code and available balance, and available capacity (if debt is contemplated) required



Approved \_\_\_\_\_ Mayor  
Veto \_\_\_\_\_  
Override \_\_\_\_\_

Agenda Item No. 9(A)(2)  
10-6-20

RESOLUTION NO. \_\_\_\_\_

RESOLUTION RETROACTIVELY AUTHORIZING THE COUNTY MAYOR OR THE COUNTY MAYOR'S DESIGNEE'S ACTION IN APPLYING FOR, RECEIVING, AND EXPENDING GRANT FUNDS IN THE AMOUNT OF \$250,000.00 FOR A TWO-YEAR PROJECT FROM THE UNITED STATES DEPARTMENT OF JUSTICE, OFFICE OF JUSTICE PROGRAMS PAUL COVERDELL FORENSIC SCIENCE IMPROVEMENT GRANTS PROGRAM TO IMPLEMENT THE PROJECT TITLED "USING LOW DOSE FULL BODY X-RAY TECHNOLOGY IN A FORENSIC SETTING TO DETERMINE DEATH CERTIFICATION;" AND AUTHORIZING THE COUNTY MAYOR OR THE COUNTY MAYOR'S DESIGNEE TO (1) ALLOCATE FROM THE GENERAL FUND \$89,995.00 AS A LOCAL MATCH; (2) APPLY FOR, RECEIVE, AND EXPEND ANY ADDITIONAL GRANT FUNDS THAT MAY BECOME AVAILABLE UNDER THIS PROGRAM; (3) EXECUTE AND EXTEND SUCH CONTRACTS, AGREEMENTS, MEMORANDA OF AGREEMENT, AND AMENDMENTS AS MAY BE REQUIRED BY PROGRAM GUIDELINES; AND (4) EXERCISE ANY TERMINATION AND MODIFICATION CLAUSES

**WHEREAS**, this Board desires to accomplish the purposes outlined in the accompanying memorandum, a copy of which is incorporated herein by reference,

**NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA**, that this Board:

**Section 1.** Retroactively authorizes the County Mayor or the County Mayor's designee's action in applying for, receiving, and expending grant funds from the United States Department of Justice, Office of Justice Programs Paul Coverdell Forensic Science Improvement Grants Program in the amount of \$250,000.00 to implement the project titled "Using Low Dose Full Body X-Ray Technology in a Forensic Setting to Determine Death Certification." This Board further authorizes the County Mayor or the County Mayor's designee to allocate from the General Fund \$89,995.00 as a local match.

**Section 2.** Authorizes the County Mayor or the County Mayor’s designee to apply for, receive, and expend any additional future funds that may become available under this program; to execute such contracts, agreements, memoranda of agreement, and amendments as may be required by program guidelines, to extend such contracts, agreements, and memoranda of agreement as may be required by program guidelines, and to exercise the termination and modification clauses of any such contracts and agreements, after review by the County Attorney’s Office for form and legal sufficiency.

The foregoing resolution was offered by Commissioner \_\_\_\_\_ ,  
who moved its adoption. The motion was seconded by Commissioner \_\_\_\_\_ and  
upon being put to a vote, the vote was as follows:

Audrey M. Edmonson, Chairwoman

Rebeca Sosa, Vice Chairwoman

Esteban L. Bovo, Jr.

Jose “Pepe” Diaz

Eileen Higgins

Joe A. Martinez

Dennis C. Moss

Xavier L. Suarez

Daniella Levine Cava

Sally A. Heyman

Barbara J. Jordan

Jean Monestime

Sen. Javier D. Souto

The Chairperson thereupon declared this resolution duly passed and adopted this 6<sup>th</sup> day of October, 2020. This resolution shall become effective upon the earlier of (1) 10 days after the date of its adoption unless vetoed by the County Mayor, and if vetoed, shall become effective only upon an override by this Board, or (2) approval by the County Mayor of this resolution and the filing of this approval with the Clerk of the Board.

MIAMI-DADE COUNTY, FLORIDA  
BY ITS BOARD OF  
COUNTY COMMISSIONERS

HARVEY RUVIN, CLERK

By: \_\_\_\_\_  
Deputy Clerk

Approved by County Attorney as  
to form and legal sufficiency.

A handwritten signature in black ink, appearing to read 'AVZ', is written over a horizontal line.

Anita Viciano Zapata



## Confirmation

Thank you for submitting your grant application package via Grants.gov. Your application is currently being processed by the Grants.gov system. Once your submission has been processed, Grants.gov will send email messages to advise you of the progress of your application through the system. Over the next 24 to 48 hours, you should receive two emails. The first will confirm receipt of your application by the Grants.gov system, and the second will indicate that the application has either been successfully validated by the system prior to transmission to the grantor agency or has been rejected due to errors.

Please do not hit the back button on your browser.

If your application is successfully validated and subsequently retrieved by the grantor agency from the Grants.gov system, you will receive an additional email. This email may be delivered several days or weeks from the date of submission, depending on when the grantor agency retrieves it.

You may also monitor the processing status of your submission within the Grants.gov system by clicking on the "Track My Application" link listed at the end of this form.

Note: Once the grantor agency has retrieved your application from Grants.gov, you will need to contact them directly for any subsequent status updates. Grants.gov does not participate in making any award decisions.

**IMPORTANT NOTICE:** If you do not receive a receipt confirmation and either a validation confirmation or a rejection email message within 48 hours, please contact us. The Grants.gov Contact Center can be reached by email at [support@grants.gov](mailto:support@grants.gov), or by telephone at 1-800-518-4726. Always include your Grants.gov tracking number in all correspondence. The tracking numbers issued by Grants.gov look like GRANTXXXXXXXXX.

If you have questions please contact the Grants.gov Contact Center: [support@grants.gov](mailto:support@grants.gov)  
1-800-518-4726 24 hours a day, 7 days a week. Closed on federal holidays.

The following application tracking information was generated by the system:

<b>Grants.gov Tracking Number:</b>	GRANT13149049
<b>Applicant DUNS:</b>	13-191-0254
<b>Submitter's Name:</b>	Wall T Dan
<b>CFDA Number:</b>	
<b>CFDA Description:</b>	
<b>Funding Opportunity Number:</b>	BJA-2020-18433
<b>Funding Opportunity Description:</b>	BJA FY 20 Paul Coverdell Forensic Science Improvement Grants Program
<b>Agency Name:</b>	Bureau of Justice Assistance
<b>Application Name of this Submission:</b>	Miami-Dade County Medical Examiner
<b>Date/Time of Receipt:</b>	Jun 19, 2020 02:25:00 PM EDT

TRACK MY APPLICATION – To check the status of this application, please click the link below:

[https://apply07.grants.gov/apply/spoExit.jsp?p=web/grants/applicants/track-my-application.html&tracking\\_num=GRANT13149049](https://apply07.grants.gov/apply/spoExit.jsp?p=web/grants/applicants/track-my-application.html&tracking_num=GRANT13149049)

It is suggested you Save and/or Print this response for your records.



# USING LOW DOSE FULL BODY X-RAY TECHNOLOGY IN A FORENSIC SETTING TO DETERMINE DEATH CERTIFICATION

**Paul Coverdell Forensic Science  
Improvement Grants Program  
JUNE 19, 2020**

***Contact Information:***

**Miami-Dade County  
Medical Examiner Department  
Kenneth D. Hutchins, M.D.  
Associate Medical Examiner  
One Bob Hope Road  
Miami, Florida 33136  
Kenneth.Hutchins@miamidade.gov  
305-545-2430**



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**PROJECT ABSTRACT:**

Miami-Dade County requests \$250,000 from the U.S. DOJ to purchase a modern, low dose full body digital x-ray scanner for the Miami-Dade County Medical Examiner Department. Acquisition of this equipment will significantly reduce the Department's backlog of cases by reducing the amount of time spent conducting a full body x-ray from hours to minutes, and increase the number of cases on which the department conducts x-rays from 30 cases/month to 200 cases/month. Low dose full body digital x-ray technology is faster, less expensive, and safer than conventional x-rays and can significantly improve medicolegal death investigations by: Reducing the number of gross autopsies performed; Reducing time spent performing full body scans using conventional x-rays in Medicolegal death investigation examinations; Decreasing exposures to biohazards by staff; Honoring our nation's diverse cultural traditions; and Increasing the amount of diagnostic information that is captured and retained electronically. It can innovatively detect natural disease in a decomposed body, the presence of retained projectiles, radio-opaque foreign bodies, and subtle bone fractures in the body and decomposed body of a trauma victim; and document abnormal heart size, lung collapse, and the presence of calcific atherosclerosis in major vessels, all without having to perform an autopsy. This capacity has the potential to achieve the following outcomes: 1. To achieve reductions to the average number of hours/days spent conducting a full-body x-ray in postmortem investigations; and 2. Reduce the number of backlogged forensic cases by increasing the number of cases that is processed each month using x-ray technology.





# USING LOW DOSE FULL BODY X-RAY TECHNOLOGY IN A FORENSIC SETTING TO DETERMINE DEATH CERTIFICATION

**Paul Coverdell Forensic Science  
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JUNE 19, 2020**

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## **PROGRAM NARRATIVE**

### **1. Description of the Issue (Understanding of the issue and its importance)**

Medicolegal death investigation systems operate at the interface between law and medicine and are an essential government function. Medicolegal death investigation requires competent, professional and ethical investigators. The work is critical and has widespread impacts on the criminal and civil justice systems. It also impacts the families of the deceased, the community, and issues of public health. The recent abrupt rise in postmortem caseload and case reviews due to the COVID-19 pandemic has placed significant stress on the ability of forensic pathologists and Medical Examiner Departments to maintain an appropriate turnaround time, from body reception to body release. The overarching goal for medical examiner agencies is to provide services that meet the technical requirements while maintaining competitive turnaround times and reasonable costs. To meet expectations, utilizing technology and equipment, such as imaging technology, that is comprehensive, efficient, cost effective, and compliant with industry standards is imperative.

Imaging technology available to pathologists as a common practice offers agencies a way to: Reduce the number of gross autopsies needed; Decrease the number of biohazard exposures; honor our nation's diverse cultural traditions; and most importantly, Increase the amount of diagnostic information that is captured and retained electronically. Using whole-body, skeletal and soft-tissue, low-dose full body X-ray scanners, such as Lodox or FOBOS, in medicolegal death investigations enables pathologists to visually capture all fractures in the body and projectiles, if they are present, one single image.<sup>1</sup> This helps pathologists to gain a better understanding of the circumstances under which the injuries occurred.

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<sup>1</sup> Knobel GJ, Flash G, Bowie GF. Lodox Statscan proves to be invaluable in forensic medicine. *S Afr Med J.* 2006;96(7):593-596.

Whole-body imaging is best used routinely in cases associated with homicide, traffic accidents, occupational injuries, decomposed bodies, and drug abusers. In cases of traffic crashes and occupational injuries, fractures of the extremities are currently diagnosed by palpation. Fractures of the skull, chest, spinal column, and pelvis are documented in writing and by conventional photography. Using low dose full body X-ray technology instead of these conventional methods allows for anterior-posterior and lateral thoraco-abdominal studies to be obtained in just 3-5 minutes while utilizing only about one-third of the radiation required for conventional radiography.

Due to their graphic and gory nature, conventional autopsy photographs are infrequently shown to jurors. These photographic images if allowed, can be used in court to allow members of the jury to better understand the extent of trauma. Though conventional photographs may not be utilized in court whole body X-ray imaging would allow injuries to be visualized in a non-gory or graphic way. However, because the Miami-Dade County Medical Examiner Department only has conventional X-ray capacity at this time, and due to the cumbersome and laborious process of obtaining conventional X-rays, imaging is reserved for only a small subset of cases brought into the Medical Examiner Department. This includes victims of gunshot and stab wounds, decomposed bodies with evidence of skeletonization, pediatric deaths, and certain unidentified bodies.

The role of whole-body imaging in the handling of decomposed bodies cannot be understated. One of the reasons decomposed bodies are brought to the Medical Examiner Department is to rule out trauma causing or contributing to death. Ideally, all decomposed bodies would undergo full body X-rays. At the moment, the department only has conventional X-ray capacity. Due to personnel, logistical, and time constraints; conventional X-ray imaging is

reserved for skeletonized bodies, bodies with obvious or suspected gunshot or stab wounds, and bodies requiring X-ray to make a positive identification. Expanding the existing capacity at the Miami-Dade County Medical Examiner to include low dose full body imaging would improve the quality, accuracy and timeliness of the autopsies performed on decomposed bodies.

Low dose full body digital x-ray technology is faster, less expensive, and safer than conventional x-rays. This technology would reduce the effects of chronic radiation exposure to employees performing X-rays by 70-80%, significantly improving overall employee safety.

Retained needle tips in the necks of intravenous drug abusers has been documented in the forensic literature. Due to needle sharing, intravenous drug users are at high risk for being infected with human immunodeficiency virus and hepatitis C. When performing autopsies, the pathologist blindly inserts his hand between the skin and musculature of the anterior neck. With a Lodox or FOBOS, the bodies of all trauma victims who are known drug users could be quickly imaged so that the pathologist performing the autopsy would have adequate warning of any potential biohazards prior to exposure through physical contact, thus avoiding illness and costly follow-up with occupational health services.<sup>2</sup> Whole body imaging could be innovatively used in conjunction with external or limited internal examination to document injuries in the bodies of trauma victims with known or suspected infectious disease, such as tuberculosis or COVID-19.

This technology also helps to identify the presence of retained projectiles and subtle fractures that might otherwise be overlooked in all decomposed bodies. It can detect specific medical features, and metal objects such as projectiles and implants. It can also detect natural disease which may decrease the need for autopsy especially in those cases where there is a religious

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<sup>2</sup> Du Plessis, Marna & Date-Chong, Mandy & Liebenberg, Linda. (2019). Lodox®: the invaluable radiographic solution in the forensic setting. *International Journal of Legal Medicine*. 134. 10.1007/s00414-019-02116-y.

objection. Miami-Dade County is home to individuals from a multitude of cultures and religions which strongly oppose the performance of autopsy. Miami-Dade County (MDC), with a total population of 2.7 million (U.S. Census) is rich in cultural and ethnic diversity, is also the most populated county in the State of Florida, and the eighth largest in the country. The county houses one of the poorest, largest cities in the country, Miami, where the poverty rate of its residents is estimated at approximately 29% (U.S. Census). MDC has a large immigrant population; approximately half of the county residents are foreign born, and roughly under two thirds of them are of Hispanic/Latino origin (U.S. Census). Of these, 77.5% are White; 19.3% are Black; 1.7% are Asian; 0.3% are Native American; 1.2% claim they are of two or more races or other; and 70% claim they are Hispanic of any race (U.S. Census). The MDC Public School System is the fourth largest school district in the United States, and is comprised of 392 schools, 345,000 students and over 40,000 employees. District students speak 56 different languages and represent 160 countries.

Excluding tourists and seasonal residents, there are approximately 123,000 Jews, 40,000 Muslims, and 6,000 American Indians who live in Miami-Dade County. Performing autopsies over the religious and cultural objections of family members adds to the emotional pain and challenges associated with the loss of a loved one. This office has always been sensitive to the religious and cultural beliefs of family members; however, autopsy is sometimes necessary. The use of low dose whole-body radiation can be used to further reduce the need to perform autopsies over the religious/cultural objections of family members and better document the injuries and evidence of natural disease in those cases when autopsy is not performed. In addition to showing bone fractures and radio-opaque foreign bodies, the whole-body imaging technologies of Lodox or FOBOS can be used to document abnormal heart size, lung collapse, and the presence of calcific atherosclerosis in major vessels. Low dose full body digital x-ray would also be very useful in mass-fatality

events, which are unfortunately on the rise in the United States. It would significantly expedite the process and allow forensic pathologists and Medical Examiner Departments to release the decedents to funeral homes and their loved ones more quickly.

Before x-ray technology, skeletal fractures and bullet location were detected by a physical examination. There was no way for a physician to see into the human body without surgery. In 1895, German physics professor Wilhelm Conrad Röntgen, while working with high-voltage electricity, cathode rays, and gases at low pressure, found that x-rays could penetrate most solid objects. For the first time, physicians were able to noninvasively see the human body. By 1986, physicians were using x-rays for medicolegal purposes, most often for gunshot cases, tumor identification, and dental examination. By the 1980s, some began using virtual or digital autopsies. Today, many U.S. offices have begun to embrace low dose full body digital x-ray technology.

Unfortunately, the Miami-Dade County Medical Examiner Department does not currently have the technology needed to be able to x-ray the whole-body at one time. Subsequently, due to the cumbersome and laborious process of obtaining conventional X-rays, imaging is reserved for only a small subset of cases brought into the medical examiner department. This includes victims of gunshot and stab wounds, decomposed bodies with evidence of skeletonization, pediatric deaths, and certain unidentified bodies. The Department is required by the National Association of Medical Examiner accreditation to complete 90% of its cases in 90 days. Acquiring whole body imaging technology can ensure the Department's ability to meet these criteria and remain in good accreditation standing.

## **2. Project Design and Implementation (Quality and technical merit)**

### **a. Soundness of the approach to improve forensic services**

Miami-Dade County respectfully requests \$250,000 from the U.S. Department of Justice to establish a modern, low dose full body digital x-ray capacity for the Miami-Dade County Medical Examiner Department and enhance the department's ability to fulfill its stated mission of performing accurate, timely, dignified, compassionate, and professional death investigation services. While the existing facility has most of the facilities a medical examiner department needs to fulfill its duty, it does not have low dose full-body x-ray equipment. It currently takes the department hours to conduct a full body conventional x-ray without the ability to conduct lateral x-rays. The new technology would provide the capacity to conduct lateral x-rays, in addition to the existing practice of conducting anterior-posterior x-rays. The department's present technology is also unreliable and breaks frequently. Since 2016, a total of approximately 20 requests for repairs were submitted to the department's maintenance agreement vendor. In 2018, repairs to the X-Ray cassette reader of the equipment involved sending the cassette reader to the vendor for an approximate 3-month period each time and using a loaner for each interim. This system's warranty coverage expired in 2019.

Acquisition of this equipment is anticipated to significantly reduce the Department's backlog of cases by reducing the amount of time that is spent conducting a full body x-ray from hours to minutes. The department currently conducts x-rays on approximately 30 cases per month. The new technology would allow the department to conduct x-rays on approximately 200 cases per month. Low dose full body digital x-ray technology is faster, less expensive, and safer than conventional x-rays and can significantly improve Medicolegal death investigations by: 1) Reducing the number of gross autopsies performed; 2) Reducing time spent performing full body scans using conventional x-rays in Medicolegal death investigation examinations; 3) decreasing exposures to biohazards by staff; 4) Honoring our nation's diverse cultural traditions;



and most importantly, 5) Increasing the amount of diagnostic information that is captured and retained electronically.

Low dose full body x-ray technology produces 70-80% less radiation than conventional or traditional x-ray. It is extremely unlikely that one will develop any type of medical issue due to its radiation. In cases where there is a religious objection to performance of autopsy, low dose full body x-ray technology is an effective alternative for traditional autopsy as it helps to identify the injuries and evidence of natural disease in those cases when autopsy is not performed. In addition to showing bone fractures and radio-opaque foreign bodies, the whole-body imaging technologies of Lodox or FOBOS can be used to document abnormal heart size, lung collapse, and the presence of calcific atherosclerosis in major vessels. It can also detect natural disease which may decrease the need for autopsy which is especially helpful in those cases where there is a religious objection.

b. Feasibility of the proposed project and awareness of pitfalls If applicable:

The success of this project will provide much needed improvements in the processing of the patients of the Miami-Dade County Medical Examiner Department. The low dose full body X-ray system will be exclusively used to evaluate Medical Examiner patient's postmortem. We have been in discussions with the system providers and are confident that the feasibility of obtaining an appropriate system is excellent. We are aware that the current size of our conventional X-ray facility may be an impediment to certain low dose full body X-ray systems but there are systems where this is not an issue such as the FOBOS system.

c. Soundness of the approach to reduce and/or eliminate a backlog

The success of this project can provide several improvements in forensic investigations. These improvements include: A decreased turnaround time from body reception to autopsy and

body release, less radiation exposure to technicians and personnel performing the x-ray, reduce necessity of autopsies in decedents infected with communicable diseases such as tuberculosis and COVID-19, less time doing the radiographs and ability to image the entire body instead of just certain areas of the body, less personnel required to perform radiographs, respect for those with religious objection to autopsy, easier autopsy projectile retrieval and easier identification of decedents.

d. Soundness of the approach to train and employ forensic personnel and medicolegal death investigators to eliminate a backlog and increase capacity

The low dose full body X-ray system provider also provides operator training for up to 10-12 people. This would include the Miami-Dade County Medical Examiner personnel in the Forensic Evidence Recovery Team (FERT), autopsy technicians, and Computer Services Bureau personnel to adequately provide the team with technical support issues that may arise. Training these personnel, one group that retrieves the bodies of decedent's and the other that participates in the autopsy procedure will decrease the turnaround time and provide personnel less exposure to radiation.

e. Innovation and creativity in the approach to reducing and/or eliminating a backlog and increasing capacity.

Whole body imaging could be innovatively used in conjunction with external or limited internal examination to document injuries in the bodies of trauma victims who have known or suspected infectious disease, such as tuberculosis or COVID-19. It can detect natural disease in a decomposed body; the presence of retained projectiles, radio-opaque foreign bodies, and subtle bone fractures in the body and decomposed body of a trauma victim; and document abnormal heart size, lung collapse, and the presence of calcific atherosclerosis in major vessels, all without

having to perform an autopsy. This capacity has the potential to significantly decrease the need for autopsy and reduce case backlog while improving the timeliness, quality and accuracy of investigations performed, particularly in cases where the body is decomposed or there is religious objection.

### **3. Capabilities and Competencies (Capabilities, demonstrated productivity, and experience of the applicant organization and proposed project staff)**

The Miami-Dade County Florida Medical Examiner Department is a premier medical examiner department in the United States that provides accurate, timely, dignified, compassionate and professional death investigative services for the 2.8 million residents of Miami-Dade County, together with education, consultation and research for local and national medical, legal, academic and law enforcement communities. Through the use of forensic pathology, they combine the efforts of legal and law enforcement investigations with those of medicine and science to ascertain the facts surrounding deaths, particularly the cause and manner of death. On a daily basis, they provide: personal services to bereaved next-of-kin who call and visit our offices seeking help; provide low-cost disposition for abandoned, unclaimed human remains and for deceased members of indigent Miami-Dade County families; and host forensic seminars for professionals and students from around the world.

The department is accredited by the National Association of Medical Examiners and investigates approximately 13,000 medico-legal deaths per year. The staff perform in excess of 2000 medico-legal autopsies per year. The department has an in-house toxicology laboratory, photography department and histology laboratory. The Miami-Dade County Medical Examiner Department also maintains a highly competitive fellowship program accredited by the Accreditation Council of Graduate Medical Education. Each year, four pathologists join our

office to become specialists in the field of forensic pathology. Over the years the department has trained over 140 medical examiners. These trainees have gone on to become medical examiners, coroners, and hospital-based pathologists all over the country. In addition, our office hosts an observer-ship program where pathologists and medical examiners from all over the world come to the department for specialized training.

The grant will allow for the Medical Examiner, Dr. Emma Lew, and five (5) Associate Medical Examiners (listed below) to be fully trained by the vendor in the operation and maintenance of the new whole-body imaging technology. Product warranties, troubleshooting, applications support and consulting as well as on-site assistance will be included in the contract. All staff will understand the project design and corresponding objectives. All staff will be responsible for implementing the proposed plan and collecting the required data in each investigation. The Medical Examiner, Dr. Lew, will provide program oversight and will monitor the results using the prescribed performance measures.

**a. Qualifications and experience of proposed project staff (including any and all scientists [and organizations] identified in the application who will be significantly involved in substantive aspects of the proposal)**

The basis for a quality death investigation system is through the unified practice of highly trained and certified professionals. The Medical Examiner and Associate Medical Examiners at the Miami-Dade Medical Examiner Department all will have a key contributory role in the proposed project and their qualifications and experience are described below. Their principle function is to perform autopsies and determine cause and manner of death; examine, analyze and interpret autopsy, toxicology, medical and histological findings and provides reports; and, if needed, provides testimony in courts of law regarding such evidence.

Dr. Emma O. Lew has an M.D. (medical doctorate) and B.S. in Physiology from University of Saskatchewan. Dr. Emma O. Lew was named Director of the Miami-Dade County Medical Examiner Department in September 2016. She was appointed Interim Director in April 2016. Dr. Lew has dedicated the past 25 years to the Forensic Pathology profession. As Deputy Chief Medical Examiner from 2001-2016, Dr. Lew provided sound leadership to the department and sage counsel to the Chief Medical Examiner. She ensured that the department maintained its strict National Association of Medical Examiners accreditation standards and managed a robust training program that prepared over 100 visiting physicians, Forensic Pathology Fellows, and Associate Medical Examiners for senior forensic pathologist positions throughout the world. Previously, Dr. Lew held the Associate Medical Examiner position from 1992 to 2001, where she performed the work of a forensic pathologist; conducted scene investigations, preserved and analyzed forensic evidence and prepared various reports. Dr. Lew completed the Medical Examiner Department's Forensic Pathology Fellowship program in 1991, joining the department in 1992 as an Associate Medical Examiner. Dr. Lew earned her medical degree from the University of Saskatchewan, Canada.

Staff name, credentials, and title	Role/Experience
Dr. Emma O. Lew, Chief Medical Examiner & Dept. Director M.D. & B.S. in Physiology from University of Saskatchewan	Perform autopsies; determine cause and manner of death; examine, analyze and interpret autopsy, toxicology, medical and histological findings and provide reports; Oversee project by reviewing procedures, data, results, conclusions, and reports; and guiding staff in evaluation of the project outcomes and success / 33 yrs on staff
Dr. Kenneth D. Hutchins Associate Medical Examiner, M.D. from University of Pennsylvania; B.A. in Biology from Swarthmore College	Perform autopsies and determine cause and manner of death; examine, analyze and interpret autopsy, toxicology, medical and histological findings and provides reports; provide court testimony: review the project by observing results and putting results into practice / 19 years on staff
Dr. Katherine Lea Kenerson Associate Medical Examiner M.D. and B.A in Biochemistry with	Perform autopsies and determine cause and manner of death; examine, analyze and interpret autopsy, toxicology, medical and histological findings and provides reports; provide court testimony: review the project by observing results and putting

minors in chemistry and French from University of Colorado	results into practice / 5 years on staff
Dr. David Fintan Garavan Associate Medical Examiner Ph.D. in Medical Toxicology; M.A. in Medicine; and several B.A.s all from Trinity College in Dublin Ireland	Perform autopsies and determine cause and manner of death; examine, analyze and interpret autopsy, toxicology, medical and histological findings and provides reports; provide court testimony: review the project by observing results and putting results into practice / 5 years on staff
Dr. Mark J. Shuman Associate Medical Examiner, M.D. from University of Pittsburgh; B.A. in Chemistry from Kenyon College	Perform autopsies and determine cause and manner of death; examine, analyze and interpret autopsy, toxicology, medical and histological findings and provides reports; provide court testimony: review the project by observing results and putting results into practice / 20 years on staff
Dr. Benjamin Mathis, Associate Medical Examiner M.D. & B.A. in Classics (Latin) from Brown University.	Perform autopsies and determine cause and manner of death; examine, analyze and interpret autopsy, toxicology, medical and histological findings and provides reports; provide court testimony: review the project by observing results and putting results into practice / 7 years on staff

CVs and Position Descriptions are attached to this proposal in Appendices E and F respectively.

**b. Demonstrated ability of the applicant organization to manage the effort**

The Miami-Dade County Medical Examiner Department is adept at managing and implementing federal grant awards from the U.S. Department of Justice. Below is a list of all federal awards successfully obtained and implemented by the department.

<b>Grant Award/Program</b>	<b>Project Title</b>	<b>Amount</b>	<b>Purpose</b>
2008-CD-BX-0049 / Paul Coverdell Forensic Science Improvement Grant	Automated Screening of Body Fluids for Drugs and Poisons	\$95,000	Purchase new technology currently in use which continues to provide invaluable results in the routine screening of drugs in human fluids
2012-CD-BX-0024 / Paul Coverdell Forensic Science Improvement Grant	Detection of Designer Drugs and Potent Complex Pharmaceuticals in Death Investigations	\$175,000	The grant helped facilitate the purchase of new technology that has made significant improvements in the Laboratory's ability to screen postmortem samples for new, abused drugs.
2014-CD-BX-0028/ Paul Coverdell Forensic Science Improvement Grant	Drug Screening in Postmortem Blood: A Faster Approach Using GC/MS" project	\$175,000	purchase technology to improve the blood drug screening procedures using a GC/MS rapid screening method.
2016-CD-BX-0054 / Paul Coverdell Forensic Science Improvement Grant	Quantifying New Illegal Drug in Postmortem Samples: Balancing Accuracy	\$250,000	Purchase technology to reduce the current backlog and to ultimately reduce the turnaround time for cases requiring quantification of new designer drugs

	and Speed Using LC/MS/MS		
2019-DU-BX-0002 / FY19 Research and Evaluation for the Testing and Interpretation of Physical Evidence	Combining LC-MS/MS Product Ion Scan Technology with GC-MS Analysis to Identify Drugs and Poisons in Postmortem Fluids and Tissues	\$372,438	Purchase a Shimadzu Model 8060 LC/MS/MS through sole source procurement to develop screening protocols that combine fast scanning LC/MS/MS and GC/MS.

**c. Relationship between the capabilities/competencies of the proposed project staff (including the applicant organization) and the scope of the proposed project.**

The grant will allow for the Medical Examiner and all five Associate Medical Examiners to receive training by the vendor in the operation and maintenance of the low dose whole body imaging technology. Product warranties and troubleshooting will also be included in the purchase contract. In addition, the vendor has included applications support and consultation as well as on-site assistance if needed. All staff will understand the project design and corresponding objectives. The procedures will be implemented based on successful methods and research performed in-house as well as by other peer-reviewed research. All staff will be responsible for implementing the proposed plan and collecting the required data in each investigation. The Medical Examiner will provide program oversight and will monitor the results using the prescribed performance measures. Their roles relative the project is described in section 3a above.

**4. Impact and Plan for Collecting the Data Required for this Solicitation's Performance Measures (Relevance to policy and practice)**

The proposed project will be evaluated by tracking how well the following objectives and outcomes are accomplished. Project Objectives are described below.

Objective #1: To improve the quality and timeliness of medicolegal death investigations

Objective #2: To reduce the number of backlogged cases.

The project's success will be measured by evaluating these two outcomes, and tracking their corresponding data measures, described in section D below.

**Outcome Measure #1: To achieve reductions to the average number of days (or hours) spent investigating a postmortem case.**

Corresponding performance data to be provided to DOJ by project staff to evaluate this outcome measure includes: Tracking and comparing the average number of days it takes the Medical Examiner Department to conduct a forensic investigation at the beginning of the grant period; and at the end of the grant period. The exact reduction in backlog cases achieved by the technology acquisition will be determined by comparing pre and post backlog case data.

**Outcome Measure #2: Percentage reduction in the number of backlogged forensic cases.**

Corresponding performance data to be tracked and provided: Number of backlogged cases at the beginning of the grant period; and Number of backlogged cases at the beginning of the grant period. In the Miami-Dade County Medical Examiner Department, pathologists and forensic technicians and staff, during a death investigation usually spend more than an hour collecting a full body conventional x-ray as part of our examination. The task, is taxing and, sometimes takes at least two people to complete. Purchasing of a low dose full body digital x-ray system would significantly reduce the time spent on a task that currently takes two people more than an hour to complete to 13 seconds done by a single person.

**B. Sustainability of Project Activities**

Grant funds requested will be used solely for the purpose of purchasing the instrument and will not be used to fund personnel staff time. The technology is anticipated to improve the efficiency of project staff by reducing the amount of time each Associate Medical



Examiner/Medical Examiner spends identifying cause of death. Maintenance costs are included in the purchase of the equipment with a 2-year warranty.

**C. Demonstrated plan for collection of the performance measure data as described in the solicitation**

The proposed data collection plan will involve tracking and evaluating the following data to determine success of the proposed project:

**Outcome Measure #1: To achieve reductions to the average number of hours/days spent conducting a full-body x-ray in postmortem investigations.**

The department currently conducts full body x-rays on approximately 30 cases per month. It takes hours and multiple staff to perform the scan using the current conventional technology.

The new technology will reduce the amount of time (and staff) spent conducting full-body x-rays from hours to minutes. Corresponding performance data to be provided to DOJ by project staff to evaluate this outcome measure includes tracking and comparing the average number of hours it takes the Medical Examiner Department to conduct full-body x-rays prior to and post technology acquisition.

**Outcome Measure #2: Percentage reduction in the number of backlogged forensic cases by increasing the number of cases that is processed each month using x-ray technology.**

In 2018, the Miami-Dade County Medical Examiner Department investigated a total of 11,621 postmortem cases of which 224 cases were Homicides/Murders and 370 cases were drug-related. The department currently conducts full body x-rays on approximately 30 cases each month. This number is anticipated to significantly increase as a result of the technology acquisition from 30 cases to as high as 200 cases per month which accounts for a backlog

Corresponding performance data to be tracked and provided includes: Number of backlogged cases at the beginning of the grant period; and Number of backlogged cases at the beginning of the grant period; Number of cases process each month using conventional x-ray technology prior to acquisition and after acquisition.

## **5. Part 1 Violent Crimes**

a. The average annual number of Part I violent crimes reported to the Federal Bureau of Investigation for Miami-Dade County, Miami-Dade Police Department and Florida for calendar years 2016, 2017, and 2018 are as follows:

	<b>JAN-DEC 2016</b>	<b>JAN-DEC 2017</b>	<b>JAN-DEC 2018</b>
Miami-Dade County (44 police agencies) Total Part 1 Crimes	111,219	107,172	100,541
Miami-Dade County (44 police agencies) Total Murders	198	188	198
Miami-Dade Police Department (MDPD) Total Part 1 Crimes	41,923	40,840	38,353
MDPD Homicide Offenses	86	95	78
State of Florida	313,113	306,840	282,276

*Source: Florida Department of Law Enforcement Florida uniform crime reports for 2016, 2017, and 2018*

b. Discussion of the impact on the Medical Examiner's resources and needs based on reported data

Miami-Dade County Medical Examiner Department works with 60 different law enforcement agencies in Miami-Dade County to determine postmortem cause of death. Their caseload in 2016, 2017 and 2018 were as follows:

<b>Year</b>	<b>Total Cases</b>	<b>Homicides</b>	<b>Drug-related Deaths</b>
2016	11,124	235	455
2017	11,574	231	424
2018	11,621	224	370

## **BUDGET NARRATIVE AND DETAILED WORKSHEET**

**PERSONNEL: \$0**

**FRINGE BENEFITS: \$0**

**TRAVEL: \$0**

**EQUIPMENT: \$339,995**

**FEDERAL REQUEST: \$250,000 / APPLICANT MATCH: \$89,995**

The purchase of the Adani Forensic Body Scanner will be SOLE SOURCE procurement as necessary based on the necessary specifications to complete the project. The procurement of this instrument will be facilitated using a purchasing contract setup by Miami-Dade County Department of Procurement Management. A sole source justification will be submitted to DOJ upon award. The new, Adani FOBOS Forensic Body Scanner instrument will be dedicated to routine screening and is intended to achieve these perceived benefits: 1. Reduce the current backlog of cases; 2. Reduce the cost of screening by significantly decreasing time of identification per case by days to weeks; and 3. Improving the quality of the work performed by improving identification in cases where bodies are decomposed. The equipment purchase also includes: a 2-Year Full Factory Warranty; biannual preventative maintenance; installation and calibration; and vendor training on how to operate equipment for 10-12 people. See attached Vendor Estimate for additional details.

**SUPPLIES: \$0**

**INDIRECT CHARGES: \$0**

**TOTAL PROJECT COSTS: \$339,995**

**TOTAL FEDERAL REQUEST: \$250,000 / TOTAL APPLICANT MATCH: \$89,995**



## Quote

13614 Poplar Circle, Unit 203, Conroe, TX 77304

(936)588.2063 Office / (281)281.250.3102 Mobile

Company:	Miami-Dade Medical Examiners Office	Quote #	Miami Dade 032620		
POC/Phone:	Dr. Kenneth D. Hutchins 305-545-2484	Date:	3/26/2020		
Address:	1851 NW 10 Avenue	RE:	FOBOS		
City, State, Zip:	Mimai FL 33136	Email:	khutch@miamidade.gov		
Part No.	Description	Qty	Sale Price	Amount	
ADN FOBOS	FOBOS - Forensic Body Scanner	1	\$339,995.00	\$339,995.00	
	NEW Forensic-Specific Critical Imaging System				
	Full Body X-ray System For Rapid Assessment Forensic Pathology				
	All Standard Configuration Components As Described in the attached information				
	2 Year Full Factory Warranty				
	Preventive Maintenance - 2x per year				
	Complete Radiation Survey Reporting				
Install	Installation & Calibration	1	Included	Included	
Training	Training: Operator Training for up to 10-12 People	1	Included	Included	
Shipping	Shipping -Miami FL	1	Included	Included	
	Quote Total			\$339,995.00	

# APPENDIX A

## **INDIRECT COST RATE AGREEMENT**

Miami-Dade County does not have a federally negotiated indirect cost rate agreement. As a result, no indirect costs are requested in this application.

# APPENDIX B

## **FINANCIAL MANAGEMENT AND SYSTEM OF INTERNAL CONTROLS QUESTIONNAIRE**

### **IN WORKSPACE**

# APPENDIX C


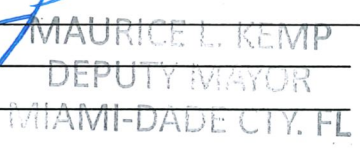
## **DISCLOSURE OF LOBBYING ACTIVITIES**

# DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352  
(See reverse for public burden disclosure.)

Approved by OMB

0348-0046

<b>1. Type of Federal Action:</b> <input checked="checked" type="checkbox"/> a. contract <input type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance		<b>2. Status of Federal Action:</b> <input checked="checked" type="checkbox"/> a. bid/offer/application <input type="checkbox"/> b. initial award <input type="checkbox"/> c. post-award		<b>3. Report Type:</b> <input checked="checked" type="checkbox"/> a. initial filing <input type="checkbox"/> b. material change <b>For Material Change Only:</b> year _____ quarter _____ date of last report _____	
<b>4. Name and Address of Reporting Entity:</b> <input checked="checked" type="checkbox"/> Prime <input type="checkbox"/> Subawardee Tier _____, if known:  Miami-Dade County 111 NW 1st Street, 22nd Floor Miami, FL 33128  Congressional District, if known: 24			<b>5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime:</b>   Congressional District, if known:		
<b>6. Federal Department/Agency:</b> U.S. Department of Justice/National Institute of Justice			<b>7. Federal Program Name/Description:</b> FY 2020 Competitive Grant Solicitation  CFDA Number, if applicable: 16.742		
<b>8. Federal Action Number, if known:</b> BJA-2020-18433			<b>9. Award Amount, if known:</b> \$ 250,000.00		
<b>10. a. Name and Address of Lobbying Registrant</b> (if individual, last name, first name, MI): Akerman Senterfitt LLP 750 9th Street, NW, Suite 750 Washington, D.C. 20001			<b>b. Individuals Performing Services</b> (including address if different from No. 10a) (last name, first name, MI): Mrs. Jane Sargent 750 9th Street, NW, Suite 750 Washington, D.C. 20001		
<b>11.</b> Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.			Signature:  Print Name: Carlos A. Gimenez Title: Mayor Telephone No.: (305) 375-3518 Date: 6/9/2020 <div style="text-align: right;">  </div>		
<b>Federal Use Only:</b>					Authorized for Local Reproduction Standard Form LLL (Rev. 7-97)



# APPENDIX D

## **APPLICANT DISCLOSURE OF PENDING APPLICATIONS**

Miami-Dade County Medical Examiner Department does NOT have any pending applications for federally funded grants or subgrants (including cooperative agreements) that include requests for funding to support the same project being proposed under this solicitation, and will cover the identical cost items outlined in the budget narrative and worksheet in the application under this solicitation. A list of all previously funded federal grant awards is provided in the narrative under Capabilities and Competencies.

# APPENDIX E

## **CURRICULUM VITAE OR RESUMES**

*Emma Oy Hir Lew, M.D.*  
*Curriculum Vitae*

I. **GENERAL:**

Office: Miami-Dade County Medical Examiner Department  
Number One on Bob Hope Road  
Miami, Florida 33136-1133  
(305) 545-2425/2416

II. **EDUCATION:**

University of Saskatchewan, Saskatchewan, Canada, B.S. in Physiology (High Honours), 1976  
University of Saskatchewan, Saskatchewan, Canada, M.D. Degree (Great Distinction), 1982  
Rotating Internship, St. Paul's Hospital, Vancouver, B.C., Canada, 1982-1983  
Anatomical Pathology Residency, University of British Columbia, Vancouver, B.C., 1983-1984  
Anatomical Pathology Residency, University of Saskatchewan, Saskatchewan, Canada, 1985-1988  
Forensic Pathology Fellowship, Miami-Dade County Medical Examiner Department, Miami, Florida, 1991-1992

III. **CERTIFICATION AND LICENSURE:**

Medical Licensure, State of Florida, August 1992, (ME 0062926)  
Diplomate of the American Board of Pathology, June 1992, Forensic Pathology  
F.R.C.P.C., December 1988, Anatomical Pathology  
Diplomate of the American Board of Pathology, November 1988, Anatomical Pathology  
Medical Licensure, Province of Saskatchewan, 1988 (#7263)  
FLEX, 1983  
Licentiate of Medical Council of Canada, 1983 (#54861)

IV. **ASSOCIATE MEMBERSHIPS:**

American Academy of Forensic Sciences  
National Association of Medical Examiners  
Florida Association of Medical Examiners

V. **APPOINTMENTS:**

Department Director and Chief Medical Examiner (September 30, 2016, to present)  
Interim Chief Medical Examiner, Miami-Dade County Medical Examiner Department (April 18, 2016, to September 29, 2016)  
Deputy Chief Medical Examiner/Director of Forensic Pathology Services, Miami-Dade County Medical Examiner Department, Miami, Florida (April 2001 to April 17, 2016); (coverage of duties to present)  
Associate Medical Examiner, District V, Florida (March 2000)  
Associate Medical Examiner, Volusia County and Seminole County, Florida (December 1998)  
Associate Medical Examiner, Palm Beach County, Florida (August 1996-December 1996)  
Voluntary Assistant Professor of Pathology, University of Miami School of Medicine, Miami, Florida (September 1992-Present)  
Associate Medical Examiner, Miami-Dade County Medical Examiner Department, Miami, Florida (July 1992-April 2001)  
Associate Director of Residency Training, Pathology, University of Saskatchewan (March 1990-June 1991)  
Assistant Professor, Department of Pathology, University of Saskatchewan (July 1988- June 1991)  
Chief (Administrative) Resident, Department of Pathology, University of Saskatchewan (1986-1987)  
Junior Lecturer, Department of Forensic Medicine, University of Leeds, Leeds, England (1984-1985)

VI. **FORENSIC PATHOLOGY CONSULTANT:**

United States Attorney, Tucson, AZ, April 2018, November 2018  
Saskatoon City Police, (Neil Stonechild Inquiry), Canada (March 2004)  
United States Border Patrol, Bahamas, (January 2001 and July 2001)  
Cayman Islands Police, (July 1998)  
Federal Bureau of Investigation, Mexico (December 1998 and January 1999), Costa Rica (March 2000), Ecuador (February 2001), Haiti (July 2006)  
Royal Turks and Caicos Islands Police, (1996 to 2006)  
Bermuda Police, (February 1994, April 1999)

VII. **HONOURS:**

Government & Law Award (Non-elected Category) 29<sup>th</sup> annual *In the Company of Women Awards* (March 2017)  
Life Alliance Miracles for Life Awards (Medical Examiner of the Year) (November 2016)  
Metro-Dade Police Department Silver Medal of Valor, December 1996 (ValuJet Flight 592)  
Mary Tom Award, Annual Meeting of the Canadian Association of Neuropathologists, Victoria, Canada, 1987  
Anatomy Award, Department of Anatomy, University of Saskatchewan, 1979  
Medical Research Council of Canada sponsorship of year in post-graduate education, 1976-1977  
RODA (Research on Drug Abuse) Summer Scholarship, Medical Research Council of Canada, 1975

VIII. **PAPERS PUBLISHED IN JOURNALS:**

Boland, D.M., Reicy, L. J., Seither, J.M., Radtke, J.M., Lew, E.O. Forty-Three Fatalities Involving the Synthetic Cannabinoid, 5-Fluoro-ADB: Forensic Pathology and Toxicology Implications. *Journal of Forensic Sciences* 2019 Jun 19.

Stroberg ED, Hutchins KD, Lew EO. A rare presentation of Alexander Disease. *Proc Am Acad Forensic Sci* (2018) V24; H1: 657.

Rapkiewicz AV, Kenerson K, Hutchins KD, Garavan F, Lew EO, Shuman MJ. Fatal Complications of Aesthetic Techniques: The Gluteal Region. *J Forensic Sci.*, 2018. doi: 10.1111/1556-4029.13761.

Matshes EW and Lew EO. An Approach to the Classification of Apparent Asphyxial Infant Deaths. Accepted for publication in *Academic Forensic Pathology*. 2017.

Snyder V., Curry C., Lew E. and Matshes E. Morbid obesity is not a risk factor for the development of clinically significant coronary artery atherosclerosis. *Academic Forensic Pathology*. 5(1), 38-46.

Matshes E., Selanders L. and Lew E. Skull base fractures are markers of severe forces in the first two years of life. *Academic Forensic Pathology*. 2 (4), 318-323.

Matshes E., Selanders L., Hatch G. and Lew E. Injuries of the upper cervical spinal column are markers of severe forces in the first two years of life. *Academic Forensic Pathology*. 2(4), 324-331.

Matshes E., Milroy C., Parai J., Sampson B., Reichard R., and Lew E. What is a complete autopsy? *Academic Forensic Pathology*. 1 (1), 2-7.

Matshes E., Evans R., Pinckard K., Joseph J., White C and Lew E. Shaken infants die of neck trauma, not of brain trauma. *Academic Forensic Pathology*. 1 (1), 82-91.

*Emma Oy Hir Lew, M.D.*  
*Curriculum Vitae*

*Papers Published in Journals (Cont.)*

- Matshes EW and Lew EO. 2010. Two-Handed Cardiopulmonary Resuscitation Can Cause Rib Fractures in Infants. *AM J Forensic Med Pathol* 31: 303-307.
- Hamilton L, Lew EO, Matshes EW. 2010. "Grown-up" Congenital Heart Disease and Sudden Death in a Medical Examiner's Population. *J Forensic Sci.* Vol. 56, No. 5 pp 1206-1212.
- Matshes EW and Lew EO. 2010. Homicide by unspecified means. *AM J Forensic Med Pathol* 31: 174-177.
- Matshes EW and Lew EO. 2010. Do resuscitation-related injuries kill infants and children? *AM J Forensic Med Pathol* 31: 178-185.
- Gyori E, Lew EO. 2007 Unsuspected central nervous system gummas in a case of "cerebral infarct" associated with cocaine use. *Am J Forensic Med Pathol* 28:208-211.
- Boland DM, Rein J, Lew EO, Hearn WL. 2003. Fatal cold medication intoxication in an infant. *Journal of Analytical Toxicology* Vol 27, 7: 523-529.
- Lew EO, Bannach BG, Rodriguez, III WC. 1996. Septic tank burial: Not just another skeleton in the closet. *J Forensic Sci.* Vol. 41, No. 5 pp. 887-890.
- Lew EO and Wetli CV. 1996. Mortality from Hurricane Andrew. *J Forensic Sci.* Vol. 41, No 3 pp. 449-452
- Lew EO and Kennington, RH. 1996. Not under the hammer: A revolver suicide. *J Forensic Sci.*, Vol. 41, No. 2 pp. 317-319
- Lew EO, Mittleman RE, Murray D. 1991. Endotracheal tube ignition by electrocautery during tracheostomy: Case report with autopsy findings. *J Forensic Sci* 36:1586-1591
- Lew EO, Rozdilsky B, Munoz DG, Perry G. 1989. A new type of neuronal cytoplasmic inclusion: Histological, ultrastructural, and immunocytochemical studies. *Acta Neuropathol* 77:599-604
- Friedman L, Patel M, Lew E, Silberberg P. 1989. Benign histiocytic fibroma of rib with CT correlation. *Can Assoc Radiol J* 40:114-116
- Lew EO, 1989. Homicidal hanging in a dyadic death. A case report. *Am J Forensic Med Pathol* 9:283-286
- Lew EOH, Richardson JS. 1981. Neurochemical and behavioural correlates of the interaction between amphetamine and  $\Delta^9$ -tetrahydrocannabinol in the rat. *Drug and Alcohol Dependence* 8:93-101

**IX. PUBLISHED PROCEEDINGS AND ABSTRACTS:**

Co-author in: Miami Vice: Brazilian Butt Lift Lessons Learned from the Miami Morgue. The Aesthetic Meeting 2019 (Scientific Sessions). Abstract #8063. To be presented in New Orleans in May 2019.

Co-author in: Update on Gluteal Fat Grafting presented at Florida Plastic Surgery Forum, Florida Society of Plastic Surgeons. December 2018.

*Emma Oy Hir Lew, M.D.*  
*Curriculum Vitae*

*Published Proceedings and Abstracts (Cont.)*

Co-author in: Gluteal Fat Grafting Mortality: The Miami Experience: Review of Autopsy Findings presented at Florida Plastic Surgery Forum, Florida Society of Plastic Surgeons. December 2018.

Co-author in: Hosting International Forensic Pathology Scholars. NAME 2018 Annual Meeting.

Schoen N, Richardson AM, Armstrong V, Sedighim S, Marshall H, Janecki J, Baig M, Bidot C, Lew E, Jagid J, Bullock MR. Gunshot Wounds to the Head in Urban South Florida: Novel Epidemiologic Insight. For digital poster presentation at the Congress of Neurological Surgeons: 2018 Annual Meeting in Houston, TX, Oct. 2018.

Stroberg E, Hutchins K, Lew E. A Rare Presentation of Alexander Disease. February 2018. American Academy of Forensic Sciences 70<sup>th</sup> Annual Scientific Meeting. Proc Am Acad Forensic Sci (2018) V24; H1.

Armstrong V, Richardson AM, Janecki J, Baig M, Marshall H, Sedighim S, Schoen N, Bidot C, Lew E, Bullock MR, Jagid J. Gunshot Wounds to the Head: A Modern Series in an Urban Melting Pot. Presented at AMA Research Symposium in Honolulu, November 2017.

Hutchins KD, Garavan G, Kenerson KL, Lew EO, Rapkiewicz AV. Fatal complications of aesthetic techniques: Gluteal liposculpture. Proc Am Acad Forensic Sci (2017) V23;H101:257.

Schoen N, Richardson AM, Janecki J, Baig M, Marshall H, Sedighim S, Armstrong V, Bidot C, Lew E, Jagid J, Bullock MR. Gunshot Wounds to the Head in Urban South Florida: An Epidemiologic Evaluation of the Public Health Burden. Accepted for presentation at the UMMSM Neurosurgery (Rosomoff) Research Day in June 2017.

Schoen NB, Richardson AM, Janecki J, Baig M, Bidot C, Marshall HS, Lew EO, Jagid JR, Bullock MR. November 2016. Gunshot Wounds to the Head in Urban South Florida: An In-Depth Epidemiologic Evaluation. AMA Research Symposium, Orlando, Florida.

Lew, EO. 2005. Fashion Faux Pas: Versace and Cunanan. National Association of Medical Examiners 2005 Annual Meeting.

Shaw, K-P, Burt M, Hyma BA. 2003. Combined Experiences of ValuJet 592, Singapore Airlines 006 and China Airlines 611 Aviation Disasters. National Association of Medical Examiners 2003 Annual Meeting. Co-presenter.

Shaw, K-P, Mont EK, Lew EO, Hyma BA. 2003. Retrospective Study of 58 Cases of Congenital Bicuspid Aortic Valve Encountered in a Forensic Setting. National Association of Medical Examiners 2003 Annual Meeting.

Lew EO, Kennington RH. 1996. Not under the hammer – a revolver suicide. Proceedings of the American Academy of Forensic Sciences, Abstract G75.

Wetli CV, Lew EO. 1994. Deaths from Hurricane Andrew and its aftermath. Proceedings of the American Academy of Forensic Sciences, Abstract. G78.

Hoppe B, Lee MA, Munoz DG, Lew E, Shuaib A. 1990. Polyradiculoneuropathy in olivopontocerebellar atrophy: An autopsy report. XXVth Meeting of the Canadian Congress of Neurological Sciences, Abstr. P22.

*Emma Oy Hir Lew, M.D.*  
*Curriculum Vitae*

*Published Proceedings and Abstracts (Cont.)*

Lew EO, Murray RB. 1988. Variations in the cytopathology of salivary gland lesions. Proceedings of the 1988 Joint Meeting of the Canadian Congress of Laboratory Medicine and Canadian Society of Clinical Chemists. P-43.

Lew EO, Rozdilsky B, Munoz DG, Perry G. 1987. A new type of neuronal inclusion in human pathology. Can J Neurol Sci 15:173

Lew EOH. 1987. The Bradford Stadium mass disaster. Journal of the Canadian Society of Forensic Science 20:3. Special Edition – Abstracts of the 11<sup>th</sup> Meeting of International Association of Forensic Sciences, Vancouver, B.C.

Richardson JS, Novakovski DM, Lew EO. 1977. Brain monoamines and free choice ethanol consumption by rats. Proceedings of the Canadian Federation of Biological Societies 20:143

Lew EO, Richardson JS, Novakovski DM. 1977. Behavioural and neurochemical correlates of the interaction of tetrahydrocannabinol with amphetamine. Proceedings of the Canadian Federation of Biological Societies 20:144

X. **EDITED VOLUME:**

Forensic Pathology: Principles and Practice. Dolinak, D., Matshes, E., and Lew, E., editors. Elsevier. Boston. 2005.

Reviewer for Medicolegal Neuropathology (A Color Atlas), Dolinak and Matshes, 2002, CRC Press.

XI. **LECTURER:**

- Death Investigation Courses:  
Miami-Dade County Medical Examiner Department (1992 to present)  
Florida Department of Law Enforcement, 1995  
Injuries and Death Investigation (Forensic Nurse) Miami-Dade Medical Examiner Department (1996 to 1998)
- Participation in Trial Advocacy/Litigation Skills Class: St. Thomas University, College of Law, Miami (1992 to 1995)
- International Association of Coroners and Medical Examiners, Dublin, Ohio (June 1994)
- University of Miami Anthropology 308 (Human Variation-Anthropology of Race), (1994 to 1998)
- American Psychiatric Association, Miami, Florida (May 1995)
- Participation in Trial Advocacy/Litigation Skills Class: University of Miami, College of Law (1995 to Present)
- Jackson Memorial Hospital Highland Park Pavilion, Adolescent Substance Abuse Program (1995 to 2001)
- American Society of Clinical Pathologists Workshop (Suicide: Problems and Pitfalls) and Dinner Seminar, Washington, D.C., (October 1998)
- Underwater Police Science Technology, Sponsored by Miami Police Department and National Academy of Police Diving (1996 to 1998)
- Jackson Memorial Hospital, Department of Education and Development Courses (1996 to 2006)
- School of Justice and Safety Administration, Criminal Investigation Conference (April 1997)
- Miami-Dade Police Crime Scene Investigations Course (1997 to 2011, 2016 to present)
- Miami-Dade Police Internal Affairs Investigations Course (2000 to present)

*Emma Oy Hir Lew, M.D.*  
*Curriculum Vitae*

*Lecturer (Cont.)*

- Miami-Dade Police Homicide Investigations Course (2001 to present)
- Miami-Dade Police Basic Police Sniper Course (2000)
- Miami-Dade Police Arson Investigation for the 21<sup>st</sup> Century Course (2000 to 2002)
- Miami-Dade Police Use of Deadly Force Investigations Course (2001 to 2006)
- Miami-Dade Police Advanced Homicide Investigations Seminar (2003 to 2005)
- Miami-Dade Police South American-Caribbean International Fugitive Conference (2004)
- Miami-Dade Police Tactical Operations Section, Special Response Team Conference (November 2007)
- Miami-Dade Police Sexual Crimes Investigations (2008 to 2010)
- Miami-Dade Police Violent Crime Scene Reconstruction (2013 to present)
- American Society of Clinical Pathologists Educational Course – Current Topics in Forensic Pathology, (Spring 1997), (Spring 1999), (Spring 2001)
- Society for the Scientific Detection of Crime (Masters of Disaster Seminar), Columbus, Ohio (March 1998)
- Wisconsin Coroners and Medical Examiners Association Annual Conference, Ashland, Wisconsin (June 2001)
- Forensic Pathology Workshop, Saskatoon, Saskatchewan, Canada (August 2001)
- Florida Association of Criminal Defense Lawyers (February 2002, February 2015)
- Federal Bureau of Investigation International Training Unit (Headquarters): Kazakhstan (June 2000); Jamaica (October 2000 and March 2001); Armenia (September 2001); Colombia (March 2002)
- American Osteopathic College of Pathologists/American Osteopathic Association Convention (October 2002)
- Ninth Annual Florida Gang Investigators Association Training Conference (October 2002)
- Saskatchewan Police College Child Abuse Investigator's Course, Regina, Saskatchewan, Canada (November 2003)
- Forensic Aspects of Child Abuse Conference, College of Medicine, University of Saskatchewan, Saskatoon, Saskatchewan, Canada (November 2003)
- A Practicum in Forensic Odontology, Miami-Dade County Medical Examiner Department and Miami-Dade County University (December 2003, 2005, 2007)
- Surgical Grand Rounds, Royal University Hospital (College of Medicine, University of Saskatchewan) (April 2004)
- Saskatchewan Association of Chiefs of Police (Spring Meeting 2004)
- Canadian Society for Medical Laboratory Science Annual Congress (June 2004)
- Florida Division of the International Association for Identification (FDIAI) Educational Training Conference (November 2004, October 2007, October 2016)
- International Forensic Photography Workshop, Miami-Dade County Medical Examiner Department (2005 to Present)
- Speaker, Paul Kneafsey Memorial Lectureship and Primary Adjudicator 2005 Research Day, Calgary, Alberta, Canada (September 2005)
- Forensic Aspects of Child Abuse: A Seminar for Health and Justice Professionals, Calgary, Alberta, Canada (October 2005)
- Smoky Mountain Criminal Justice Conference (Tenth Annual Criminal Justice Conference for Tennessee) (November 2005)
- Jornada de Actualizacion en Patologia Forense, Ministerio Público Instituto de Medicina Legal, Panama City, Panama (March 2006)
- International Association of Women Police, 44th Annual Conference (Canada, September 2006)



*Emma Oy Hir Lew, M.D.*  
*Curriculum Vitae*

*Lecturer (Cont.)*

- Regional Organized Crime Information Center, 15<sup>th</sup> Annual Homicide Conference (Arkansas, October 2006)
- Florida Association for Women Lawyers (February 2008)
- Miami-Dade Police Department Citizens Police Academy (2008 to present)
- Annual Medical Examiner's Symposium (Alberta, Canada, March 2009)
- Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) Quarterly Tactical Firearms Training (August/September 2009)
- Performance Standards of Forensic Autopsy and Inspection Conference (Taipei, Taiwan, May 2010)
- Federal Bureau of Investigation ERT Basic Arson School (September 2010 to 2013)
- Masters 14 Conference for Advanced Death Investigation. (Saint Louis University, July 2011)
- Joint Meeting of the American Medical Technologists (AMT) and Caribbean Association of Medical Technologists (CASMET). (August 2011)
- Fanshawe College (London, Ontario) Police Class (2012 to 2014, 2016 to present)
- Florida Department of Law Enforcement Criminal Justice Advanced Course: Investigation and Supervision of Officer-Involved Deadly Force Incidents (April 2012 to present).
- 5<sup>th</sup> Annual International Veterinary Forensic Sciences Conference (May 2012)
- Practical Death Investigation Photography (Calgary, Alberta, Canada. May 2012)
- Crime Scene Investigations Course. (Miami-Dade College, School of Justice, August 2012)
- Carnival Cruise Lines Physicians Annual Conference: Preservation of Death Scene and Evidence (August 2013)
- Florida Department of Law Enforcement Sex Crimes Investigation (Miami Police Training Center) (October 2013)
- Florida Division International Association for Identification Annual Training Conference. Welcome speech as one of three local dignitaries at the Opening Ceremonies. (October 2013)
- Miami-Dade Mayor's Executive Interns (November 2013)
- Caribbean Overseas Territories (COT) Serious and Organized Crime Working Group (February 2014)
- Miami-Dade Police Special Response Team/Ryder Trauma Center Fellows (February 2014)
- German International Police Association (IPA) Educational Program (February 2014, May 2015)
- Carnival Cruise Lines Shipboard Security Training CVSSA Model Course 11-01 (May 2014, May 2015, April 2016, May 2018)
- Volusia County Sheriff's Office Death & Crime Scene Investigation Conference (September 2016, 2018)
- Florida Court Reporters Association (FCRA) Annual Convention (June 2017)
- SOFT/TIAFT Meeting Workshop "From the Street to the Lab: Updated Trends and Case Reports for Novel Psychoactive Substances" (January 2018)

**CURRICULUM VITAE  
KENNETH D. HUTCHINS, M.D.  
ASSOCIATE MEDICAL EXAMINER  
MIAMI –DADE COUNTY MEDICAL EXAMINER DEPARTMENT  
NUMBER ONE ON BOB HOPE ROAD  
MIAMI FLORIDA 33136  
305-545-2430**

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**EDUCATION:**

- B.A. 1980 Swarthmore College
- M.D. 1984 University of Pennsylvania

**ADDITIONAL EDUCATION:**

- 1994-95                      Student, Temple University Law School (Fall Semester)

**TRAINING:**

- 1984-85                      Internship, General Surgery, SUNY Health Science Center, Syracuse
- 1985-87                      Fellow, National Institute of Health, Neurosurgery, SUNY Health Science Center, Syracuse
- 1987-88                      Resident, Neurosurgery, SUNY Health Science Center, Syracuse
- 1988-89                      Fellow, National Institute of Health, Neuropathology, Albert Einstein College of Medicine, New York
- 1989-90                      Resident, General Pathology, Albert Einstein College of Medicine, New York
- 1990-92                      Resident, Neuropathology, Albert Einstein College of Medicine, New York
- 1992-93                      Resident, General Pathology, Albert Einstein College of Medicine, New York
- 1993-94                      Research Fellow, Neuropathology, Albert Einstein College of Medicine, New York
- 1995-96                      Fellow, Forensic Pathology Office of the Chief Medical Examiner, State of Maryland, Baltimore, Maryland

**PROFESSIONAL EXPERIENCE:**

- 2001-present: Associate Medical Examiner, Miami-Dade County, Miami, Florida
- 1996-2001: Associate Medical Examiner, Regional Medical Examiner Office, Newark, New Jersey.

**CERTIFICATION:**

- Diplomate of the American Board of Pathology - Certified in Anatomic Pathology
- Diplomate of the American Board of Pathology - Certified in Forensic Pathology
- Diplomate of the American Board of Pathology- Certified in Neuropathology

**LICENSURE:**

New York: #170013 (inactive)  
Pennsylvania: MD#-52340L (inactive)  
New Jersey: #64477 (inactive)  
Florida: #ME 82184

**ADVISORY BOARD MEMBERSHIP:**

Reviewer: Oakstone Publishing, Practical Reviews in Forensic Medicine & Sciences, Forensic Medicine & Sciences Select (2001-2002).  
Miami-Dade County Domestic Violence Fatality Review Team (2003-present)  
Miami-Dade County Child Abuse Death Review Team (2003-present)

**PROFESSIONAL ORGANIZATIONS:**

National Association of Medical Examiners, Fellow 1999-present  
American Academy of Forensic Sciences, Fellow 1996-present  
Florida Association of Medical Examiners, 2004-present  
American Association of Neuropathologists, 2001-present  
The New York Association of Neuropathologists-Neuroplex, Inc., 2001-present  
American Association for the History of Medicine, Inc., 2001-2012

**GRANTS:**

1986 - National Research Services Award, National Institutes of Health (NRSA Fellowship 08012)

**FACULTY APPOINTMENTS:**

Assistant Professor of Pathology University of Miami School of Medicine (Voluntary Faculty) 2001-2013

**TEACHING EXPERIENCE:**

Course Coordinator Pathology 9014 (Forensic Pathology) New Jersey Medical School 1998-2001  
Instructor, Police Training Commission, State of New Jersey 1997-2000  
Lecturer, New Jersey Medical School, Department of Surgery-Grand Rounds 1997, 1998  
Lecturer, SIDS Center of New Jersey, 11<sup>th</sup> Annual New Jersey SIDS Conference 1998  
Lecturer, New Jersey Medical School, Department of Emergency Medicine-Grand Rounds 2000  
Lecturer, International Association for Identification, New Jersey Division, 2000  
Presenter, Univ of Miami School of Medicine, Trauma Surgery Morbidity & Mortality Conferences 2001  
Lecturer, Police Medicolegal Investigation of Death Course, Miami Dade Medical Examiner Department 2001-present

**HONORS:**

1979 - Swarthmore Richard Humphrie Scholarship  
1988 - Central Neuropsychiatric Association Meninger Award Honorable Mention  
1989 - Belfer Institute for Advanced Biomedical Sciences Diploma Recipient

**SPECIALTY COURSES:**

Bloodstain Pattern Analysis workshop, February 13-17, 2006 (40 hours)

## **PUBLICATIONS:**

### **ABSTRACTS:**

Stroberg ED, Hutchins KD, Lew EO. **A rare presentation of Alexander Disease.** Proc Am Acad Forensic Sci (2018) V24; H1:169.

Hutchins KD, Shuman MJ. **Delayed post-hypoxic leukoencephalopathy (DPHL)** Proc Am Acad Forensic Sci (2017) V23;H119:259

Mathis B, Hutchins KD. **Pneumococcal meningitis associated with phlegmonas gastritis and HIV/AIDS.** Proc Am Acad Forensic Sci (2017) V23;H12:244.

Hutchins KD, Garavan G, Kenerson KL, Lew EO, Rapkiewicz AV. **Fatal complications of aesthetic techniques: Gluteal liposculpture.** Proc Am Acad Forensic Sci (2017) V23;H101:257.

Hutchins KD, Shuman MJ. **Severe retinal hemorrhages with retinoschisis are not pathognomonic for abusive head trauma.** Proc Am Acad Forensic Sci (2016) V22; H24:731

Rapkiewicz A, Hood B, Hutchins KD. **Fatal case of hydrophilic polymer emboli.** J Forensic Sci (2015) Accepted for publication.

Mathis B, Hutchins KD. **Adolescent Suicide: A 30 year retrospective review.** Proc Am Acad Forensic Sci (2014) V20; G43:341.

Hutchins KD, Barnhart EA, Walter BV. **Fatal pulmonary fat emboli following first trimester elective abortion: Is this amniotic fluid embolism.** Proc Am Acad Forensic Sci (2012) V18; G6:279.

Rapkiewicz A, Shuman MJ, Hutchins KD. **Fatal wounds sustained from falling bullets: Maintaining a high index of suspicion in a forensic setting.** Proc Am Acad Forensic Sci (2012) V18; D4:187-88.

Thomas KM, Hutchins KD, Shuman MJ. **Retinal and optic nerve sheath hemorrhages associated with non-traumatic subarachnoid hemorrhage: Two cases of Terson Syndrome in young children.** Proc Am Acad Forensic Sci (2012) V18; G87:325.

Hutchins K, Nunez M, Petito C. **Causes of death and neuropathology in autism spectrum disorder: A medical examiner perspective.** J Neuropathol Exp Neurol (2010) 69:547-548.

Hutchins KD, Perez LE. **Acute hemorrhagic leukoencephalopathy (Weston-Hurst Disease): A natural disease presents as head trauma.** Proc Am Acad Forensic Sci (2007) V13; G5:258-9.

Hutchins KD, Lin RL, Natarajan GA. **An unusual case of death due to asphyxiation by soap.** Proc Am Acad Forensic Sci (2000) VI; G72:203-4.

Hutchins KD, Natarajan GA. **Suicide by Rubber - Novel use of the internet in Forensic Investigations: A case report.** Proc Am Acad Forensic Sci (2000) VI; G79:207-8.

Hutchins KD, Natarajan GA. **Frequency of cardiac rupture in acute myocardial infarction.**

Poster Presentation National Association of Medical Examiners Annual Meeting, Albuquerque, New Mexico 1998

Hutchins KD, Weidenheim KM, Rashbaum W, Lyman WD. **Characterization of the human fetal basal ganglia.** Brain Pathology (1994) 4:372.

Hutchins KD, Wu E, Kascak R, Dickson DW. **Spongiform change in diffuse Lewy body disease.** J Neuropathol Exp Neuro (1992) 51:327.

Dickson DW, Hutchins KD, Wu E. **Neuropathological study of diffuse Lewy body disease.** Neurosci Lett Supplement (1992) 42:S50.

Hutchins KD, Shoji T, Cho S, Dickson DW. **Immunohistochemical analysis of glial populations in multicystic encephalopathy.** J Neuropathol Exp Neuro (1991) 50:338.

Hutchins KD, Dickson DW, Kress YS, Rashbaum WK, Lyman WD. **Localization of morphologically distinct microglial populations in human fetal central nervous system.** Lab Invest (1990) 62:46A.

Hutchins KD, Dickson DW, Rashbaum WK, Lyman WD. **Characterization of microglia in human fetal spinal cord.** J Neuropathol Exp Neuro (1990) 49:283.

Hutchins KD, Dickson DW, Kure K, Rashbaum WK, Lyman WD. **Evidence that microglia in the human brain may be derived from neuroectoderm.** J Neuropathol Exp Neurol (1989) 48:342.

Lyman WD, Kress YS, Tanaka KE, Hatch WC, Hutchins KD, Rashbaum WK, Soeiro R. **HIV-1 infection of human fetal central nervous system organotypic cultures via autologous lymphocytes.** Neurosci Abstr (1990) vol. 15.

Hutchins KD, Strick PL. **Origin of corticospinal projections to the ipsilateral spinal cord.** Neurosci Abstr (1987) vol. 13.

## **PAPERS:**

*Rapkiewicz AV, Kenerson KL Hutchins KD, Garavan G, Lew EO, Shuman MJ.* **Fatal complications of aesthetic techniques: The Gluteal Region.** J Forensic Sci (2018) 63:1406-1412.

Hutchins KD, Shuman MJ. **Severe retinal hemorrhages with retinoschisis are not pathognomonic for abusive head trauma.** J Forensic Sci (2017) 62:807-811.

Rapkiewicz AV, Shuman MJ, Hutchins KD. **Fatal wounds sustained from falling bullets: Maintaining a high index of suspicion in a forensic setting.** J Forensic Sci (2014). 59:268-270.

Hutchins KD, Menke J, Reichard RR. **The utility of routine brain histology in forensic cases.** Acad For Path (2012) 2 (1):42-45.

Shields LBE, Hunsaker DM, Hunsaker JC, Wetli CV, Hutchins KD, Holmes RM. **Atypical autoerotic death: Part II.** Am J Forensic Med Pathol (2005) 26:53-62.

Hutchins KD, Skurnick J, Lavenhar M, Natarajan GA. **Cardiac rupture in acute myocardial infarction: A reassessment.** Am J Forensic Med Pathol (2002) 23:78-82.

Seigel JH, Smith JA, Tenenbaum N, McCammon L, Siddiqi SQ, Presswalla F, Pierre-Louis P, Williams W, Zaretski L, Hutchins K, Perez L, Shaikh J, Natarajan G. **Deceleration energy and change in velocity on impact: key factors in fatal versus potentially survivable motor vehicle crash (mvc) aortic injuries (A1): the role of associated injuries as determinants of outcome.** Ann Proc, Assoc Advancement Auto Med (2002) 46:315-38.

Siegel JH, Loo G, Dischinger PC, Burgess AR, Wang SC, Schneider LW, Grossman D, Rivara F, Mock C, Natarajan GA, Hutchins KD, Bents FD, McCammon L, Leibivich E, Tenenbaum N. **Factors influencing the patterns of injuries and outcomes in car versus car crashes compared to sport utility, van, or pickup truck versus car crashes: Crash injury research engineering network study.** J Trauma (2001) 51:975-990.

Hutchins KD, Williams AW, Hameed M. **The thymus and childhood sudden death: Status thymicolymphaticus revisited.** ASCP Check Sample (2001) FP 01-5.

Barami K, Hutchins KD, Lyman WD. **Neurotransmitter distribution in the second trimester fetal human corpus striatum.** Neurol Res (2001) 23:16-22.

Hutchins KD, Williams AW, Natarajan GA. **Neck needle foreign bodies: An added risk for autopsy pathologists.** Arch Pathol Lab Medicine (2001) 125:790-792.

Hutchins KD, Ballas SK, Phatak D, Natarajan GA. **Sudden unexpected death in a patient with splenic sequestration and sickle cell  $\beta$  thalassemia syndrome.** J Forensic Sci (2001) 46:412-414.

Hutchins KD, Natarajan GA. **Blunt impact abdominal injury in child abuse.** ASCP Check Sample (2000) FP 00-5.

Hutchins KD, Pierre-Louis PJB, Zaretski L, Williams AW, Lin RL, Natarajan GA. **Heroin body packing: Three fatal cases of intestinal perforation.** J Forensic Sci (2000) 45:42-47.

Hutchins KD, Dickson D, Hameed M, Natarajan GA. **Sudden death in a child due to an intrathoracic paraganglioma.** Am J Forensic Med Pathol (2000) 20:338-342.

Hutchins KD, Dickson DW, Rashbaum WK, Lyman WD. **Localization of microglia in the human fetal cervical spinal cord.** Dev Brain Res (1992) 66:270-273.

Hutchins KD, Dickson DW, Rashbaum WK, Lyman WD. **Localization of morphologically distinct microglial populations in the developing human fetal brain: Implication for ontogeny.** Dev Brain Res (1990) 55:95-102.

Dickson DW, Mattiace LA, Kure K, Hutchins KD, Lyman WD, Brosnan CF. **Biology of disease: Microglia in human disease, with an emphasis on AIDS.** Lab Invest (1990) 64:135-156.

Hutchins KD, Martino J, Strick PL. **Corticospinal projections from the medial wall of the hemisphere.** Exp Brain Res. (1988) 71:667-672.<sup>50</sup>

# Katherine Lea Kenerson, MD

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1851 NW 10th Ave  
Miami, FL 33136  
305-545-2481

klkenerson@gmail.com

## ASSOCIATE MEDICAL EXAMINER

*July 1, 2015 - Present*

**Miami-Dade Medical Examiner Department, Miami, FL**

## GRADUATE MEDICAL TRAINING

*July 1, 2014 – June 30, 2015*

**Fellowship in Forensic Pathology  
Miami-Dade Medical Examiner Department, Miami, FL**

*July 1, 2010 – June 30, 2014*

**Resident in Anatomical and Clinical Pathology  
University of Miami and Jackson Memorial Hospital, Miami, FL**

## EDUCATION

*August 2006 - May 2010*

**Doctor of Medicine, University of Colorado School of Medicine  
Aurora, CO**

*August 2004-June 2006*

**Duke University, Durham, NC**  
Post-Baccalaureate Research Education Program (PREP)

*August 1999 - May 2004*

**Bachelor of Arts University of Colorado, Boulder, CO**  
Major: Biochemistry; Minors: Chemistry and French  
Graduated Magna cum Laude

*January-June 2002*

**University of Edinburgh, Edinburgh, Scotland**  
Study Abroad

## CERTIFICATIONS

*September 15, 2015*

**Diplomat of the American Board of Pathology, Forensic Pathology**

*July 31, 2014*

**Diplomat of the American Board of Pathology, Anatomic and  
Clinical**

## CONTINUING EDUCATION

*July 2014*

**Police Medico-Legal Investigation of Death**  
Miami Dade Medical Examiner Department, Miami, FL

*October 2014*

**Bugs, Bones and Botany: A Unique Death Investigation Workshop**  
University of Florida, Gainesville, FL

*October 2014*

**Forensic Photography Workshop**  
Miami Dade Medical Examiner Department, Miami, FL

## SCHOLARSHIPS, HONORS, AND AWARDS

<i>June 2011</i>	Anatomic Pathology Case Presentation Award, University of Miami
<i>August 2006</i>	Dean's Scholarship, University of Colorado School of Medicine
<i>August 2004- June 2006</i>	PREP Research Scholar, Duke University
<i>May 2004</i>	Merck Index Award, University of Colorado
<i>August 2002-May 2004</i>	NIH/HHMI Scholars Program for Diversity in Biosciences Scholarship
<i>December 1999-May 2004</i>	Dean's List, University of Colorado
<i>August 1999</i>	Diversity Scholarship, University of Colorado
<i>August 1999</i>	National Society of Collegiate Scholars
<i>August 1999</i>	Golden Key Society

## WORK EXPERIENCE

*July 2014 – Present*

**Miami Dade Medical Examiner Department, Miami, FL**

### ASSOCIATE MEDICAL EXAMINER, FORENSIC PATHOLOGY

- Perform full autopsies in cases that fall under Medical Examiner jurisdiction, which includes complete eviscerations, organ review, protocol dictation, histology evaluation, evidence preservation, toxicology review and court testimony
- Attend death scene investigations as the primary scene investigator and work with law enforcement to determine cause and manner of death
- Review and approve and/or deny cremation requests
- Determine whether a case falls under Medical Examiner jurisdiction
- Responsible for supervising fellows and residents
- Attend bi-weekly conferences to present and discuss cases

*July 2010-June 2014*

**University of Miami School of Medicine and Jackson Memorial Hospital, Miami, FL**

### RESIDENT, ANATOMIC AND CLINICAL PATHOLOGY

- Performed graduated responsibilities in anatomic pathology including grossing, previewing and signing-out surgical pathology and cytology specimens, evaluating frozen section specimens, and performing autopsies
- Performed graduated responsibilities in clinical pathology including previewing and signing-out hematopathology
- Responsible for covering on-call procedures including after hours frozen sections, emergent apheresis, blood smear evaluation, malaria counts, blood transfusion reaction evaluation, and blood product approvals
- Prepared and presented journal clubs and pathology case presentations
- Responsible for preparing and presenting numerous tumor board conferences
- Responsible for supervising junior residents



August 2004-June 2006

**Post-Baccalaureate Research Education Program: Duke University, Durham, NC**

**RESEARCH SCHOLAR**

- Worked in Molecular Genetics and Microbiology laboratory and analyzed the action of the Human Papillomavirus (HPV) oncogenic protein, E6, in the Nuclear Factor  $\kappa$ B (NF- $\kappa$ B) pathway
- Performed analytic techniques including Agarose Gel Electrophoresis, SDS-PAGE, Western Blot, immunoprecipitation experiments, si-RNA transfections with FACS cell-sorting analysis, Dual-Luciferase Assay, and Protease Assays
- Participated in weekly meetings with fellow PREP scholars to present research and discuss journal articles

October 2002-May 2004

**Biochemistry Department: University of Colorado, Boulder, CO**

**NATIONAL INSTITUTE OF HEALTH/HOWARD HUGHES MEDICAL INSTITUTE RESEARCH SCHOLAR**

- Performed experiments to structurally and biochemically characterize the enzyme ArnB, an aminotransferase that catalyzes a key step in the formation of lipid A on bacteria cell walls, from bacteria *Pseudomonas aeruginosa*, *Salmonella typhimurium*, *Escherichia coli*, and *Yersinia pestis*
- Conducted analytical methods including Ni-NTA Protein Purification, Size-Exclusion Protein Purification, Bradford Protein Assay, Protein Spectrum Analysis, and Protein Activity Analysis
- Presented data and analysis to fellow researchers on a monthly basis

June 2000-December 2001

**Community Health Education Department: CU Wardenburg Health Center, Boulder, CO**

**STUDENT WELLNESS COORDINATOR**

- Researched and prepared presentations on the facts and harmful effects of tobacco use. Organized Great American Smoke-out Events to encourage smokers to quit smoking.
- Responsible for volunteer recruitment of ten volunteers per year, organizing, and conducting volunteer meetings.
- Organized health information tables with topics including tobacco, nutrition, breast cancer, and eating disorders.

**PUBLICATIONS**

- Rapkiewicz, AV, Kenerson, K, Hutchins, KD, Garavan, F, Lew, EO and Shuman, MJ. Fatal complications of aesthetic techniques: the gluteal region. J Forensic Sci. 2018.
- Kenerson, KL, Lear-Kaul, KC. Ingestion of drugs by “parachuting”: a unique drug delivery technique. Am J Forensic Med Pathol. 2012 Jun; 33(2):173-175.

- **The Southern Ute Drum Newspaper Vol. XLI, No. 8, April 23, 2009**
  - **Healthy Perspectives: The Importance of Seatbelt Use**
    - Newspaper Article Ignacio, CO 2009

#### **ABSTRACTS AND CONFERENCE PRESENTATIONS**

- **College of American Pathologists (CAP)**
  - **Endometriosis with vascular involvement: a diagnostic curiosity**
    - Poster Presentation San Diego, CA, 2012
- **United States and Canada Academy of Pathology (USCAP)**
  - **Effectiveness of Reporting Significant Diagnosis in Anatomic Pathology: Pathologists' Roles and Challenges**
    - Poster Presentation Vancouver, BC, Canada, 2012
- **Annual Biomedical Research Conference for Minority Students (ABRCMS)**
  - **The Human Papilloma Virus E6 Protein Activates the NF-kappa B Expression**
    - Poster Presentation Atlanta, GA, 2005
  - **Cystic Fibrosis: The Over-Expression and Purification of the PmrH Enzyme**
    - Poster Presentation San Diego, CA, 2003

#### **TEACHING AND LECTURES**

- **Miami-Dade Medical Examiner Department, Miami, FL**
  - "Patterns of Suicide" Lecture, Annually, three times per year
  - "Thermal Injuries" Lecture, Annually, three times per year
- **University of Miami School of Medicine, Miami, FL**
  - "Postmortem Changes" Lecture, December 2014
  - "Gunshot Wounds" Lecture, December 2014
- **University of Miami School of Medicine, Miami, FL**
  - Pathology Teaching Laboratories, January 2011 - June 2014

#### **SKILLS**

**Languages** Proficient in spoken and written Portuguese. Competent in spoken Spanish and French

**David Fintan Garavan, PhD, MD, FRCPath.**  
**Curriculum Vitae**  
crocker1nint@hushmail.com

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**EDUCATION:**

2018- Master of Arts, Medicine, Trinity College, Dublin, Ireland  
1994-1999 Bachelor of Arts, Bachelor of Obstetric Arts, Bachelor of Surgery, Bachelor of Medicine, Trinity College, Dublin, Ireland  
1990-1994 PhD in Medical Toxicology, Trinity College, Dublin, Ireland  
1987-1990 Diploma in Toxicology, Athlone Institute of Technology, Athlone, Ireland  
1989 Certificate in Laboratory Practice and Procedures, Athlone Institute of Technology, Athlone, Ireland

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**RESIDENCIES:**

July 2001-June 2006 South Dublin Pathology Resident Training Program, Dublin, Ireland  
July 2000-July 2001 Senior House Officer, Pathology, St James Hospital, Dublin, Ireland  
January 2000-July 2000 Surgical Residency, Limerick Regional General Hospital, Limerick, Ireland  
July 1999-January 2000 Medical Residency, Adelaide and Meath Hospital, Tallaght, Dublin, Ireland

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**BOARD CERTIFICATION:**

2010 Royal College of Pathologists (London) FRCPath (Forensic Pathology)

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**CURRENT REGISTRATIONS:**

2015-present Registered with Florida Medical Board, USA as a Forensic Pathologist (No. ME124500)  
2011-2016 Registered with the New Zealand Medical Council as a Vocational Specialist (No. 60734) Certified as a Forensic Pathologist  
2009-present General Medical Council, England (No. 7032911)  
1999-present General Register of Irish Medical Practitioners, Ireland (No. 23081) On Specialist Registry as a Forensic Pathologist

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**PROFESSIONAL EXPERIENCE:**

2015-2017 Medical Examiner, Miami-Dade, Florida, USA

- Staff Forensic Pathologist responsible for carrying out autopsies investigating homicides, and all other deaths that fall under Florida Statue 406
- Routinely testifies in courts as an expert witness

- Supervise, mentor and provide training to fellows, residents, medical students, and police agencies in forensic pathology

#### 2011-2015 Regional Consultant Forensic Pathologist, Auckland, New Zealand

- Consultant Forensic Pathologist responsible for carrying out autopsies, investigating homicides, suspicious deaths and coroner's autopsies, preparing reports, and testifying in court
- Acting Chief Forensic Pathologist in the absence of the Chief
- Routinely testified in courts as an expert witness at trials
- Provided training to residents, medical students, and police agencies in autopsy pathology
- Supervised and advised fellows and residents in carrying out death investigations
- Provided interpretation of toxicology results to colleagues when requested
- Expert witness at trials providing the court with toxicology and pathology opinions
- Carried out autopsies as well as testified in court for the governments of: Samoa, Kingdom of Tonga and Cook Islands

#### 2011- present Private Forensic Pathology and Toxicology consulting

- Provide expert defence opinion in forensic pathology and toxicology matters at trials including homicides, and assaults (non-fatal) in Federal Courts

#### 2009-2011 Forensic Pathologist, Forensic Unit, Royal Hospital Liverpool, England

- Responsible for carrying out coroner's autopsies, preparing reports, and testifying in court
- Routinely advised the coroner in complicated surgical and medical deaths in hospital and to ascertain the cause of death
- Provided training to residents and medical students in autopsy pathology
- Supervised and advised residents in carrying out complicated medical, surgical, and community related death investigations

#### 2006-2009 Forensic Pathology Fellowship, Miami-Dade Medical Examiner Department, Miami, United States (An ACGME Accredited Program)

- Third-year fellowship with a concentration in neuropathology
- Second-year fellowship with a concentration in pediatric pathology
- First-year fellowship with a concentration in general medico-legal death investigation and cardiac pathology

#### June 1994-October 1994 Locum Laboratory Toxicologist, Beaumont Hospital, Dublin, Ireland

- Performed various analytical techniques to identify, confirm and quantitate endogenous and exogenous substances in biological fluids
- Interpreted toxicology findings

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### PROFESSIONAL APPOINTMENTS:

2017 Appointed to the National Association of Medical Examiners (NAME) Toxicology Committee

2017 Appointed as a voluntary Assistant Professor of Pathology in the School of Medicine at the University of Miami, United States

2015-2018 Honorary Academic in Pathology and Toxicology, Department of Molecular Medicine and Pathology, University of Auckland, New Zealand

2011-2015 Examiner for The Royal College of Pathologists of Australasia for candidates seeking admission to the college

#### **INVITED PROFESSIONAL REVIEWS:**

- Review of Clozapine-related deaths from 2007-2015 on behalf of the Office of the Chief Coroner for New Zealand. Completed October 2016. This has led to new policies and practices being implemented in New Zealand regarding death investigation.
- Review the toxicology, postmortem and scene examination of the Carterton Balloon Disaster Inquiry. To provide the Inquiry with an opinion as to the interpretation of the postmortem toxicology result for the Pilot of the Balloon. The Pilot's toxicology results became a highly contentious issue during the inquiry. The inquiry report was published in April 2015.

#### **PROFESSIONAL AFFILIATIONS:**

2017- present The Society of Forensic Toxicology (SOFT)

2016-present The Florida Association of Medical Examiners (FAME)

2014-present The International Association of Forensic Toxicologists (TIAFT)

2010-present Fellow of The National Association of Medical Examiners (NAME)

2010-present Fellow of The Royal College of Pathologists (FRCPath, London)

2010-present Member of The American Academy of Forensic Sciences (AAFS)

2002-2004 Irish Medicines Board- Pre-Clinical Toxicology Committee

2001-2006 Irish Society of Toxicology, Council Member

#### **TEACHING:**

2015- present Responsible for teaching and training Fellows on all matters pertaining to Toxicology interpretation for postmortem examinations.

2015-present Responsible for training of Fellows (four) at the Miami-Dade Office that is an ACGME accredited training program. The Fellows complete a 1 year program.

2016-present Set exams questions and mark final papers for candidates sitting for their degree at Department of Pharmacology and Clinical Pharmacology, University of Auckland, Auckland, New Zealand

2016-present Instructor at the Police Medicolegal Investigation of Death seminar Miami Dade Medical Examiner's Office, Miami, Florida (3 times a year)

2011-2015 Responsible for training fellows, registrars and medical students in pathology and forensic pathology, Auckland, New Zealand

2011-present Guest lecturer in the Department of Pharmacology and Clinical Pharmacology, University of Auckland, Auckland, New Zealand

2011- 2015 Guest lecturer in the Department of Anatomy with Radiology, University of Auckland, New Zealand

2011-2015 Lecturer: The Fire Officers Training School, Auckland, New Zealand

2010 Guest lecturer in The Department of Pathology, University College, Galway, Ireland

2009-2011 Responsible for training registrars in autopsy and forensic pathology, Liverpool, England

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#### SELECT PUBLICATIONS:

1. New Psychoactive Substances (2019). Chapter in Drug Abuse Handbook, 3<sup>rd</sup> Edition;
2. Walsh, E. and **Garavan, D.F.** (2018) To test or not to test?: The value of toxicology in a delayed overdose death. *Journal of Forensic Sciences*: Volume 64 Issue 1, 314-317
3. Rapkiewicz, A and **Garavan, D.F.** (2018) Fatal complications of Aesthetic Techniques: The Gluteal Region. *Journal of Forensic Sciences*; Volume 63, Issue 5, 1-7
4. Bellissima, B and **Garavan, D.F.** (2017) Use of Coronal Post-mortem Tissue for Research in New Zealand. *Journal of Legal Medicine* 25, 1:205-209
5. **Garavan D.F.** and Khanijow, V. (2015) Complications of Untreated Hypothyroidism (Hashimoto's Thyroiditis). *The Academic Journal of Forensic Pathology* 5(4): 690-698
6. **Garavan D.F.** and Hameed H. (2015) Post-mortem Diagnosis of Primary Small Bowel Volvulus in an Adult: A case report. *The Academic Journal of Forensic Pathology*, 5(1):133-139
7. Serfontein, JJ. And **Garavan D.F.** (2013) A case of black oesophagus (acute oesophageal necrosis). *The Journal of the Royal College of Pathologists of Australasia*. Volume 45(S1):s92.
8. **Garavan D.F.**, Jeffers M., Granger R. (2004) Endometroid carcinoma of the urinary bladder complicating Vesical Mullerianosis. *VirchowsArchiv* Volume 444 No. 6 587.
9. **Garavan D.F.** and Chambers P.L. (1998) Exposure of blood to vapors or gases: A novel model with benzene as exemplar. *Toxicology Methods*, 8:117-126.
10. **Garavan D.F.**, Chambers, P.L., Chambers, C.M. (1995) Halothane and erythrocyte membrane-bound acetylcholinesterase (EMBAChE). *The International Toxicologist*, 7(1):19-P12.
11. Bolster M.A., **Garavan, D.F.** Harbison, J. (1995) Dyadic deaths in Ireland. *Medico-Legal Journal of Ireland*, 1(3):91-93.
12. Chambers P.L., C.Y. Ng, Chambers, C.M., **Garavan, D.F.**, (1993) A novel use of a blood oxygenator to study the effects of solvent vapors on the membrane-bound acetylcholinesterase of human erythrocytes. *Irish Chemical News*, 8:18.
13. Stinson J.C., **Garavan, D.F.**, Adebayo, G. (1993) Pesticide-contaminated cucumber. *Lancet*, 341:64.
14. **Garavan D.F.** (1992) Co-editor. *Toxicology from Discovery and Experimentation to the Human Perspective*. Proceedings of the VI<sup>th</sup> International Congress of Toxicology, Rome, Italy, 28 June-3 July 1992.

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#### INVITED SPEAKER:

1. **Fintan Garavan.** The Real C.S.I. Miami - A Collaborative Approach to Death Investigation with an Emphasis on Investigative Postmortem Toxicology. SOFT Workshop, October 9<sup>th</sup> 2018, Minneapolis
2. **Fintan Garavan.** The Forensic Pathologist- Cross examination of the expert. The Pacific Prosecutors Association Annual Conference. July 21-25<sup>th</sup> 2015, Nuku'loa, Tonga

3. **Fintan Garavan.** Assessment of Suspected Physical Abuse in Children. To be presented 8/11-8/14 2015 at The Health Care Educational Centre, Auckland Hospital, Auckland, New Zealand
4. **Fintan Garavan.** Assessment of Suspected Physical Abuse in Children. Presented 8/18-8/21 2014 at The Health Care Educational Centre, Auckland Hospital, Auckland, New Zealand
5. **Fintan Garavan.** Short Course in Post-mortem Forensic Toxicology. Presented 10/31-11/02 2014 at The Royal College of Pathologists of Australasia annual update meeting Tasmania, Australia
6. **Fintan Garavan.** Forensic Toxicology. Presented 4/5/2013 at The New Zealand Medical Laboratory Scientist Annual Conference, Auckland, New Zealand
7. **Fintan Garavan.** Toxicology from around the world. Presented 10/22/2012 at The Royal College of Pathologists Australasia Forensic Interim Meeting, Hobart, Australia
8. **Fintan Garavan.** Interpretation of Postmortem toxicology results. Coroner's training course 07/05/14, Wellington, New Zealand.
9. **Fintan Garavan.** Death Certification. Coroner's training course 07/05/14, Wellington, New Zealand.

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#### RECENT CONFERENCE PROCEEDINGS:

1. **Garavan, F.** Workshop (4 hours) The Real C.S.I. Miami - A Collaborative Approach to Death Investigation with an Emphasis on Investigative Postmortem Toxicology. Society of Forensic Toxicologist Annual Meeting, Minneapolis, USA, 9<sup>th</sup> October 10<sup>th</sup> 2018
2. Bellissima B, **Garavan F**, Tingle MD. Analysis of post-mortem levels of clozapine in coronial autopsy cases. ASCEPT NZ. Queenstown, New Zealand, 31 August 2016.
3. Bellissima B, Vara A, Kenedi C, **Garavan F**, Tingle MD. Clozapine-associated myocarditis and cardiomyopathy in Auckland, NZ. Society of Toxicology, New Orleans, Louisiana, USA, 16 March 2016.
4. Bellissima B, Tingle MD, Kenedi C, **Garavan F**. Clozapine-associated myocarditis in Auckland, NZ. Inflammation 2016, Miami Florida, USA, 26 January 2016.
5. Bellissima B, **Garavan F**, Kenedi C, Tingle MD. Clozapine-associated myocarditis and cardiomyopathy in New Zealand. ASCEPT NZ. Queenstown, New Zealand, 3 August 2015.
6. Bellissima B, **Garavan F**, Tingle MD. Coronial post-mortem tissue and ethical for considerations for student-led research in New Zealand. ASCEPT NZ. Queenstown, New Zealand, 27 August 2014.

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#### GRANTS:

A\* Trust Research Grant: Clozapine-Associated Myocarditis and Cardiomyopathy: Investigating a Metabolic Basis of Toxicity. \$30,000 Principle Investigator

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#### RESEARCH:

Advisor to PhD and MSc candidates at Auckland University, Department of Pharmacology and Clinical Pharmacology, University of Auckland, Auckland, New Zealand 2015-current

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#### AWARDS:

For contributions to Forensic Pathology by the New Zealand Police 2016

For Contributions to Death Investigations and Criminal Proceedings by the Pacific Prosecutors Association (PPA), presented at the AGM of PPA, Kingdom of Tonga 2015



# Curriculum Vitae

## Mark J. Shuman, MD, MS

### EDUCATION & WORK EXPERIENCE

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- |                |   |                     |
|----------------|---|---------------------|
| 2001 – Present | Miami-Dade County<br>Medical Examiner Department<br><i>Associate Medical Examiner</i>   | Miami, FL           |
| 2000 – 2001    | County of San Diego<br>Medical Examiner's Office<br><i>Deputy Medical Examiner</i>  | San Diego, CA       |
| 1999 - 2000    | Miami-Dade County<br>Medical Examiner Department<br><i>Fellow, Forensic Pathology</i>   | Miami, FL           |
| 1997 - 2000    | Nova Southeastern University<br><i>Masters of Science in Computer Information Systems</i>   | Fort Lauderdale, FL |
| 1995 - 1999    | Jackson Memorial Hospital<br><i>Resident, Pathology</i>   | Miami, FL           |
| 1994 - 1995    | Department of Pathology<br>University of Pittsburgh School of Medicine.<br><i>Research Fellow</i> <ul style="list-style-type: none"><li>▪ Studied prostate cell biology using an <i>in vitro</i> system of prostate cell culture.</li></ul> | Pittsburgh, PA      |
| 1993 - 1994    | Washington Hospital Center<br><i>Resident, General Surgery</i>  | Washington, DC      |
| 1989 - 1993    | University of Pittsburgh School of Medicine<br><i>Medical Doctor</i>  | Pittsburgh, PA      |
| 1985 - 1989    | Kenyon College<br><i>Bachelor of Arts</i> <ul style="list-style-type: none"><li>▪ <i>Summa Cum Laude</i></li><li>▪ High Honors in Chemistry</li></ul>   | Gambier, OH         |

# Curriculum Vitae

## Mark J. Shuman, MD, MS

### PUBLICATIONS AND ABSTRACTS

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"Fatal Complications of Aesthetic Techniques: The Gluteal Region." Rapkiewicz, Amy V., Katherine Kenerson, Kenneth D. Hutchins, Fintan Garavan, Emma O. Lew, and Mark J. Shuman. *Journal of Forensic Sciences*, 2018 February 21

"Optic Nerve Sheath Hemorrhages Associated With Non-Traumatic Subdural and Subarachnoid Hemorrhage: A Case of Undiagnosed Congenital Hydrocephalus." Shuman MJ and Thomas K. Poster presented at AAFS 69<sup>th</sup> Annual Scientific Meeting, 2017, New Orleans, LA.

"Delayed Post-Hypoxic Leukoencephalopathy (DPHL)." Hutchins KD and Shuman MJ. Poster presented at AAFS 69<sup>th</sup> Annual Scientific Meeting, 2017, New Orleans, LA.

"Severe Retinal Hemorrhages with Retinoschisis are Not Pathognomonic for Abusive Head Trauma." Shuman M and Hutchins K. *Journal of Forensic Sciences* 63(3):807-811, 2017 May.

"Fatal wounds sustained from 'falling bullets': maintaining a high index of suspicion in a forensic setting." Rapkiewicz AV, Shuman MJ, and Hutchins KD. *Journal of Forensic Sciences* 59(1):268-70, 2014 January

"Retinal and Optic Nerve Sheath Hemorrhages Associated With Non-Traumatic Subarachnoid Hemorrhage in Young Children." Thomas K, Shuman M, and Hutchins K. Abstract presented at AAFS 64<sup>th</sup> Annual Scientific Meeting, 2012; Atlanta, GA.

"Sickle cell trait-associated deaths: a case series with a review of the literature." Thogmartin JR, Wilson CI, Palma NA, Ignacio SS, Shuman MJ, and Flannagan LM. *Journal of Forensic Sciences* 56(5):1352-60, 2011 September.

"Retinal and Optic Nerve Sheath Hemorrhages Are Not Pathognomonic of Abusive Head Injury." Matshes E. SM, Shuman M, and Lew E. Abstract presented at: AAFS 62<sup>nd</sup> Annual Scientific Meeting, 2010; Seattle, WA.

"Apparent Natural Deaths in Older Individuals" Burt, M and Shuman, MJ. Abstract presented at the 2002 annual meeting of the National Association of Medical Examiners.

"Evaluation of Clinician Accuracy in Describing Gunshot Wound Injuries" Shuman M. and R. K. Wright. *Journal of Forensic Sciences* 44(2):339-342, 1999 March

"A Simple Method for the Isolation and Culture of Epithelial and Stromal Cells from Benign and Neoplastic Prostates" Krill D., Shuman M., Thompson MT., Becich MJ., and Strom SC. *Urology* 49(6):981-8, 1997 Jun.

## Curriculum Vitae

### Mark J. Shuman, MD, MS

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"Replication of Human Prostate Epithelial Cells, In Vitro." S.C. Strom, M. Shuman, R. Bahnson, and M. Becich. (Abstract)

"Lessons Learned from Tissue Banking Prostates from Organ Donors and Prostatectomy Specimens: What is Normal?" A. Hakam, J.T. Gau, M. Shuman, S. Strom, D. Cooper, R.R. Bahnson, T. Hakala, B. Brosnick and M.J. Becich. (Abstract)

"The Cellular Distribution of CD44 and c-met in Relation to the Secretion of PSA in Human Prostate Cell Lines." J.T. Gau, S. Hsu, M.G. Grove, M. Shuman, A. Hakam, B.A. Evans, T.A. Howard, S. Strom, R.R. Bahnson, D. Cooper, and M.J. Becich. (Abstract)

#### PRESENTATIONS

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"Electrocution" at the Miami-Dade County Medical Examiner Department Police Medicolegal Investigation of Death conference – presented three times per year.

"Head Injuries in Infants and Young Children" at the Illinois Institute for Continuing Legal Education (IICLE), Defending Illinois Death Penalty Cases conference in Springfield, IL (November 18, 2008) and in Chicago, IL (March 27, 2009)

"Pediatric Head Injury and the Shaken Baby Syndrome: Myths and Facts" at the Miami-Dade County Medical Examiner Department (October 20, 2008) and at the FORENSIC SCIENCE: NOW AND THE FUTURE conference the Nova Southeastern University (November 14, 2008).

"Imaging for the Forensic Pathologist" in the Workshop So You Think You Know Digital Imaging? SWGIT Advice to All AAFS Disciplines at the 61st Annual Meeting of the American Academy of Forensic Sciences (AAFS) in Denver, CO.

"Physician's Death Certification & Death Reporting Responsibilities" at Doctor's Hospital, Miami, FL (April 11, 2008)

"Capturing Still Images in the Field and Laboratory" in the Workshop SWGIT Presents: Guidelines for Acquiring, Processing, Analyzing, and Archiving Video and Image Data at the 57th and 59th Annual Meetings of the American Academy of Forensic Sciences (AAFS) in New Orleans, LA and San Antonio, TX, respectively.

"Bodies in Water" at the Forensic Science Conference of the Caribbean Forensic Network in St. Croix, U.S. Virgin Islands

"Practical Digital Photography" Workshop presented at the 54<sup>th</sup> Annual Conference of the American Academy of Forensic Sciences in Atlanta, Georgia.



## **Curriculum Vitae**

### **Mark J. Shuman, MD, MS**

"Digital Photography: It's Not Just for Vacations Anymore" Workshop presented at the 53<sup>rd</sup> Annual Conference of the American Academy of Forensic Sciences in Seattle, Washington.

"Cyber Solutions for Forensic Science: Practical Cost Effective and Efficient." Workshop presented at the 52<sup>nd</sup> Annual Conference of the American Academy of Forensic Sciences in Reno, Nevada.

"Lightning Injury and Death." Presented in the workshop "Electrical Injury and Death" at the 52<sup>nd</sup> Annual Conference of the American Academy of Forensic Sciences in Reno, Nevada.

"Information Technology Solutions for Forensic Pathology: Practical, Cost Effective and Efficient." Presented at the Fourth Annual Conference for Advancing Pathology Informatics, Imaging and the Internet in Pittsburgh, Pennsylvania.

"Information Systems for Medical Examiners and Coroners." Presented in the workshop "Beyond Record Keeping: Maximizing the Use of Forensic Data: Implications for SNOMED® and the Forensic Pathologist" at the 1999 ASCP/CAP Fall Meeting in New Orleans, Louisiana.

#### **PROFESSIONAL MEMBERSHIPS**

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American Academy of Forensic Sciences

National Association of Medical Examiners

Florida Association of Medical Examiners

FBI/DOJ Scientific Working Group on Imaging Technologies

#### **AWARDS AND ACHIEVEMENTS**

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FIU Chapmanville Leadership Development Program, May 4, 2018

Chief Resident, Clinical Pathology, Jackson Memorial Hospital 1998-1999

Phi Beta Kappa, Kenyon College (1989)

Carl Djerassi Award in Chemistry (1989)

Sigma Xi (Honor Society for Science Majors, 1989)

Lubrizol Fund Award (1988 and 1989)

#### **CERTIFICATION AND LICENSURE**

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Diplomate of The American Board of Pathology in Anatomic, Clinical and Forensic Pathology

Florida State Medical License #ME78012

Cayman Islands Medical Doctor Registration Number MDC/PL/MED/223

Nevada State Medical License #14953

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1865 NE 214<sup>th</sup> Terrace, Miami, FL 33179  
PHONE: (305) 527-9535 E-MAIL: [mshumanmd@gmail.com](mailto:mshumanmd@gmail.com)

## BENJAMIN MATHIS, MD

Number One on Bob Hope Road  
Miami, Florida 33136

(305) 545-2400  
bmathis@miamidade.gov

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BOARD CERTIFICATION      American Board of Pathology  
   Anatomic & Clinical Pathology  
   Expires 12/31/2022

MEDICAL LICENSURE      Florida:                      ME 112471 (unrestricted)  
   Pennsylvania :              MD 444608 (unrestricted)

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CURRENT POSITION      Miami-Dade County Medical Examiner Department  
July 2013-                      Associate Medical Examiner  
   Miami, Florida

FELLOWSHIP TRAINING      Miami-Dade County Medical Examiner Department  
July 2012-June 2013              Miami, Florida

RESIDENCY TRAINING      Hospital of the University of Pennsylvania (HUP)  
July 2008- June 2012              Anatomic & Clinical Pathology  
   Philadelphia, Pennsylvania

MEDICAL EDUCATION      Warren Alpert Medical School  
September 2004-May 2008              Brown University  
   Providence, Rhode Island  
   Doctor of Medicine, May 2008

UNDERGRADUATE      Brown University, Providence, Rhode Island  
September 2000-May 2004              Bachelor of Arts with Honors in Classics (Latin), May 2004  
   Study Abroad: Zhejiang University, Hangzhou, China, Fall 2002

HIGH SCHOOL      Springfield Central High School, Springfield, Massachusetts  
September 1996-June 2000              Summa cum laude, Aquilifer

PROFESSIONAL ASSOCIATIONS      College of American Pathologists  
   United States & Canadian Academy of Pathology

ACTIVITIES      College of American Pathologists  
   Histotechnology Committee, 2011-present

   Brown Medical Senate  
   Class Advocate and Committee Chair, 2004-2008

   Brown Medical School, Marrow Donor Recruitment Programming  
   Coordinator, 2006-2008

   Student National Medical Association, Brown Medical School Chapter  
   Chapter President, 2005-2006; Immediate Past President, 2006-2007

Dean's Advisory Council for Faculty Diversity, Brown Medical School  
Medical Student Representative, 2006

Course Liaison, Systemic Pathology, Brown Medical School, 2005

Campus Life Advisory Board, Brown University  
Medical School Representative, 2004-2006

Histology Teaching Assistant, Brown Medical School, 2004-2006

Brown University Yearbook, *Liber Brunensis*, Editor, 2000-2004

#### PRESENTATIONS

"Prognostic Value of Cervical Cone Margins and Endocervical Curettage Findings on Persistence of Residual Neoplasia in Subsequent Hysterectomy Specimens"

B Mathis and VA LiVolsi, United States and Canadian Academy of Pathology, Vancouver, British Columbia, March 19, 2012

"A Clinopathological Correlation of Noncompaction Cardiomyopathy" B Mathis et al. American Academy of Forensic Sciences, Washington, DC, February 20, 2013

"Sudden Death by Occult Metastatic Carcinoma"

S Dean and B Mathis, LA Litzky, I Hood, American Academy of Forensic Sciences, Washington, DC, February 20, 2013

"Photography Is an Underutilized Resource Crucial to Documentation of Cause of Death and Assurance of High Quality Postmortem Examinations"

B Mathis, United States and Canadian Academy of Pathology, Baltimore, Maryland, March 2013

"Adolescent Suicide: A 30 Year Retrospective Review"

B Mathis and K Hutchins, American Academy of Forensic Sciences, Seattle, Washington, February 2014

#### HONORS & AWARDS

Lodato Award for Excellence in Resident Teaching and Mentorship  
University of Pennsylvania Pathology Department, June 2012

Class Marshall, Brown Medical School  
Brown University 240<sup>th</sup> Commencement, May 2008

Academic honors in Classics/Latin Literature for undergraduate senior thesis entitled "Evolution of Latin into the Romance Languages," May 2004

Yale Book Award for Outstanding Character & Intellectual Promise, 2000

# APPENDIX F

## **POSITION DESCRIPTIONS OF PROJECT STAFF SCIENTISTS**

## **APPENDIX F: POSITION DESCRIPTIONS OF PROJECT STAFF SCIENTISTS**

### **MEDICAL EXAMINER**

#### **Minimum Qualifications:**

Doctor of Medicine degree. Board certified in Anatomic or Anatomic/Clinical Pathology and in Forensic Pathology by the American Board of Pathology. A minimum of eight to ten years of professional experience as an Assistant Medical Examiner in an established medical examiner facility are required.

#### **Job Description:**

#### **NATURE OF WORK:**

This is highly responsible executive level work in planning and directing the complex scientific and administrative operations of the Miami-Dade County Medical Examiner Department. An employee in this class is responsible for planning, directing and coordinating complex activities and operations in forensic medicine in accordance with local, state and federal statutes and regulations. Responsibilities include directing forensic investigations into the manner and causes of death, consulting with Assistant Medical Examiners on problem cases, providing direction in the conduct of examinations and autopsies, reviewing daily case summaries, providing laboratory services in the analysis of specimens, coordinating activities with law enforcement agencies and other organizations, and directing a variety of administrative and operational support functions. The incumbent exercises extensive independent judgment and professional knowledge of medicine and forensic pathology in directing County medical examiner activities in compliance with established regulations. Supervision is exercised over professional, technical, administrative and clerical employees with assigned responsibilities in various phases of operations. General direction is received from the Mayor who holds the incumbent responsible for the professional management of the department and achievement of departmental goals and objectives.

#### **ILLUSTRATIVE TASKS:**

Directs and supervises, through executives and professional employees, pathology operations including conducting all examinations and autopsies, coordinating case investigations with law enforcement and other involved agencies and individuals, conducting pathology resident training, and providing factual and witness testimony for courts. Directs and coordinates, through executives and professional employees, toxicology operations including providing laboratory services by performing chemical analyses on specimens submitted for examination, issuing reports of findings and providing interpretations, and providing testimony in court. Directs and coordinates, through executives and supervisors, the receipt and release of bodies, professional assistance during autopsies, fingerprinting and photography, investigative services for medical examiners, maintenance of case files, investigation of natural deaths at scenes, administration of indigent burial and cremation programs, and coordination of efforts among police, funeral homes and family. Directs, through executives and supervisors, a variety of administrative and support functions including personnel administration, budgeting, procurement, medical transcription services, computer operations, maintaining department



case files, and preparing statistical information and reports for use by professional staff, private individuals, companies or other agencies. Ensures that the department is in compliance with all local, state, and federal regulations including the Clinical Laboratory Act, Rules of the Department of Health and Human Services, Occupational Health and Safety Administration, and Department of Professional Regulation. Reviews daily case summaries and consults with professional staff on problem cases; participates in professional staff conferences; reviews and guides the clearance of pending cases; reviews reports, scientific literature and publications germane to medical examiner operations; ensures that the department keeps abreast of new standards and scientific procedures; represents department in interactions with police, health and other agencies. Establishes departmental programs, functions and direction; coordinates divisional operations; sets goals and objectives and monitors their achievement; evaluates departmental activities and services and assesses their effectiveness in meeting the needs of the citizens of Dade County. Reviews organizational patterns, work relationships, and staff responsibilities; structures the organization of the department to effectively achieve organizational goals. Meets with executive, supervisory, and administrative employees to discuss and resolve budgetary issues, review projects and programs, establish or redirect priorities, review policies and procedures, and implement improvements in operations. Makes decisions regarding hiring, discipline and promotion of subordinates; exercises authority for departmental personnel actions consistent with collective bargaining agreements, County personnel rules, and all other applicable rules and regulations. Performs related work as required.

#### KNOWLEDGES, ABILITIES, AND SKILLS:

Extensive knowledge of the theories, principles, and practices of medicine, and anatomic, clinical and forensic pathology. Extensive knowledge of the mission, goals, and objectives of the department in providing forensic medical services for the citizens of Dade County and various law enforcement, health, and other agencies. Extensive knowledge chemistry, physics, police science, police investigations, and legal requirements related to medical examiner operations. Thorough knowledge of local, state, and federal laws and regulations pertaining to medical examiner activities. Thorough knowledge of supervisory principles and practices. Thorough knowledge of the planning and organizing of complex medical examiner operations and activities. Ability to apply advanced professional knowledge of the principles of management, medicine, and forensic pathology in directing, supervising and coordinating a large and complex medical examiner department. Ability to plan, organize, direct and coordinate, through executives, managers and supervisors, the work of subordinates in a manner conducive to full performance and high morale. Ability to ensure that departmental operations and activities are in compliance with local, state, federal laws, and regulations. Ability to delegate the authority to subordinates necessary to complete responsibilities in varied medical examiner functions. Ability to communicate clearly, concisely, verbally, and in writing, to groups and individuals. Ability to establish and maintain effective working relationships with senior County management, elected officials, law enforcement and health agencies, and with officials of other local, state and federal organizations. Ability to exercise judgment and discretion in devising, installing and interpreting departmental policies, rules and regulations.

NEW 10-96

## ASST MEDICAL EXAMINER (ASSOCIATE MEDICAL EXAMINER)

### Minimum Qualifications:

Doctor of Medicine degree and Board qualified in Anatomic and Forensic Pathology to be certified by the American Board of Pathology or will obtain Board Certification in Forensic Pathology within three (3) years of employment with the department.

### Job Description:

**NATURE OF WORK:** This is highly responsible executive level work in complex scientific operations of the Miami-Dade County Medical Examiner Department. An employee in this class is responsible for Medical Examiner Departmental activities and operations in forensic pathology in accordance with local state and federal statutes and regulations. Responsibilities include performing work of staff pathologists; scene investigations; collecting, documenting, preserving and analyzing forensic evidence; preparing autopsy protocols and microscopic reports; planning, coordinating and performing medical research; resolving forensic problems and medical examiner cases; teaching in the Forensic Pathology Fellowship Training Program. The incumbent exercises extensive independent judgment and professional knowledge of medicine and forensic pathology in conducting County medical examiner activities in compliance with established regulations.

**ILLUSTRATIVE TASKS:** Performs work of staff pathologist; conducts scene investigations; collects, documents, preserves and analyses forensic evidence; prepares autopsy protocols and microscopic reports; conducts and/or attends various daily and weekly in-house scientific conferences. Teaches and supervises forensic pathology fellows, pathology residents and visiting medical students. Maintains communications with other County agencies, State Attorney's Office, Public Defender's Office, U.S. Attorney's Office, law enforcement agencies and the general public. Testifies as an expert witness in criminal and civil proceedings. Performs related work as required.

**KNOWLEDGE, ABILITIES AND SKILLS:** Extensive knowledge of the theories, principles and practices of medicine, and anatomic, clinical and forensic pathology. Extensive knowledge of the mission, goals and objectives of the department in providing forensic pathology services for the citizens of Miami-Dade County and various law enforcement, health and other agencies. Extensive knowledge of chemistry, physics, police science, police investigations, and legal requirements related to medical examiner operations. Thorough knowledge of local, state and federal laws and regulations pertaining to medical examiner activities. Thorough knowledge of the complex medical examiner operations and activities. Ability to communicate clearly and concisely, verbally and in writing, to groups and individuals. Ability to establish and maintain effective working relationships with law enforcement, attorneys, health agencies, and other employees of the Medical Examiner Department. Ability to exercise judgment and discretion in interpreting departmental policies, rules and regulations.

# APPENDIX G

## COVERDELL STATUTORY CERTIFICATIONS

- a. Certification as to Plan for Forensic Science Laboratories - Application from a Unit of Local Government
- b. Certification as to Generally Accepted Laboratory Practices and Procedures
- c. Certification as to Forensic Science Laboratory System Accreditation
- d. Certification as to Use of Funds for New Facilities
- e. Certification as to External Investigations

U.S. DEPARTMENT OF JUSTICE  
OFFICE OF JUSTICE PROGRAMS  
BUREAU OF JUSTICE ASSISTANCE

FY 2020 Coverdell Forensic Science Improvement  
Grants Program

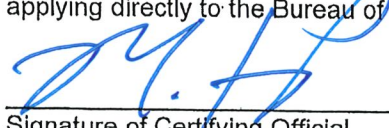
Certification as to Plan for Forensic Science Laboratories—  
Application from a **Unit of Local Government**

On behalf of the applicant agency named below, I certify the following to the Bureau of Justice Assistance, Office of Justice Programs, U.S. Department of Justice:

This unit of local government has developed a plan for forensic science laboratories under a program intended to improve the quality and timeliness of forensic science or medical examiner services provided by the laboratories operated by the applicant unit of local government and any other government-operated laboratories within the State that will receive a portion of the grant amount.

I acknowledge that a false statement in this certification or in the grant application that it supports may be the subject of criminal prosecution, including under 18 U.S.C. § 1001 and/or 1621 and 34 U.S.C. §§ 10271-10273. I also acknowledge that Office of Justice Programs grants, including certifications provided in connection with such grants, are subject to review by the Office of Justice Programs and/or by the Department of Justice's Office of the Inspector General.

I have authority to make this certification on behalf of the applicant agency (that is, the agency applying directly to the Bureau of Justice Assistance).

  
\_\_\_\_\_  
Signature of Certifying Official

Maurice L. Kemp  
\_\_\_\_\_  
Printed Name of Certifying Official

Deputy Mayor  
\_\_\_\_\_  
Title of Certifying Official

Miami-Dade County Medical Examiner Department  
\_\_\_\_\_  
Name of Applicant Agency  
(Including Name of Unit of Local Government)

6/10/2020  
\_\_\_\_\_  
Date

U.S. DEPARTMENT OF JUSTICE  
OFFICE OF JUSTICE PROGRAMS  
BUREAU OF JUSTICE ASSISTANCE

**FY 2020 Coverdell Forensic Science Improvement  
Grants Program**

Certification as to Generally Accepted Laboratory  
Practices and Procedures

On behalf of the applicant agency named below, I certify the following to the Bureau of Justice Assistance, Office of Justice Programs, U.S. Department of Justice:

Any forensic science laboratory system, medical examiner's office, or coroner's office in the State, including any laboratory operated by a unit of local government within the State, that will receive any portion of the grant amount uses generally accepted laboratory practices and procedures, established by accrediting organizations or appropriate certifying bodies.

I acknowledge that a false statement in this certification or in the grant application that it supports may be the subject of criminal prosecution, including under 18 U.S.C. § 1001 and/or 1621 and 34 U.S.C. §§ 10271-10273. I also acknowledge that Office of Justice Programs grants, including certifications provided in connection with such grants, are subject to review by the Office of Justice Programs and/or by the Department of Justice's Office of the Inspector General.

I have authority to make this certification on behalf of the applicant agency (that is, the agency applying directly to the Bureau of Justice Assistance).

  
\_\_\_\_\_  
Signature of Certifying Official

Maurice L. Kemp

\_\_\_\_\_  
Printed Name of Certifying Official

Deputy Mayor  
\_\_\_\_\_  
Title of Certifying Official

Miami-Dade County Medical Examiner Department  
\_\_\_\_\_  
Name of Applicant Agency  
(Including Name of State)

6/10/2020  
\_\_\_\_\_  
Date

U.S. DEPARTMENT OF JUSTICE  
OFFICE OF JUSTICE PROGRAMS  
BUREAU OF JUSTICE ASSISTANCE

FY 2020 Coverdell Forensic Science Improvement  
Grants Program

Certification as to Forensic Science Laboratory System Accreditation

On behalf of the applicant agency named below, I certify the following to the Bureau of Justice Assistance, Office of Justice Programs, U.S. Department of Justice:

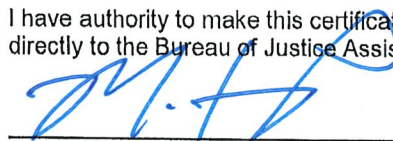
Before receiving any funds under this grant, any forensic science laboratory system in the State, including any laboratory operated by a unit of local government within the State, that will receive any portion of the grant amount (except with regard to any medical examiner's office) either—

a) is accredited by an accrediting body that is a signatory to an internationally recognized arrangement and that offers accreditation to forensic science conformity assessment bodies using an accreditation standard that is recognized by that internationally recognized arrangement, or,

b) is not so accredited, but will (or will be required in a legally binding and enforceable writing to) use a portion of the grant amount to prepare and apply for such accreditation not more than 2 years after the date on which a grant is awarded under the FY 2020 Paul Coverdell Forensic Science Improvement Grants Program.

I acknowledge that a false statement in this certification or in the grant application that it supports may be the subject of criminal prosecution, including under 18 U.S.C. § 1001 and/or 1621 and 34 U.S.C. §§ 10271-10273. I also acknowledge that Office of Justice Programs grants, including certifications provided in connection with such grants, are subject to review by the Office of Justice Programs and/or by the Department of Justice's Office of the Inspector General.

I have authority to make this certification on behalf of the applicant agency (that is, the agency applying directly to the Bureau of Justice Assistance).



Signature of Certifying Official

Maurice L. Kemp

Printed Name of Certifying Official

Deputy Mayor

Title of Certifying Official

Miami-Dade County Medical Examiner Department

Name of Applicant Agency  
(Including Name of State)

6/10/2020

Date



U.S. DEPARTMENT OF JUSTICE  
OFFICE OF JUSTICE PROGRAMS  
BUREAU OF JUSTICE ASSISTANCE

**FY 2020 Coverdell Forensic Science Improvement  
Grants Program**

Certification as to Use of Funds for New Facilities

On behalf of the applicant agency named below, I certify the following to the Bureau of Justice Assistance, Office of Justice Programs, U.S. Department of Justice:

The amount of the grant (if any) used for the costs of any new facility or facilities to be constructed as part of a program to improve the quality and timeliness of forensic science and medical examiner services will not exceed the limitations set forth at 34 U.S.C. § 10564(c) and summarized in the FY 2020 Coverdell Forensic Science Improvement Grants Program solicitation.

I acknowledge that a false statement in this certification or in the grant application that it supports may be the subject of criminal prosecution, including under 18 U.S.C. § 1001 and/or 1621 and 34 U.S.C. §§ 10271-10273. I also acknowledge that Office of Justice Programs grants, including certifications provided in connection with such grants, are subject to review by the Office of Justice Programs and/or by the Department of Justice's Office of the Inspector General.

I have authority to make this certification on behalf of the applicant agency (that is, the agency applying directly to the Bureau of Justice Assistance).



Signature of Certifying Official

Maurice L. Kemp

Printed Name of Certifying Official

Deputy Mayor

Title of Certifying Official

Miami-Dade County Medical Examiner Department

Name of Applicant Agency  
(Including Name of State)

6/10/2020

Date

U.S. DEPARTMENT OF JUSTICE  
OFFICE OF JUSTICE PROGRAMS  
BUREAU OF JUSTICE ASSISTANCE

**FY 2020 Coverdell Forensic Science Improvement  
Grants Program**

Certification as to External Investigations

On behalf of the applicant agency named below, I certify the following to the Bureau of Justice Assistance, Office of Justice Programs, U.S. Department of Justice:

A government entity exists and an appropriate process is in place to conduct independent external investigations into allegations of serious negligence or misconduct substantially affecting the integrity of the forensic results committed by employees or contractors of any forensic laboratory system, medical examiner's office, coroner's office, law enforcement storage facility, or medical facility in the State that will receive a portion of the grant amount.

I personally read and reviewed the section entitled "Eligibility" in the Fiscal Year 2020 program solicitation for the Coverdell Forensic Science Improvement Grants Program. I acknowledge that a false statement in this certification or in the grant application that it supports may be the subject of criminal prosecution, including under 18 U.S.C. § 1001 and/or 1621 and 34 U.S.C. §§ 10271-10273. I also acknowledge that Office of Justice Programs grants, including certifications provided in connection with such grants, are subject to review by the Office of Justice Programs and/or by the Department of Justice's Office of the Inspector General.

I have authority to make this certification on behalf of the applicant agency (that is, the agency applying directly to the Bureau of Justice Assistance).

  
\_\_\_\_\_  
Signature of Certifying Official

Maurice L. Kemp  
\_\_\_\_\_  
Printed Name of Certifying Official

Deputy Mayor  
\_\_\_\_\_  
Title of Certifying Official

Miami-Dade County Medical Examiner Department  
\_\_\_\_\_  
Name of Applicant Agency  
(Including Name of State)

6/10/2020  
\_\_\_\_\_  
Date




# Memorandum



**Date:** July 8, 2019

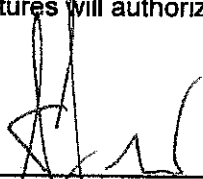
**To:** Linda A. Cave  
Director, Clerk of the Board

**From:** Carlos A. Gimenez  
Mayor 

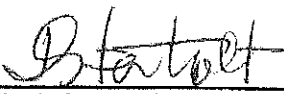
**Subject:** Administrative Order 2-3  
Signature Authority

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Effective immediately, this memo authorizes the following staff members to sign documents and agreements, which have been reviewed by the County Attorney as to form and legal sufficiency, and approved by official action of the Board of County Commissioners. In addition, these signatures will authorize submission of agenda items to the Office of Agenda Coordination.


  
Alejandro Ferro  
Chief of Staff

  
Maurice L. Kemp  
Deputy Mayor

  
Jack Osterholt  
Deputy Mayor /RER Director

  
Edward Marquez  
Deputy Mayor/Finance Director

  
Jennifer Moon  
Deputy Mayor/OMB Director

  
Michael Spring  
Senior Advisor

  
Myriam Marquez  
Communications Director/Senior Advisor

c: Eugene Love, Director, Office of Agenda Coordination

# Memorandum



**Date:** July 8, 2019

**To:** Deputy Mayors

**From:** Carlos A. Gimenez  
Mayor

A handwritten signature in black ink, appearing to read "Carlos A. Gimenez", written over a horizontal line.

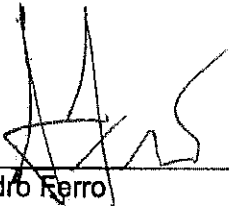
**Subject:** 2019 Signature Authority

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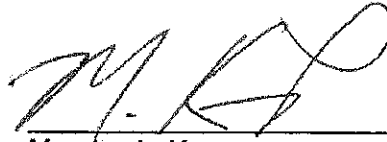
Effective immediately, you are authorized to sign the following items for your respective departments on my behalf:

- Permits
- Senior Management Performance Appraisal Forms
- Leave slips (your department and immediate staff)
- Travel requests for up to 4 travelers except for international and legislation-related travels
- Telecommunications Device and Service Requests
- Vehicle requests
- Grant applications

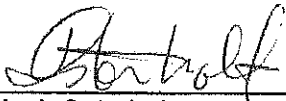
Your judgment is crucial when reviewing items for signature. Please submit requests for administrative leave and executive salary reviews to me for consideration. If an item is controversial, sensitive or otherwise significant, please forward it to my attention or discuss it with me personally.



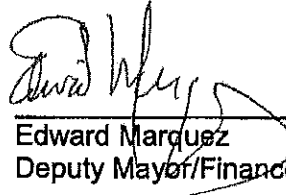
Alejandro Ferro  
Chief of Staff



Maurice L. Kemp  
Deputy Mayor



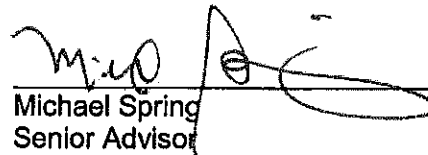
Jack Osterholt  
Deputy Mayor/RER Director



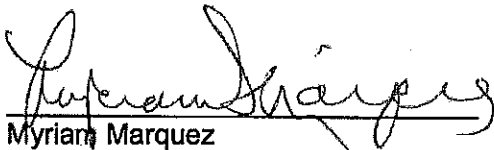
Edward Marquez  
Deputy Mayor/Finance Director



Jennifer Moon  
Deputy Mayor/OMB Director



Michael Spring  
Senior Advisor



Myriam Marquez  
Communications Director/Senior Advisor

c: Arleene Cuellar, Director, Human Resources Department  
Jennifer Moon, Director, Office of Management and Budget  
Angel Petisco, Director, Information Technology Department  
Tara Smith, Director, Internal Services Department  
Office of the Mayor Senior Staff