CHANDRA Y. GERRARD, B.S., R.T. (R)(CT)(MR)(QM)

 New Mexico Office of the Medical Investigator Radiology-Pathology Center for Forensic Imaging University of New Mexico School of Medicine MSC07 4040, 1 University of New Mexico, 87131-0001 2. Department of Radiology University of New Mexico School of Medicine MSC10 5530, 1 University of New Mexico, 87131-0001 Office: (505) 925-0553 Mobile: (505) 450-7313 Work: cgerrard@salud.unm.edu Personal: chandy_nm@yahoo.com

EMPLOYMENT

Lecturer III – Faculty, May 2015 to present. University of New Mexico, New Mexico, USA Health Sciences Center, School of Medicine Departments of Radiology and Pathology

> <u>Current appointments:</u> Supervisor of Forensic Imaging: Radiology-Pathology Center for Forensic Imaging May 2015 to present Clinical Radiology Research Technologist: Department of Radiology August 2016 to present

Past appointments: CT Physics Instructor: Radiologic Sciences Program May 2015 to July 2016

Radiologic Technology Instructor – Faculty, August 2014 to present. Central New Mexico Community College, New Mexico, USA. School of Health, Wellness, and Public Safety (HWPS) Albuquergue, New Mexico, USA

Radiologic Technologist – Intermittent Federal Employee, February 2013 to present.

Assistant Secretary for Preparedness and Response (ASPR) Department of Health and Human Services (HHS) National Disaster Medical System (NDMS) Disaster Mortuary Operational Response Teams (DMORT) Region VI

Supervisor of Forensic Imaging, May 2011 – May 2015.

University of New Mexico, New Mexico, USA Health Sciences Center, School of Medicine New Mexico Office of the Medical Investigator Radiology-Pathology Center for Forensic Imaging Computed Tomography Supervisor, October 2009 – April 2011. University of New Mexico Hospitals, New Mexico, USA. Radiology Department – Computed Tomography Interim Computed Tomography Supervisor, October 2009 – October 2010

Computed Tomography Staff Technologist, April 2007 – September 2009. University of New Mexico Hospitals, New Mexico, USA. Radiology Department – Computed Tomography

Diagnostic Radiologic Technologist, April 2006 – August 2008. Lovelace Medical Center – Downtown, New Mexico, USA. Radiology Department – Radiography PRN Diagnostic Radiologic Technologist, April 2007 – August 2008.

EDUCATION

MPH – Master of Public Health - Epidemiology, August 2015 to May 2018. University of New Mexico, School of Medicine, Public Health Program, Master of Public Health Program, Albuquerque, New Mexico, USA. Expected graduation May 2018.

BS – Radiologic Sciences, September 2007 to December 2013. University of New Mexico, School of Medicine, Radiologic Sciences Program, Albuquerque, New Mexico, USA. Graduated Cum Laude, Department of Radiologic Sciences, School of Medicine.

- Magnetic Resonance Imaging Certificate, June 2011 to July 2012. University of New Mexico, School of Medicine, Radiologic Sciences Program, Albuquerque, New Mexico, USA.
- **Computed Tomography Certificate,** June 2007 to July 2008. University of New Mexico, School of Medicine, Radiologic Sciences Program, Albuquerque, New Mexico, USA.
- AS Occupational Sciences, Radiologic Sciences, September 2003 to April 2006. *PIMA Medical Institute,* Albuquerque, New Mexico, USA. Graduated with Honors, PIMA Medical Institute.

CERTIFICATION & LICENSURE

- Board Certified in Radiologic Technology. American Registry of Radiologic Technologists. USA. (ARRT 405735 April 2006, exp. February 2017).
- Board Certified in Computed Tomography. American Registry of Radiologic Technologists. USA. (ARRT 405735 August 2008, exp. February 2017).

- Board Certified in Magnetic Resonance Imaging. American Registry of Radiologic Technologists. USA. (ARRT 405735 August 2012, exp. February 2017).
- Board Certified in Quality Management. American Registry of Radiologic Technologists. USA. (ARRT 405735 November 2012 exp. February 2017).
- Licensed Radiographic Radiologic Technologist. The New Mexico Medical Imaging and Radiation Therapy Program. New Mexico, USA. (RRT 03529 – April 2016, expires April 2018).
- Basic Life Support (BLS and AED). American Safety and Health Institute. New Mexico, USA. (Registry No. 48576, October 2015, exp. October 2017).

PRESENTATIONS

SCIENTIFIC

2017	European Society of Paediatric Radiology (ESPR) ESPR 2017 - 53 rd Annual Scientific Meeting Title: <u>International PMCT protocols – Presentation of Combined ESPR</u> <u>PM Taskforce / ISFRI Paediatric Working Group white document on PM</u> <u>CT protocols.</u> Davos, Switzerland, 05/30/17 – 06/03/17
2016	RTI International Forensic Technology Center of Excellence Funded award Title (PI Hatch): Hosting 3-day Workshop on Advanced Radiologic Imaging in Medicolegal Death Investigation. Title of talk: <u>Protocols</u> Albuquerque, NM, USA, 11/11/16-11/13/16
2016	RTI International Forensic Technology Center of Excellence Funded award Title (PI Hatch): Hosting 3-day Workshop on Advanced Radiologic Imaging in Medicolegal Death Investigation. Title of talk: <u>The Skeletal Survey</u> Albuquerque, NM, USA, 11/11/16-11/13/16
2015	Podium Presentation – Scientific Session 4 th International Society of Forensic Radiology and Imaging (ISFRI) World Congress <u>Postmortem Computed Tomography (PMCT) in pediatric deaths</u> <u>attributed to asphyxia</u> Leicester, United Kingdom, 05/14/15 – 05/16/15
2015	Workshop Presentation

	67 th American Academy of Forensic Sciences (AAFS) Annual Scientific Meeting <u>RADid: Using Radiologic Techniques to Identify Unknown Decedents</u> Orlando, FL, USA, 02/16/15 – 02/21/15
2014	Podium Presentation – Scientific Session 3 rd International Society of Forensic Radiology and Imaging (ISFRI) World Congress <u>PMCT findings in hanging</u> Marseille, France, 05/15/14 – 05/17/14
2014	Workshop Presentation 66 th American Academy of Forensic Sciences (AAFS) Annual Scientific Meeting <u>Advanced Forensic Pathology and Forensic Radiology Techniques in the</u> <u>Assessment of Cervical Spine and Craniocervical Junction Trauma</u> Seattle, WA, USA, 02/17/14 – 02/22/14
2014	Podium Presentation National Institute of Justice (NIJ) 2014 Grantees Meeting <u>Investigation of the Impact of Body Temperature and Post-Mortem</u> <u>Interval on Magnetic Resonance Imaging (MRI) of Unfixed Tissue</u> Seattle, WA, USA, 02/17/14 – 02/22/14
2013	Paper Presentation 65 th American Academy of Forensic Sciences (AAFS) Annual Scientific Meeting. Forensic Sciences Foundation Emerging Forensic Scientist Award. <u>Determination of Postmortem Interval Using Non-Invasive Magnetic</u> <u>Resonance Imaging Measurement of the Apparent Diffusion Coefficient</u> <u>and 1-Dimensional Spectroscopy</u> Washington, DC, USA, 02/18/13 – 02/23/13 (Unable to attend due to unforeseen circumstances)
2012	Podium Presentation – Scientific Session 1 st International Society of Forensic Radiology and Imaging (ISFRI) World Congress <u>Determination of PMI using non-invasive MRI measurement of the ADC</u> Zurich, Switzerland, 05/14/12 – 05/15/12
INVITED	
2016	Podium Presentation International Society of Forensic Radiology and Imaging (ISFRI) International Association of Forensic Radiographers (IAFR) Day Meeting <u>PMMR of the Brain</u> Amsterdam, The Netherlands, 05/12/16 – 05/14/16
2016	Podium Presentation

	British Columbia Association of Medical Radiation Technologists (BCAMRT) Annual General Conference <u>Forensic Imaging</u> Coquitlam, British Columbia, Canada, 04/22/16 – 04/23/16
2015	Podium Presentation New Mexico Society of Radiologic Technologists Annual Conference (NMSRT) <u>Forensic Radiologic Technologist</u> Ruidoso, NM, USA, 04/17/15 – 04/18/15
2014	Podium Presentation Radiology CEU Seminar; University of New Mexico Hospitals <u>Forensic Radiologic Technologist</u> Albuquerque, NM, USA, 06/14/14
2014	Live Webinars RTI International Center for Forensic Sciences Continuing Education Program, funding from National Institute of Justice <u>Investigation of the Impact of Body Temperature and Post-Mortem</u> <u>Interval on Magnetic Resonance Imaging (MRI) of Unfixed Tissue</u> Webinars (3) presented 06/03/14 – 06/05/14
2012	Podium Presentation 65 th National Association of Medical Examiners (NAME) Annual Meeting & Exhibits <u>Pediatric Skeletal Survey as a Means of Identifying Cases of Non-</u> <u>Accidental Trauma</u> Baltimore, MD, USA, 10/05/12 – 10/09/12
2012	Podium Presentation 2012 Philips Clinical Informatics and Patient Care User Summit <i>iSite's role in transforming workflow for Forensic Radiology</i> San Francisco, CA, USA, 09/06/12 – 09/07/12
2012	Podium Presentation New Mexico Society of Radiologic Technologists Annual Conference (NMSRT) <u>Introduction to a Medical Examiner's Office</u> Taos, NM, USA, 04/13/12 – 04/14/12

TEACHING

September 2016	Senior Morphology Technicians Overview of Forensic Imaging Modalities New Mexico Office of the Medical Investigator	
Fall 2016	RADS 410	Physics of Computed Tomography I

(TA)	RADS 410	Physics of Computed Tomography I Structured Education Requirement Student (SERS)	
	RADS 420	Computed Tomography Clinical I	
July 2016		can Tribal Leadership Open House Computed Tomography Demonstration	
June 2016	Field Deputy Medical Investigator Continuing Education <u>Forensic Imaging – workflow, utility, and case examples</u> New Mexico Office of the Medical Investigator Medicolegal Death Investigation – ECHO Session (June 15, 2016)		
Summer 2016 (Instructor)	RADS 412 RADS 422	Computed Tomography Physics Review Computed Tomography Clinical III	
March 2016		onal Disaster Preparedness Event New Mexico Health Sciences Center Interprofessional E)	
Spring 2016 (Instructor)	RADS 411 RADS 421	Physics of Computed Tomography II Computed Tomography Clinical II	
Fall 2015 (Instructor)	RADS 410 RADS 420	Physics of Computed Tomography I Computed Tomography Clinical I	
Summer 2015 (Instructor)	RADS 412 RADS 422	Computed Tomography Physics Review Computed Tomography Clinical III	
February 2015	Forensic Pathology Fellow Rotation Radiographic Technique for Pediatric Skeletal Survey		
January 2015		Medical Investigator Meeting rensic Imaging – past, present, future	
March 2014	Forensic Pathology Faculty, Fellows, Residents Workshop presentation <u>Advanced Forensic Pathology and Forensic Radiology Techniques in the</u> <u>Assessment of Cervical Spine and Craniocervical Junction Trauma</u>		
July 2013	Forensic Pathology Fellow Rotation Radiographic Technique for Pediatric Skeletal Survey		
July 2012	Morphology Technician Training <u>Pediatric Skeletal Survey</u>		
Spring 2009 (Student TA)	<i>CT Physics Program</i> (RADS 406 requirement) Developed PowerPoints for CT Physics Instructor Used for courses RADS 410 and RADS 420		
Fall 2008	Nuclear Medi	cine Program (RADS 406 requirement)	

(Student TA) Developed Visual Graphs for Nuclear Medicine Program Director Graphs used to represent student clinical experience

MENTORING

Fall 2016	Victoria Bixler, R.T.(R)(MR) Radiologic Sciences Bachelor of Science in Radiologic Sciences candidate; RADS 406 research rotation
TRAINING	
October 2015	<u>Leadership Academy</u> American Society of Radiologic Technologists (ASRT) Albuquerque, NM, USA, 10/15/15 – 11/26/15
August 2015	<u>Disaster Victim Identification – In Theory and Practice</u> International Association of Forensic Radiographers (IAFR) United Kingdom Forensic Radiography Response Team (UKFFRT) Shrivenham, Swindon, United Kingdom, 08/08/15 – 08/09/15
June 2014	<u>Disaster Mortuary Operational Response Teams Fundamentals National</u> <u>Training</u> Disaster Mortuary Operational Response Teams (DMORT) United States Department of Health and Human Services (HHS) National Disaster Medical System (NDMS) Phoenix, AZ, USA, 06/23/15 – 06/25/15
July 2013	<u>N 1070 – Ethics Training for Special Government Employees</u> Assistant Secretary for Preparedness and Response National Disaster Medical Systems Certificate of Training
July 2013	<u>N 2051 – Psychological First Aid</u> Assistant Secretary for Preparedness and Response National Disaster Medical Systems Certificate of Training
October 2012	<u>Advanced Forensic Imaging Course</u> University of Maryland Medical System Office of the Chief Medical Examiner (OCME) Baltimore, MD, USA, 10/10/12
March 2010	<u>FEMA (ICS-00800.b) – National Response Framework, An Introduction</u> Emergency Management Institute United States Department of Homeland Security
March 2010	<u>FEMA (ICS-00700.a) – National Incident Management System (NIMS),</u> An Introduction

	Emergency Management Institute United States Department of Homeland Security
March 2010	FEMA (IS-00200.a) – ICS for Single Resources and Initial Action Incidents, ICS-200 Emergency Management Institute United States Department of Homeland Security
February 2010	FEMA (IS-00100.FWa) – Introduction to the Incident Command System, ICS-100 for Federal Workers Emergency Management Institute United States Department of Homeland Security

PROFESSIONAL AFFILIATIONS

1.	American Registry of Radiologic Technologists (ARRT)	2006 – present
2.	American Society of Radiologic Technologists (ASRT) Computed Tomography Chapter Magnetic Resonance Imaging Chapter Quality Management Chapter	2009 – present 2009 – present 2012 – present 2013 – present
3.	International Association of Forensic Radiographers (IAFR)	2011 – present
4.	New Mexico Society of Radiologic Technologists (NMSRT)	2011 – present
5.	National Association of Medical Examiners (NAME) Support System Affiliate	2012 – present
6.	International Society of Forensic Radiology and Imaging (ISFRI) Founding Member	2012 – present
7.	Golden Key International Honour Society	2012 – present
8.	Association of Educators in Imaging and Radiologic Sciences (AEIRS) Active Member	2014 – present
9.	American Academy of Forensic Sciences (AAFS) Trainee Affiliate – General Section	2015 – present 2015 – present
10.	New Mexico Public Health Association (NMPHA) Student Member	2015 – present
11.	European Society of Paediatric Radiology (ESPR) Associate Member	2016 – present
12.	New Mexico Diabetes Advisory Council (NMDAC)	2016 – present

Para Professional Member

OTHER PROFESSIONAL SERVICE / COMMITTEES

1.	Committee on Bylaws Member American Society of Radiologic Technologists (ASRT)	09/01/16 – 08/31/17
2.	House of Delegates Minutes Approval Committee Member American Society of Radiologic Technologists (ASRT)	09/01/16 – 08/31/17
3.	Protocol Review & Monitoring Committee (PRMC) Protocol reviewer for department of Radiology UNM, SOM UNM Comprehensive Cancer Center	08/2016 – present
4.	Standing Member, Radiology Research Committee Department of Radiology, University of New Mexico School of Me	08/2016 – present dicine
5.	Practice Standards Council Computed Tomography Subcommittee American Society of Radiologic Technologists (ASRT)	07/2016 – 06/2018
6.	Computed Tomography (CT) Chapter Delegate American Society of Radiologic Technologists (ASRT)	07/2016 – 06/2018
7.	Public Health Emergency Preparedness Committee Scholarship Development University of New Mexico, Health Sciences Center	04/2016 – present
8.	Public Health Emergency Preparedness Committee Curricular Development University of New Mexico, Health Sciences Center	04/2016 – present
9.	Chairman of the Board New Mexico Society of Radiologic Technologists (NMSRT)	04/2016 – present
10	. Co-chair Public Health Emergency Preparedness Committee Interprofessional Education (IPE) University of New Mexico, Health Sciences Center	09/2015 – present
11.	. International Membership Subcommittee International Association of Forensic Radiographers (IAFR)	07/2015 – present
12	. Subcommittee Member – Pediatric Imaging Lead protocol member	05/2015 – present

International Society of Forensic Radiology and Imaging (ISFRI)

 Affiliate Delegate Representing New Mexico Society of Radiologic Technologists (N Society of Radiologic Technologists (ASRT) 	02/2015 – 01/2017 NMSRT): American
14. USA Liaison – Committee Member International Association of Forensic Radiographers (IAFR)	10/2014 – 10/2017
15. Subcommittee Member – Image Acquisition Lead protocol member International Society of Forensic Radiology and Imaging (ISFRI)	05/2014 – present
16. Grass-roots Network American Society of Radiologic Technologists (ASRT)	04/2014 – 03/2019
17. Advisory Committee Member University of New Mexico, Radiologic Sciences Program	Fall 2013 – present

PAST PROFESSIONAL SERVICE

1.	Honorary Secretary International Association of Forensic Radiographers (IAFR)	11/2015 – 10/2016
2.	Invited Presenter – USA Liaison IAFR 4 th International Society of Radiographers and Radiological Technolo Teleconference	08/29/2016 gists (ISRRT) Americas
3.	Invited Collaborator International Forensic Radiology Research Summit (IFRRS) Summit partnerships: National Institute of Justice (NIJ), Netherlands Forensic Institute (NFI), International Society of Forensic Radiology and Imaging (ISFRI), International Association of Forensic Radiographers (IAFR)	05/10/16 – 05/11/16
4.	Standing Member, Radiology Research Committee Department of Radiology, University of New Mexico School of Me	05/2015 – 09/2015 dicine
5.	New Mexico Society of Radiologic Technologists (NMSRT) President President – Elect Vice President	04/2015 – 04/2016 04/2014 – 04/2015 04/2012 – 04/2014

PROFESSIONAL MEETINGS – PUBLIC HEALTH

October 2016	New Mexico-Youth Risk and Resilienc	y Surveys (NM-YRRS) Roadshow

Adelante Development Center Community Room Albuquerque, NM, USA, 10/12/2016

September 2016	From Giving Life to Living Life: Understanding proper care in preventing and managing diabetes New Mexico Diabetes Advisory Council Educational Session (NMDAC) Albuquerque, NM, USA, 09/09/2016
December 2015	12 th Annual New Mexico Public Health Association (NMPHA) Health Policy Legislative Forum Albuquerque, NM, USA, 12/09/2015
October 2015	5 th Meeting of the Legislative Health and Human Services (LHHS) Committee <i>Attended: Substance Use Disorder and Overdose Update</i> State Capitol, Santa Fe, NM, USA, 10/06/2015

PEER REVIEWED PAPERS

 Catherine Miller, MD, MA; Michael Haag, BS; Chandra Y. Gerrard, BS, R.T.(R)(CT)(MR)(QM); Gary M. Hatch, MC; Jamie Elifritz, MD, Michael C. Simmons, MD, Sarah Lathrop, DVM, PhD, Kurt B. Nolte, MD <u>A Comparative Evaluation of Potentially Radiolucent Projectile Components by Radiographs</u> <u>and Computed Tomography</u> Journal of Forensic Sciences, 2017 (in press).

PEER REVIEWED ABSTRACTS

- L. Adolphi, A. Mason, C. Martinez Barrera, CY. Gerrard. <u>The effect of tissue preservation (refrigeration, freezing/thawing, or fixation) on tissue properties and postmortem imaging.</u> Abstract published on ISFRI website 5th International Society of Forensic Radiology and Imaging (ISFRI) World Congress; Amsterdam, The Netherlands, 05/12/16 – 05/14/16
- Ian Paul, MD*; Sarah Lathrop, DVM, PhD; Gary M. Hatch, MD; Chandra Y. Gerrard, BS; Valerie Poland, BA; Ross E. Zumwalt, MD; Sam W. Andrews, MD; Jan Price, RN, MSA; Gary W. Mlady, MD; Jennifer W. Pohl, MD, PhD; Brad W. Cushnyr, MD; Philip W. Wiest, MD; Kurt B. Nolte, MD <u>A Prospective Double-Blinded Comparison of Autopsy and Postmortem</u> <u>Computerized Tomography (PMCT) for the Evaluation of Potential Drug</u> <u>Poisoning Deaths.</u> 68th Annual Scientific Meeting of the American Academy of Forensic Sciences. Las Vegas, NV. USA. 2016.
- 3. Morin J, Jarrell H, Kastenbaum H, Proe L, Aurelius M, **Gerrard C**, Nolte K. <u>The utility of postmortem computed tomography in supplanting autopsies in determining cause of death in pediatric trauma fatalities.</u>

68th National Association of Medical Examiners (NAME) Annual Meeting & Exhibits; Charlotte, North Carolina, USA, 10/02/15 – 10/06/15.

- CY Gerrard*, SL Lathrop, GM Hatch, S Williamson, J P Price, KM Lopez, SW Andrews, RE Zumwalt, ID Paul, JM Elifritz, KB Nolte <u>Postmortem Computed Tomography (PMCT) in pediatric deaths attributed to asphyxia.</u> 4th International Society of Forensic Radiology and Imaging (ISFRI) World Congress; Leicester, United Kingdom, 05/14/15 – 05/16/15 Abstract currently in press with *Journal of Forensic Radiology and Imaging (JoFRI)*
- Hatch GM, Lathrop SL, Gerrard CY, Poland V, Paul ID, Mlady G, Cushnyr BW, Andrews SW, Pohl J, Wiest PW, Zumwalt RE, Price JP, Elifritz JM, Nolte KB <u>Comparison of Postmortem Computed Tomography and Autopsy in Gunshot Wound Fatalities.</u>
 4th International Society of Forensic Radiology and Imaging (ISFRI) World Congress; Leicester, United Kingdom, 05/14/15 05/16/15

Abstract currently in press with Journal of Forensic Radiology and Imaging (JoFRI)

- Hatch G, Gerrard C, Mlady G, Adolphi N, Elifritz J, Nolte K, Wiest P. <u>The Value of Postmortem Imaging for Translational Research, Forensic Investigation, and</u> <u>Clinical Medicine.</u> American Roentgen Ray Society (ARRS), Annual Meeting; Toronto, Canada, 04/19/15 – 04/24/15.
- SL Lathrop*, GM Hatch, CY Gerrard, S Williamson, JP Price, KM Lopez, SW Andrews, RE Zumwalt, ID Paul, JM Elifritz, KB Nolte <u>A prospective double-blinded comparison of autopsy and post-mortem computed</u> <u>tomography (PMCT) for the evaluation of pediatric trauma deaths.</u> 67th American Academy of Forensic Sciences (AAFS) Annual Scientific Meeting. Orlando, FL, USA, 02/16/15 – 02/21/15.
- Hatch GM, Elifritz JM, Biggs SM, Ruder TD, Flach PM, Gerrard CY, Nolte KB <u>CSI Radiology: A Précis of Radiologic Identification (RADid) for the Practicing Radiologist.</u> 100th Annual Meeting of the Radiological Society of North America (RSNA). November 2014, Chicago, Illinois, USA.
- Cushnyr BW, Lathrop SL, Hatch GM, Gerrard CY, Elifritz JM, Andrews SW, Paul ID, Price JP, Zumwalt RE, Nolte KB <u>Utility of X-ray Computed Tomography (CT) as a Postmortem Tool for the Diagnosis of Blunt</u> <u>Force Head Injuries.</u> 20th World Meeting of the International Association of Forensic Sciences (IAFS 2014). October 2014, COEX, Seoul, Korea.
- 10. Nolte KB, Lathrop SL, Hatch GM, Gerrard CY, Elifritz JM, Cushnyr BW, Mlady G, Pohl J, Andrews SW, Paul ID, Price JP, Zumwalt RE, Wiest PW <u>Utility of Postmortem X-ray Computed Tomography (CT) for Medicolegal Autopsies on</u> <u>Decedents with Blunt Force Injuries.</u>

20th World Meeting of the International Association of Forensic Sciences (IAFS 2014). October 2014, COEX, Seoul, Korea.

- 11. J. Elifritz, G.M. Hatch, H. Kastenbaum, C. Gerrard, S.L. Lathrop, K.B. Nolte. <u>PMCT findings in hanging.</u> J Forensic Radiol Imaging 2014; 2:97.
- 12. N.L. Adolphi, C. Gerrard, G.M. Hatch, K.B. Nolte. <u>The physical basis of poor fat/muscle contrast observed at low temperatures in post-mortem</u> <u>MR (PMMR) imaging.</u> J Forensic Radiol Imaging 2014; 2:101.
- 13. N.L. Adolphi, C. Gerrard, G.M. Hatch, N. Takacs, K.B. Nolte. <u>Determining the temperature-dependence of tissue relaxation times (T₁ and T₂) for prospective optimization of post-mortem magnetic resonance (PMMR) image contrast. J Forensic Radiol Imaging 2013; 1:80.</u>
- 14. Snyder V, Pinckard JK, Zumwalt RE, Matshes E, Hatch GM, Gerrard C. <u>Advanced Forensic Pathology and Forensic Radiology Techniques in the Assessment of</u> <u>Cervical Spine and Craniocervical Junction Trauma.</u> 66th Annual Scientific Meeting of the American Academy of Forensic Sciences. Seattle, WA, USA. 2014.
- 15. D. Sandoval^{1*}, G Hatch², C Gerrard², P Heintz¹, ⁽¹⁾ Department of Radiology, University of New Mexico School of Medicine ⁽²⁾Radiology-Pathology Center for Forensic Imaging, University of New Mexico School of Medicine.
 Validation of a Neural CT Propert Designate: Method in Dest Merters. Unembolized Forenal.

Validation of a Novel CT Breast Dosimetry Method in Post Mortem, Unembalmed Female Subjects.

55th American Association of Physicists in Medicine (AAPM) Annual Meeting. August 2013. Indianapolis, Indiana, USA.

Medical Physics. 2013. Validation of a Novel CT Breast Dosimetry Method in Post Mortem, Unembalmed Female Subjects; 40(6): 458-459.

16. Catherine R. Miller, MA*; Michael G. Haag, BS; Chandra Gerrard; Gary M. Hatch, MD; Jamie Elifritz, MD; Michael C. Simmons, MD; Sarah Lathrop, DVM, PhD; Kurt B. Nolte, MD. <u>Comparative Evaluation of Radiolucent Projectile Components by Radiographs and</u> <u>Computed Tomography.</u>

65th American Academy of Forensic Sciences (AAFS) Annual Meeting. Forensic Sciences Foundation Emerging Forensic Scientist Award (presentation for award consideration). February 2013.

17. Chandra Gerrard; Gary M. Hatch, MD; Kurt B. Nolte, N.L. Adolphi

Determination of Post mortem Interval using non-invasive Magnetic Resonance Imaging measurement of the Apparent Diffusion Coefficient and 1-Dimensional Spectroscopy. 65th American Academy of Forensic Sciences (AAFS) Annual Meeting. Forensic Sciences Foundation Emerging Forensic Scientist Award (presentation for award consideration). February 2013.

PEER REVIEWED EDUCATIONAL MATERIAL

- CY Gerrard. Data Acquisition. University of New Mexico Hospitals, 2211 Lomas Blvd, NE, 87106, Albuquerque, NM, USA. American Society of Radiologic Technologists CT Basics Series, Module 3, 2009
- CY Gerrard. Image Processing and Reconstruction. University of New Mexico Hospitals, 2211 Lomas Blvd, NE, 87106, Albuquerque, NM, USA. American Society of Radiologic Technologists CT Basics Series, Module 4, 2009

BOOK CHAPTERS

 JM Elifritz, KB Nolte, GM Hatch, NL Adolphi, and CY Gerrard. 2014. "Radiology, Forensic Imaging and the 'virtual autopsy'," In: McManus LN and Mitchell RN. Pathobiology of Human Disease: A Dynamic Encyclopedia of Disease Mechanisms. Elsevier, pp. 3448-3458. ISBN: 978-0-12-386457-4.

FORMAL ACKNOWLEDGEMENTS

- Mark D. Viner. Lecture: Forensic Dental Radiography a review of current techniques and future developments. 11th International Association of Forensic Radiographers Annual Meeting, parallel session to the 5th International Society of Forensic Radiology and Imaging Congress. Amsterdam, The Netherlands. May 2016.
- 2. Gary M. Hatch. Lecture: *The relevance of the post-axial skeleton in cases of abusive head trauma*. World Congress on Infant Head Trauma. Plano, TX. November 2013.
- 3. Courtney Lapham-Simpson MD, Ryan LeBaron, MD, Michael Haag, BS, Gary M. Hatch, MD Kurt B. Nolte, MD. *A Ballistics Study of the Winchester Supreme Elite*® *PDX1*[™] *Ammunition.* April 2013.

BOOK CONTRACT

1. CY Gerrard (Lead Author), JM Elifritz (CRC Press, Taylor & Francis Group. Performing Postmortem Radiographs: A Concise Guide

Completion 2017

NON – PEER REVIEWED PUBLICATIONS

- 1. **C Gerrard**. 2012. *Postmortem CT Imaging Is Like No Other Job*. ASRT Scanner, Vol.44 No.4
- 2. **C Gerrard**. 2011. *In the Medical Investigator's Office*. Radiologic Technology, Vol.83 No 2:189CI-191CI.

RESEARCH FUNDING

ACTIVE GRANTS AND CONTRACTS:

National Institute of Justice (PI Adolphi) \$619,325 01/01/17 - 12/31/18 Title: Evaluation of the Routine Use of CT Scanning to Supplant or Supplement Autopsy in a High-Volume Medical Examiner's Office Submitted 04/06/2016 to: Solicitation NIJ-2016-9011, Research and Evaluation for the Testing and Interpretation of Physical Evidence in Publicly Funded Forensic Laboratories Role: Co-Investigator National Institute of Justice (PI Adolphi) \$714,891 01/01/17 - 12/31/19Title: Improving and Evaluating Computed Tomography and Magnetic Resonance Imaging in the Investigation of Fatalities Involving Suspected Head Trauma Submitted 02/01/2016: Solicitation NIJ-2016-4305, Research and Development in Forensic Science for Criminal Justice Purposes Role: Co-Investigator National Institute of Justice – NIJ 2015-DN-BX-K018 \$36,598 (sub) 01/01/16 - 12/31/17 (Subaward PI Adolphi) Title: Biomechanical Investigation of the Effect of Bone Disorders on Pediatric Femur Fracture Potential Role: Subaward Co-Investigator, Co-investigator [Prime PI Thompson, U. Louisville] National Institute of Justice (PI Edgar) \$692,938 01/01/17 - 12/31/18 Title: Facilitating forensic research in multiple fields using a unique computed tomography dataset Submitted 02/01/2016: Solicitation NIJ 2016-4305, Research and Development in Forensic Science for Criminal Justice Purposes Role: Co-Investigator Research Triangle International (RTI) \$81.327 07/01/16 - 09/30/16 International Forensic Technology Center of Excellence Budget proposals for 5 projects were invited by RTI; submitted 06/13/2016. The goal of these projects is to educate and inform the forensic pathology community regarding the use of advanced radiological imaging methods in death investigation, and to facilitate the adoption of these technologies by medical examiners in the U.S 1. (PI Hatch) \$49,013, Title: Development of Curriculum and Instructional Content for Workshop on Advanced Radiologic Imaging in Medicolegal Death Investigation Role: Co-Investigator 2. (PI Hatch) \$5,662, Title: Hosting 3-day Workshop on Advanced Radiologic Imaging in Medicolegal Death Investigation Role: Co-Investigator 3. (PI Gerrard) \$11,848, Title: Guidance Document on Current Best Practices for Implementing Advanced Radiological Imaging in Medicolegal Death Investigation Role: Principal Investigator 4. (PI Adolphi) \$3,351, Title: Webinar on Advanced Forensic Radiology: Introduction and Current Recommended Practices Role: Co-Investigator

 (PI Adolphi) \$11,453, <u>Title: Landscape Study Report on Acquiring and</u> <u>Implementing Post-mortem Computed Tomography in a Medical Examiner's</u> <u>Office</u> Role: Co-Investigator

Natl Inst Justice – NIJ 2015-DN-BX-K009\$94,960 (sub)01/01/16 – 12/31/16(Subaward PI Hatch)Title: Development of Modern Subadult Standards: Improved Age and Sex Estimation inU.S. Forensic PracticeRole: Co-Investigator, Co-investigator [Prime PI Stull, Idaho State]

Natl Inst Justice – NIJ 2013-DN-BX-K004 (PI Hatch) \$498,616 01/01/14 – 12/31/16 Title: Investigation of Post-Mortem Magnetic Resonance Imaging for the Detection of Intraneural Hemorrhage Role: Co-Investigator

PAST GRANTS AND CONTRACTS

Natl Inst Justice – NIJ 2012-DN-BX-K019) (PI Adolphi) \$575,686 01/01/13 – 06/30/16 Title: Investigation of the Impact of Body Temperature and Post-Mortem Interval on Magnetic Resonance Imaging of Unfixed Tissue Role: Co-Investigator

Research Inst. at Nationwide Children's Hospital Contract 00071785 2/CC#183511 HSC (PI Nolte) / (Prime PI Will Ray) Total / \$10,000 06/14/14 – 09/30/14 Title: <u>Pediatric CT Scan Study</u> Role: Co-investigator

Harris Co. Inst. of Forensic Sci. PO#P226527 (PI Adolphi) \$4351 04/15/14 – 09/30/14 Title: <u>Radiography and Computed Tomography for Quantification of Bone Density in Infant</u> <u>Decedents.</u> Prime award from Children's Justice Act (PI Love). Role: Contract Co-investigator

American Academy of Forensic Sciences (AAFS), Lucas Grant (PI Hatch) Total / \$2,940 02/2014 Title: <u>Detection of Neural Injury in Shaken Infants: A Pilot Investigation Using Postmortem</u> <u>Magnetic Resonance Imaging</u> Role: Co-Investigator

University of New Mexico, Health Sciences Center, (PI Nolte) Total / \$43,000 2014 Office of Research Title: Equipment Funding Grant Role: Co-Investigator

Natl Inst Justice (NIJ 2010-DN-BX-K205) (PI Nolte) Total / \$895,832 1/1/11 – 12/31/13

Title: <u>Utility of Postmortem X-ray Computed Tomography (CT) in Supplanting or Supplementing</u> <u>Medicolegal Autopsies</u> Role: Lead CT Technologist

University of New Mexico, Health Sciences Center, (PI Mercer) Total / \$17,423 12/12 – 11/13 Clinical and Translational Sciences Center. Title: <u>Biomechanical Evaluation of Structures Responsible for Thumb Basal Joint Stability</u>. Role: Co-Investigator

University of New Mexico, Health Sciences Center, HSC-20214 (PI Nolte) Total / \$1,220 09/13 Sub-award with Harris County Institute of Forensic Sciences Title: <u>Computer Assisted Identification Project</u> Role: Co-Investigator

University of New Mexico, Health Science Center, Total / \$24,244 03/01/12 – 02/28/13 Research Allocation Committee (RAC) Title: Incidental Breast Radiation Dose During Routine Clinical Computed Tomography: A Novel Postmortem Implanted Dosimetry Model Role: Co-investigator

State of New Mexico Department of Health (PI Aurelius) Total / \$535,174 03/01/12 – 06/30/12 Regents of the University of New Mexico – New Mexico Mass Fatality Title: <u>Mass Fatality Plan for the State of New Mexico</u> Role: Co-Investigator

HONORS and AWARDS

Epidemiology Traineeship Grant Recipient

Health Resources and Services Administration (HRSA)

University of New Mexico School of Medicine

Public Health Program

Master of Public Health

Traineeship Details: Under the guidance of Alcohol Epidemiologist Laura Tomedi, PhD, MPH, and the New Mexico Department of Health, Substance Abuse Epidemiology Section, Epidemiology and Response Division, traineeship efforts were focused on developing educational materials regarding general alcohol use in New Mexico, Alcohol Outlet Density, Alcohol Screening and Brief Intervention, and County specific factsheets on alcohol use, morbidity and mortality in McKinley County, New Mexico. Factsheets were developed for use by community members, media, legislators, physicians and educators.

June 2015-October 2016

Institutional Honors – Cum Laude

University of New Mexico School of Medicine

Bachelor of Science in Radiologic Sciences December 2013

Class President

University of New Mexico Radiologic Sciences Program - 2011 - 2012 Magnetic Resonance Imaging Physics Program September 2011

"Best story" contribution to Pima Medical Institutes

Association of Private Sector Colleges & Universities (APSCU) August 2011

PMI Alumni Success Story

Pima Medical Institute (PMI) - Corporate Office July 2011

Pride in Excellence Award

University of New Mexico Hospital - Radiology Department August 2010

Radiologic Sciences Scholarship

University of New Mexico Hospital - Radiology Department April 2006

Director's Award for Educational Excellence

Pima Medical Institute (PMI) April 2006

VOLUNTEER

Allied Health Professional Commencement Speech Committee Member Health Professions and Public Health Programs (HP/PHP) University of New Mexico, School of Medicine April 2016

Chairman of the Board New Mexico Society of Radiologic Technologists (NMSRT) April 2016 – Current

Research Manuscript Reviewer Mississippi Society of Radiologic Technologists (MSRT) Review student and technologist research papers for inclusion in 2015 MSRT annual conference September 2015 Actor American Society of Radiologic Technologists (ASRT) Radcademy Episode 1: X-rays Are Pretty Rad! June 2015

Working Group – Pediatric Imaging Subcommittee Member International Society of Forensic Radiology and Imaging (ISFRI) May 2015 – Current

President New Mexico Society of Radiologic Technologists (NMSRT) April 2015 – April 2016

Committee Member USA Liaison International Association of Forensic Radiographers (IAFR) October 2014 – Current

Working Group – Image Acquisition Subcommittee Member International Society of Forensic Radiology and Imaging (ISFRI) May 2014 – Current

President – Elect New Mexico Society of Radiologic Technologists (NMSRT) April 2014 – April 2015

Chair 2014 Annual Conference New Mexico Society of Radiologic Technologists (NMSRT) April 2014

Vice President New Mexico Society of Radiologic Technologists (NMSRT) April 2012 – April 2014

Interview <u>www.Radiologyschools411.com</u>, regarding insight as a radiologic technologist October 2013

Model Academic Forensic Pathologist journal Used in manuscript: <u>Postmortem X-ray Computed Tomography (CT) and Forensic Autopsy: A</u> <u>Review of the Utility, the Challenges and the Future Implications</u> May 2011

Model

American Society of Radiologic Technologists (ASRT) *Scanner* magazine and future publications March 2011

Beta student for the Quality Management (Didactic and Clinical) University of New Mexico, School of Medicine Radiologic Sciences Program 2010

Contributor to the Alliance for Radiation Safety in Pediatric Imaging (ARSPI) forum for the nationwide "Image Gently" campaign American Society of Radiologic Technologists (ASRT) 2009

Beta tester for the Online Digital Imaging Academy (ODIA) American Society of Radiologic Technologists (ASRT) 2008