

IN THE SUPREME COURT OF MISSISSIPPI

NO. 2010-DP-01927

LESLIE GALLOWAY, III

APPELLANT

v.

STATE OF MISSISSIPPI

APPELLEE

ON APPEAL FROM THE CIRCUIT COURT OF THE FIRST JUDICIAL DISTRICT
OF HARRISON COUNTY, MISSISSIPPI; CASE NO. B2401-09-00468

BRIEF OF *AMICI CURIAE*, DR. MICHAEL M. BADEN, DR. ANDREW M. BAKER,
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CERTIFICATE OF INTERESTED PERSONS

The undersigned Counsel of Record certifies that the following listed persons have an interest in the outcome of this case. These representations are made in order that the Justices of the Supreme Court may evaluate possible disqualification or recusal.

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TABLE OF CONTENTS

	<u>Pages</u>
CERTIFICATE OF INTERESTED PERSONS	ii
TABLE OF CONTENTS	v
TABLE OF AUTHORITIES	vi
I. INTRODUCTION AND OVERVIEW	1
A. Summary and Context of Amici’s Concerns	1
B. A Broader Prefatory Context	2
II. AMICI’S CORE PREMISE ELABORATED	4
A. Dr. McGarry Claimed a Professionally Inappropriate Level of Certainty for His Hypotheses Regarding the Cause of the Autopsy Findings	4
B. Dr. McGarry Claimed a Professionally Inappropriate Level of Certainty for Excluding the Defense Hypothesis Regarding the Cause of the Autopsy Findings	7
C. Dr. McGarry Used Professionally Improper Terminology	9
D. Physical Evidence Alone is Not Enough to Support a Forensic Opinion Regarding Consent <i>Vel Non</i>	10
III. BROADER PERSPECTIVES	11
A. This Court Should Signal Its Concurrence in the Strong Public Policy Enactment of the Legislature and the Governor in 2011	11
B. Judicial Scrutiny of Expert Opinions Should, if Anything, be Stronger in Homicide Cases Than in Mere Civil Disputes	13
IV. CONCLUSION	15
CERTIFICATE OF SERVICE	17

TABLE OF AUTHORITIES

	<u>Pages</u>
<u>CASES</u>	
<i>Bickham v. Grant</i> , 861 So.2d 299 (Miss. 2003)	1
<i>Brooks v. State</i> , 748 So.2d 736 (Miss. 1999)	11
<i>Brewer v. State</i> , 725 So.2d 106 (Miss. 1998) and 819 So.2d 1169 (Miss. 2002)	12
<i>Bullock v. Lott</i> , 964 So.2d 1119 (Miss. 2007)	14
<i>Daubert v. Merrell Dow Pharm., Inc.</i> , 509 U.S. 579 (1993)	3, 9, 13, 14
<i>DeHenre v. State</i> , 43 So.3d 407 (Miss. 2010)	12
<i>Edmonds v. State</i> , 955 So.2d 787 (Miss. 2007)	11, 14
<i>Fowler v. State</i> , 566 So. 2d 1194 (Miss. 1990)	14
<i>Franklin v. State</i> , 23 So.3d 507 (Miss. App. 2009)	5
<i>Gause v. State</i> , 65 So.3d 295 (Miss. 2011)	12
<i>Gillett v. State</i> , 56 So.3d 469 (Miss. 2010)	3
<i>Golden v. State</i> , 984 So.2d 1026 (Miss. 2008)	6
<i>Gulf South Pipeline Co. v. Pitre</i> , 35 So.3d 494 (Miss. 2011)	14, 15

Hill v. Mills,
26 So.3d 322 (Miss. 2010) 1, 14

Holliman v. State,
2011 WL 5985628 (Miss. 2011) 6

Johnson v. State,
52 So.3d 384 (Miss. App. 2011) 5

McKay v. State,
59 So.3d 644 (Miss. App. 2011) 5

Mississippi Transportation Commission v. McLemore,
863 So.2d 31 (Miss. 2003) 14,15

Moffett v. State,
49 So.3d 1073 (Miss. 2010) 6

Ruffin v. State,
447 So.2d 113 (Miss. 1984) 11

Sherwin-Williams Co. v. Gaines on behalf of Pollard,
75 So.3d 41 (Miss. 2011) 14, 15

Spires v. State,
10 So.3d 477 (Miss. 2009) 5

University of Mississippi Medical Center v. Foster,
2011 WL 6157338 (Miss. App. 2011) 6

Whitfield v. State,
2011 WL 5529937 (Miss. App. 2011) 6

STATUTES

Miss. Code § 41-61-55 12, 13

Miss. Code § 97-3-19 1

Miss. Code § 99-19-105 4

RULES

Miss. R. Evidence 702 2, 3, 4, 5, 10, 13, 14

Miss. R. Appellate Procedure 29(a)	2
Order Amending Miss. R. Evidence 702, 841-46 So.2d (Miss. cases), xxxviii-xi (May 29, 2003)	3
Fed. R. Evidence 702	3

OTHER AUTHORITIES

American Academy of Pediatrics, Committee on Child Abuse and Neglect, <i>Guidelines for the Evaluation of Sexual Abuse of Children: Subject Review</i> , Vol. 103, No. 1, PEDIATRICS 186, 188-189 (Jan. 1, 1999)	6
<i>Anogenital Injuries in Adolescents after Consensual Sexual Intercourse</i> , 10 Academic Emergency Medicine 1378, 1383 (December 2003)	11
Bays and Chadwick, <i>Medical Diagnosis of the Sexually Abused Child</i> , 17 CHILD ABUSE & NEGLECT 91, 94 (1993)	7
Berenson, <i>Normal Anogenital Anatomy</i> , Vol. 22, Issue 6, CHILD ABUSE & NEGLECT 589-596 (1998)	6
S.C. Boos, et al., <i>Anogenital Injuries in Child Pedestrians Run Over by Low-Speed Motor Vehicles: Four Cases with Findings that Mimic Child Sexual Abuse</i> , 112 Pediatrics e77, e84 (July 2003)	8
Botash, M.D., <i>Examination for Sexual Abuse in Prepubertal Children: An Update</i> , 26 PEDIATRIC ANALS 312, 319 (May 1997)	7
Cal. Ass’n of Criminalists, Code of Ethics §III.E., reprinted in Peter D. Barnett, <u>Ethics in Forensic Science: Professional Standards for the Practice of Criminalists</u> 128 (2001)	9
Capital Area Bar Association Newsletter, at page 9 (June 2011), at www.caba.ms/downloads/caba-newsletter-june2011.pdf	12
Garrett, Brandon L., et al., <i>Invalid Forensic Science Testimony and Wrongful Convictions</i> , 95 Va. L. Rev. 1, 10, 31-33 (2009)	2, 9, 13
<i>Genital Findings of Women After Consensual and Nonconsensual Intercourse</i> , 2 Journal of Forensic Nursing 59, 64 (Summer 2006)	11
Nancy Kellogg, M.D., and the Committee on Child Abuse and Neglect, American Academy of Pediatrics, <i>Guidelines for the Evaluation of Sexual Abuse of Children</i> , Vol. 116, No. 2, Pediatrics 506, 509 (Aug. 1, 2005)	6

McQuiston-Surrett & Saks, *The Testimony of Forensic Identification Science: What Expert Witnesses Say and What Factfinders Hear*, 33 *Law & Hum. Behav.* 436, 451 (2009) 3

Andre A. Moenssens, *Novel Scientific in Criminal Cases: Some Words of Caution*, 84 *J. Crim. L. & Criminol.* 1 (1993) 5

National Academy of Sciences, *Strengthening Forensic Science in the United States: A Path Forward*, Committee on Identifying the Needs of the Forensic Sciences Community, National Research Council 53 (2009); <http://www.ncjrs.gov/pdffiles1/nij/grants/228091.pdf> 2, 5

Neufeld, *The (Near) Irrelevance of Daubert to Criminal Justice*, Vol. 95, No. S1, *Am. J. Pub. Health* S107, S109 (Sept. 1, 2005) 13

Risinger, *Navigating Expert Reliability: Are Criminal Standards of Certainty Being Left on the Dock*, 64 *Alb. L. Rev.* 99, 149 (2000) 13

Saks and Koehler, *The Coming Paradigm Shift in Forensic Identification Science*, 309 *SCIENCE* 892, 893 (2005) 5

Therese Zink, et al., *Violence: Recognition, Management and Prevention: Comparison of Methods for Identifying Ano-Genital Injury After Consensual Intercourse*, Vol. 39, Issue 1, *Journal of Emergency Medicine* 113, 116 (Tables 2 and 3) (July 2010) 10

I. INTRODUCTION AND OVERVIEW

A. Summary and Context of Amici's Concerns

Amici Curiae¹ are here today to explain that — and why — the verdict below is fatally infected with professionally problematic and otherwise indefensible testimony presented by the forensic pathology expert witness for the prosecution. We would not file this Brief if we thought the Court were reviewing a conventional “battle of the experts,” each presenting objectively arguable though differing opinions.² Nor would Amici approach this Court just because, without the testimony of forensic pathologist, Dr. Paul A. McGarry, Leslie Galloway could not have been exposed to the death penalty.³ Amici have been called as witnesses for the prosecution in many homicide cases, including potential death penalty cases.⁴ Amici are certainly not here to argue that Dr. Leroy R. Riddick⁵ had the better view of the issues at trial, and that his testimony and opinions should now be accepted.

Amici speak from the point of view of professional forensic pathologists seeking to uphold and advance the standards of their profession and the integrity of its role in the criminal justice system. The law is discussed only to show that it appears consistent with what we say here, and that, as Amici understand it, the law permits the Court to act upon generally accepted proprieties of the profession of forensic pathology. From Amici's perspective, Dr. McGarry's

¹ A biographical sketch of each forensic pathologist who has reviewed and approved this brief, and on whose behalf this brief is filed, is attached as Appendix A.

² See, e.g., *Hill v. Mills*, 26 So.3d 322, 330 (¶ 28) (Miss. 2010); *Bickham v. Grant*, 861 So.2d 299, 303 (Miss. 2003).

³ The only underlying felony submitted to the jury was that Mr. Galloway had anally raped Shakeyia Anderson prior to her death. R. 418, 758, 763. Miss. Code § 97-3-19(2)(e). Without the testimony of Dr. McGarry, Amici understand that the Circuit Court would have had no alternative but to direct a verdict of acquittal on the underlying felony.

⁴ A partial list of cases where Amici have been called as witnesses for the prosecution in homicide cases is attached as Appendix B, with death penalty cases noted.

⁵ The fact that Dr. Riddick is among Amici is not to the contrary; rather, Dr. Riddick joins to show his concurrence in each of the premises stated above and fleshed out below, and which rise above the ground level view from which he testified at trial.

testimony and opinions fall of their own weight. Without this appearance by Amici, these are matters that, within Miss. R. App. P. 29(a)(3), may escape the Court's attention.

At trial, Dr. McGarry, forensic pathologist for the prosecution, stated as unquestionable facts what are not even arguable opinions. “[T]his is exactly what she had. She had the injury of forceful penetration by a penis of a sexual event,” R. 739-40. Taking as true this unproven fact, Dr. McGarry played the second card upon which the house is built, stating as fact another point that can only be a professionally flawed opinion. “[I]t causes enough pain that it would be resisted.” R. 678. He spoke more as a lawyer than as a dispassionate forensic pathologist, when he said the victim suffered “forceful penetration of the anus” and “it’s evidence of anal rape.” R. 677. Nothing in the record suggests how Dr. Paul McGarry could “know” these statements as opinions passing muster under the science-based proprieties accepted by professional forensic pathologists generally, much less how he could know these as facts. From Amici’s perspective, Dr. McGarry’s views seem to fall short when measured by the three step process that is the core of Miss. R. Ev. 702. All of this will be elaborated at pages 4 through 11 below.

B. A Broader Prefatory Context

Many argue that “the legal system is ill-equipped to correct the problems [of bad forensic science].”⁶ “Unfortunately, our criminal system may not be well-suited to prevent unscientific testimony.” Garrett, et al., *Invalid Forensic Science Testimony and Wrongful Convictions*, 95 Va. L. Rev. 1, 10 (2009). Amici are not so pessimistic. Still, we put our heads in the sand when we ignore evidence that traditional adversary procedures — cross-examination, presenting opposing experts, and jury instructions — are not always the antidote we have long hoped they could

⁶ National Academy of Sciences, *Strengthening Forensic Science in the United States: A Path Forward*, Committee on Identifying the Needs of the Forensic Sciences Community, National Research Council 53 (2009); <http://www.ncjrs.gov/pdffiles1/nij/grants/228091.pdf> (hereafter “*Strengthening Forensic Science*”)

become. McQuiston-Surrett & Saks, *The Testimony of Forensic Identification Science: What Expert Witnesses Say and What Factfinders Hear*, 33 *Law & Hum. Behav.* 436, 451 (2009).

Amici are regular participants in criminal justice systems in multiple jurisdictions, including Mississippi. Amici assert their faith that the criminal courts are the ground forces on the front line, with the weapons to address effectively the present problem of professionally unacceptable forensic pathology testimony. This Court signaled its concurrence on May 29, 2003. On that date, the Court promulgated the refined and clarified the post-*Daubert* federal standard for forensic science expert witness evidence.⁷ By analogy to the structure of present Miss. R. Ev. 702, Amici are concerned that there be judicial follow-through at the stage of particular application, where the rubber really hits the road in each of the (1), (2), (3) analytical steps that Rule 702 requires. The trial testimony of Dr. Paul McGarry is a graphic instance of this problem. At pages 11 through 15 below, Amici will address these broader perspectives.

A final prefatory word. It is not our province to advise the Court how it should actualize its Rule 702-based injunction against junk forensic science. Amici do not address points of timely objection, plain error or preservation of error for appeal. These are beyond the expertise and interests of Amici. The technical legal admissibility of Dr. McGarry's opinions is not Amici's ultimate concern, though we do not credit them. The mere fact that an expert's testimony may be admissible, according to Amici's understanding, does not make the evidence strong enough to withstand a motion for a directed verdict. See *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 596 (1993); *Gillett v. State*, 56 So.3d 469, 495 (¶ 65) (Miss. 2010).

⁷ See Order, 841-46 So.2d (Miss. Cases), at xxxviii-xl. On December 1, 2000, Fed. R. Ev. 702 refined and clarified the law, as inadequacies and impracticabilities in the original 1993 *Daubert* formulation had become too obvious to ignore. On May 29, 2003, this Court amended Miss. R. Ev. 702 to make it identical with the post-*Daubert* version of Fed. R. Ev. 702, as it then read.

Amici understand that this Court has an independent duty to determine “[w]hether the sentence of death was imposed under the influence of passion, prejudice, or any other arbitrary factor,” Miss. Code § 99-19-105(3)(a). From Amici’s perspective, crucial aspects of Dr. McGarry’s testimony may reasonably be seen to be such an “arbitrary factor.”⁸

II. AMICI’S CORE PREMISE ELABORATED

The testimony of Dr. Paul McGarry falls short of accepted criteria governing all forensic pathologists on at least four scores.

A. Dr. McGarry Claimed a Professionally Inappropriate Level of Certainty for His Hypotheses Regarding the Cause of the Autopsy Findings

Dr. McGarry overstated the level of certainty professionally appropriate for a case like this. He did this first when he asserted that the anal tear which he found must have been caused by a penis to the exclusion of other objects. “And this is exactly what she had. She had . . . penetration by a penis of a sexual event, not a random injury of the area between her legs.” R. 739-40. Given the evidence as Amici understand it, there are no objectively reasonable grounds upon which this assertion may be made.

One may reasonably differentiate a penis penetrating the anus from **some** other foreign objects. A piece of glass or a metal object with sharp edges are examples. Nothing in the evidence suggests such a foreign object. If there is no injury to the anal area other than the minor injury described by Dr. McGarry, the most that can be said with professional propriety is that the findings are consistent with either a penis or other such smooth object.

Amici understand that anal rape of Ms. Anderson prior to her death is the only thesis the prosecution advanced to show the underlying felony of sexual battery. As this is so, the most

⁸ Amici understand that a timely objection to the relevant particulars of Dr. McGarry’s opinion testimony — under their appreciation of Miss. R. Ev. 702 — should have been sustained. Again, by what procedural mechanism the views of Amici may be implemented is the business of this Court alone.

that can be said is that the autopsy findings are consistent with either a penis or a smooth foreign object unaccompanied by an opinion of the level of probability as to which it was. A large bowel movement although unlikely cannot be excluded either, given the post-mortem anatomical findings. Any level of certainty advanced beyond these opinions is professionally inappropriate. If this should be put within the contours and wording of Rule 702, no opinion beyond “consistent with”⁹ is professionally appropriate. Dr. McGarry went far beyond that. The level of certainty Dr. McGarry professionally improperly expressed at trial cannot have been “based upon sufficient facts or data.” Neither can his opinion of that improper level of certainty reasonably be said “the product of reliable principles and methods.”

To responsibly present opinion evidence, forensic scientists must report any relevant uncertainty in their findings. *See e.g., Strengthening Forensic Science* 184 (“All results for every forensic science method should indicate the uncertainty in the measurements that are made . . .”). As a corollary, they must refrain from hiding any uncertainty in their findings. *See, e.g., Saks and Koehler, The Coming Paradigm Shift in Forensic Identification Science*, 309 *SCIENCE* 892, 893 (2005) (discussing the risk posed by the fact that forensic scientists will be “tempted, many times in their careers, to report positive results when their inquiries come up inconclusive, or indeed to report a negative result as positive’”) (quoting A. A. Moenssens, *Novel Scientific Evidence in Criminal Cases: Some Words of Caution*, 84 *J. Crim. L. & Criminol.* 1, 17 (1993)).

⁹ Dr. McGarry is no stranger to the courtrooms of this state. It appears he is familiar with the “consistent with” form of expressing an opinion. *See, e.g., McKay v. State*, 59 So.3d 644, 647 (¶ 14) (Miss. App. 2011) (“diagonal wound consistent with being stabbed”); *Johnson v. State*, 52 So.3d 384, 389 (¶ 10) (Miss. App. 2011) (“wound was consistent with Franklin facing the truck with his left shoulder more forward”); *Spires v. State*, 10 So.3d 477, 479 (¶ 9) (Miss. 2009) (“location of the wounds was consistent with two people being very close together”); *Franklin v. State*, 23 So.3d 507, 512 (¶ 15) (Miss. App. 2009) (“bullets . . . recovered consistent with a bullet fired from”);

Amici understand that, where the evidence permits, Mississippi law allows forensic experts in pathology and other fields to opine that physical facts found are “consistent with” a particular hypothesis.¹⁰ See, e.g., *Moffett v. State*, 49 So.3d 1073, 1101-02 (Miss. 2010); *Golden v. State*, 984 So.2d 1026, 1033 (Miss. 2008). Amici acknowledge this standard.¹¹ The problem arises and becomes serious when the forensic expert, who did not witness the activity under judicial scrutiny, exceeds this standard and speculates beyond what science allows. Dr. McGarry exceeded what science allows when he testified that **only** penetration by a penis could have caused the physical findings. R. 682, 739-40. And when he opined regarding the level of probability of his speculation contrasted with other possible causes of the autopsy findings.

An exhaustive review of the literature in the field found no article claiming that a physician can determine with reasonable certainty the instrument used to cause a tissue wound based on a post-mortem physical examination. Rather, the pertinent challenge for experts is to distinguish abnormal findings that were necessarily the result of some kind of abuse by some kind of object from those that might have been resulted from disease or other causes.¹²

¹⁰ Competent forensic experts often limit their opinions to finding that the forensic evidence is “consistent with” a particular factual conclusion of legal consequence. See, e.g., *Holliman v. State*, 2011 WL 5985628, ¶¶ 6, 11 (Miss. 2011); *UMMC v. Foster*, 2011 WL 6157338, ¶ 30, fn. 1 (Miss.App. 2011); *Whitfield v. State*, 2011 WL 5529937, ¶ 5 (Miss. App. 2011)

¹¹ Amici say this with caution. “Consistent with,” without elaboration or clarification, is one of those ways of speaking that may often be heard by the jury as affirming a premise that it is not professionally appropriate for a forensic pathologist to suggest. See part 3 below.

¹²See, e.g., Nancy Kellogg, M.D., and the Committee on Child Abuse and Neglect, American Academy of Pediatrics, *Guidelines for the Evaluation of Sexual Abuse of Children*, Vol. 116, No. 2, PEDIATRICS 506, 509 (Aug. 1, 2005) (“sexual abuse is rarely diagnosed on the basis of only physical examination or laboratory findings”); American Academy of Pediatrics, Committee on Child Abuse and Neglect, *Guidelines for the Evaluation of Sexual Abuse of Children: Subject Review*, Vol. 103, No. 1, PEDIATRICS 186, 188-189 (Jan. 1, 1999) (“[p]hysical examination alone is infrequently diagnostic [of sexual abuse] in the absence of a history and/or specific laboratory findings; anal lacerations cause for much concern, but not conclusive evidence of sexual abuse”); Berenson, *Normal Anogenital Anatomy*, Vol. 22, Issue 6, CHILD ABUSE & NEGLECT 589-596 (1998) (discussing the need for studies of the perianal area of non-abused children to assist in distinguishing between medical

B. Dr. McGarry Claimed a Professionally Inappropriate Level of Certainty for Excluding the Defense Hypothesis Regarding the Cause of the Autopsy Findings

There is a second level at which Dr. McGarry claimed an inappropriate level of certainty. As unequivocally as was his first professional impropriety, Dr. McGarry excluded the defense hypothesis that the autopsy findings were consistent with the victim having been overrun by a motor vehicle. For example,

Q. Okay. And is this something that is consistent with being ran over by a vehicle?

A. No. This is away from the vehicle. This is in a very protected part of her body between her buttocks, below her pelvis and behind her vagina.

R. 676.

Q. And you say that there is a stretching of the anus. Is that common in an injury such as this, a rollover injury?

A. No. The rollover injury doesn't affect the anus.

R. 677

Q. You've heard the opinion of Dr. Riddick that the injuries to the anus in this case could be caused by the crushing of Shakeylia Anderson by her being run over with the spreading of her buttocks. Did your autopsy support this opinion?

A. No, sir. The area of her anus and her vagina remained in a very protected area. It did not get injured by being dragged or pulled along a road surface. There was no evidence of that around the edges. ... [I]t is important to distinguish between injuries coming in a random fashion from injuries to the body versus forceful¹³ sexual penetration. ... They are quite different.

R. 738-739.

With respect, this is another area where Dr. McGarry opines with a level of certainty that is professionally inappropriate. Amici advise the Court that, Dr. McGarry's statements to the

abnormalities caused by abuse and those not caused by abuse); Botash, M.D., *Examination for Sexual Abuse in Prepubertal Children: An Update*, 26 PEDIATRIC ANALS 312, 319 (May 1997) ("the diagnosis of sexual abuse can never rely solely on physical findings"); Bays and Chadwick, *Medical Diagnosis of the Sexually Abused Child*, 17 CHILD ABUSE & NEGLECT 91, 94 (1993).

¹³ In part 3 below, Amici address the professional impropriety of using the adjective "forceful."

contrary notwithstanding, anal injuries **do** occur when a person is being overrun by a motor vehicle. There is no science that supports Dr. McGarry's testimony that the anogenital area is such a protected part of the body that being run over by a motor vehicle can be excluded as explaining the autopsy findings here.

There are any number of ways that, singly or in combination, a motor vehicle runover can cause the autopsy findings. For example, shearing forces, created by rotating tires on a body pinned by the weight of the vehicle, may account for these injuries. The rapid and extreme rise in the pressure of the abdominal and pelvic cavities, while being overrun, can cause anal and perianal tearing. Such injuries have been found in living children overrun by motor vehicles.¹⁴

With respect, Amici advise the Court that the anal and autopsy findings in this case are, at best, non-specific. Given that Ms. Anderson was overrun by a motor vehicle, all of her anal and perianal findings may be explained by this mechanism of injury, with or without the additional post-mortem changes due to decomposition. On these facts, a forensic pathologist may not with professional propriety give an opinion that excludes being overrun by a motor vehicle as the sole cause of all of Ms. Anderson's anal and perianal findings.

¹⁴ See S.C. Boos, et al., *Anogenital Injuries in Child Pedestrians Run Over by Low-Speed Motor Vehicles: Four Cases with Findings that Mimic Child Sexual Abuse*, 112 *Pediatrics* e77, e84 (July 2003) (concluding, based on the results of the study, that “[c]hildren run over by slow-moving vehicles across their torso may have anogenital injuries identical to those sustained in acute child sexual abuse.”). For the convenience of the Court, a copy is attached as Appendix C. The study found that in every case it studied, “the anogenital findings included lacerations to the hymen or anus, much like that described with acute child sexual abuse or nonintentional impalement injury.” *Id.* at e81. The authors hypothesized two theories to explain these effects, even in the absence of a pelvic fracture: (1) “high intraabdominal pressure, resulting from the passage of a tire over the chest and abdomen, causes extrusion of pelvic contents through perineal orifices, forcing distention and laceration of those orifices” and (2) “traction on the skin, caused by the tires passing over the pelvis, creates shearing forces, which also produce laceration about the anus and hymenal orifice.” *Id.* at e83.

C. Dr. McGarry Used Professionally Improper Terminology

At trial, Dr. McGarry repeatedly used the phrase “forceful penetration.” R. 675, 677, 739-40. In the present context, this is professionally inappropriate. “Force” and related terms such as “forceful” and “forceable” are fraught with potential for confusing a lay jury, suggesting inferences and conclusions beyond what the testifying forensic pathologist is actually saying. The concern is exacerbated by the practical reality that “[e]xpert evidence can be both powerful and quite misleading because of the difficulty in evaluating it.” *Daubert*, 509 U.S. at 595.

The adjectival meaning of “forceful” is embedded within “penetration” standing alone. The reason this is so is that force attends any penetration, invited or uninvited, consensual or non-consensual. This is so without regard to the object doing the penetrating or the bodily orifice penetrated. In this context, “forceful” is a term which, when it is used, creates a substantial risk that what the forensic pathologist is saying and what the jury is hearing are not the same thing at all.

In 2009, the National Academy of Science saw

a critical need in most fields of forensic science to raise the standards for reporting and testifying about the results of investigations. . . . The use of such terms can have a profound effect on how the trier of fact in a criminal or civil matter perceives and evaluates evidence.

Strengthening Forensic Science, at 184. Amici trust the Court will find intuitively plausible the California Association of Criminalists’ admonition, *viz.*, “in all respects, the criminalist will avoid the use of terms and opinions which will be assigned greater weight than are due them. When an opinion requires qualification or explanation, it is not only proper but incumbent upon the witness to offer such qualification.”¹⁵

¹⁵ Cal. Ass’n of Criminalists, Code of Ethics §III.E., reprinted in Peter D. Barnett, *Ethics in Forensic Science: Professional Standards for the Practice of Criminalists* 128 (2001); also cited and quoted in Garrett, et al., *supra*, 95 Va. L. Rev. 1, 31 fn. 88 (2009).

The point is brought home when it is seen as a matter of objective fact that Dr. McGarry used “forceful” to communicate something beyond mere penetration, *viz.*, “[I]t is important to distinguish between injuries coming in a random fashion from injuries to the body versus **forceful** sexual penetration. . . . They are quite different.” R. 738-739. [Emphasis supplied] In context, Amici advise that Dr. McGarry’s improper use of “forceful” was not a benign slip of the tongue. Non-consensual and thus illegal penetration is what any lay jury would likely hear.

After all, Dr. McGarry claimed that the anal tear he found was evidence of anal rape.

Q. Okay. And do you have an expert opinion as to what caused the injury to the victim’s anus in this case?

A. My impression is that it was forceful penetration of the anus that caused he injury to the -- what is called the sphincter or the muscle ring around the anus that ordinarily is less than a fourth of an inch in diameter, stretched out to more than in inch in diameter by the penetration of the anal canal. **It’s evidence of anal rape.**

R. 677 [emphasis supplied]

D. Physical Evidence Alone is Not Enough to Support a Forensic Opinion Regarding Consent *Vel Non*

Assuming *arguendo* that there may be evidence that Ms. Anderson was anally penetrated before her death, Dr. McGarry disregarded prevailing norms in our field when he opined that she resisted and that the penetration was without her consent. R. 740. The lack of a scientific basis for Dr. McGarry’s assertion here means, Amici respectfully suggest, that his opinion cannot survive scrutiny under these non-lawyers’ reading of the words of either Rule 702(1) or (2), such that the application process of Rule 702(3) is never reached.

Whether physical evidence of trauma to a woman’s ano-genital area can support a valid opinion that intercourse was non-consensual has been extensively studied. Therese Zink, et al., found anal tears in all women studied who reported having experienced consensual anal intercourse. *Violence: Recognition, Management and Prevention: Comparison of Methods for*

Identifying Ano-Genital Injury After Consensual Intercourse, Vol. 39, Issue 1, Journal of Emergency Medicine 113, 116 (Tables 2 and 3) (July 2010).

After observing injuries in subjects following consensual and nonconsensual intercourse, Sarah Anderson, et al., concluded that “there is evidence to suggest that injuries can be identified on examination after both nonconsensual and consensual intercourse.” *Genital Findings of Women After Consensual and Nonconsensual Intercourse*, 2 Journal of Forensic Nursing 59, 64 (Summer 2006). After studying injuries observed among female adolescents who had consensual sexual intercourse and comparing findings where intercourse was nonconsensual, Jeffrey Jones, et al., have concluded that “[c]learly, the presence of anogenital trauma . . . implies nothing about consent.” *Anogenital Injuries in Adolescents after Consensual Sexual Intercourse*, 10 Academic Emergency Medicine 1378, 1383 (December 2003).

If evidence of trauma is apparent and comparable in cases of consensual and non-consensual vaginal intercourse, such that no credible inference consent *vel non* may be made in particular cases, it follows *a fortiori* that consent *vel non* may not be inferred in cases of anal intercourse, given the physiological differences in the anal orifice and cavity and the vaginal orifice and cavity.

III. BROADER PERSPECTIVES

A. This Court Should Signal Its Concurrence in the Strong Public Policy Enactment of the Legislature and the Governor in 2011

In recent years, this state’s criminal justice system has suffered a black eye in the court of public opinion. There has been a sea change in public policy, given the public’s recent awakening to the fact that innocent men have been sentenced to life imprisonment,¹⁶ and in one

¹⁶ See *Brooks v. State*, 748 So.2d 736 (Miss. 1999), declared exonerated by Circuit Court of Noxubee County and released May 13, 2008; *Edmonds v. State*, 955 So.2d 787, 791-93 ¶¶ 5-11 (Miss. 2007); *Ruffin v. State*, 447 So.2d 113 (Miss. 1984), declared exonerated posthumously on

known instance sent to death row,¹⁷ as a result of professionally inappropriate testimony by a former would-be state medical examiner. The Legislature's 2011 amendment to Miss. Code § 41-61-55, as per S. B. 2435, Reg. Sess. 2011, Miss Laws, ch. 499, § 1 (2011), informs our understanding of this crisis in public confidence in the integrity of the forensic science component of our criminal justice system.

To be sure, there has been a sense of relief that the former medical examiner has been dismissed by the Commissioner of Public Safety, and S. B. 2435 enacted, designed to restore integrity to the forensic pathology dimension of homicide prosecutions. What Dr. Paul McGarry has done in this case suggests any sense of complacency may be misplaced.

What is important today is that there is no mistaking the broader signals that, with the Governor's approval, the Legislature was sending in S. B. 2435. The problem with pinning the blame on a few widely publicized excesses of a particular pathologist¹⁸ is that it "channels our thinking toward individualistic solutions (replacing the bad apples) and divert[s] attention from broader institutional, structural and cultural factors that may contribute to [bad forensic science]." Thompson, *Beyond Bad Apples: Analyzing The Role of Forensic Science In Wrongful Convictions*, 37 Sw. L. Rev. 1027, 1028 (2008). Enhancing substantially the independence and integrity of the office of State Medical Examiner in particular, and of the

February 18, 2011, the Circuit Court of Forrest County; *see also*, chart published in Capital Area Bar Association Newsletter, at page 9 (June 2011), at www.caba.ms/downloads/caba-newsletter-june2011.pdf.

¹⁷ *See Brewer v. State*, 725 So.2d 106 (Miss. 1998) and 819 So.2d 1169 (Miss. 2002), declared exonerated by Circuit Court of Noxubee County and released February 15, 2008.

¹⁸ Nothing said here should be taken to imply that Dr. Steven T. Hayne does not satisfy the general qualifications standards of Rule 702, nor that he has not in other cases given professionally proper opinions. One of today's Amici has relied on a Dr. Hayne autopsy. *See DeHenre v. State*, 43 So.3d 407, 417 (¶¶ 42-45) (Miss. 2010). Rather, Amici say only that each opinion should be scrutinized in the context of the customs and norms of the practice of forensic pathology. *See Gause v. State*, 65 So.3d 295, 306-07 (¶¶ 35-36) (Miss. 2011). All of this equally applies to Dr. Paul McGarry. The stakes are high, and none of Amici expects to avoid the same scrutiny every single time he or she is called by the prosecution.

practice of forensic pathology in our criminal courts in general — in fact **and** in the public’s eye — are paramount public policy. There is no other way to read S. B. 2435’s grant of authority to the Commissioner of Public Safety, with the approval of a panel including “(a) the Dean of the University of Mississippi Medical Center School of Medicine; (b) the Dean of the University of Mississippi School of Law; and (c) the State Health Officer.” Miss. Code § 41-61-55(1). With respect, one way the Judicial Department of this State could accept and support the public policy enacted by the Legislature and the Governor would be by scrutinizing — and then accepting — the forensic pathology propositions advanced here and, thereupon, vacating and rendering on the death sentence in this case.

**B. Judicial Scrutiny of Expert Opinions Should, if Anything, be Stronger
in Homicide Cases Than in Mere Civil Disputes**

Finally, and with respect, this case reminds us that Rule 702 — and, as well, the professional proprieties of forensic pathology — read and apply the same in all death cases. The same level of scrutiny should be given the testimony of forensic experts in homicide and other criminal cases where the court must decide life or death, as in important civil litigations. Yet, an incongruous pattern had appeared elsewhere before March of 2003 when this Court ordered Miss. R. Ev. 702 amended to include the refined and clarified *Daubert* standard.

For the first decade of its life, federal courts often used the 1993 *Daubert* standard to exclude questionable forensic science in civil cases, but hardly at all in criminal prosecutions. *See, e.g.,* Neufeld, *The (Near) Irrelevance of Daubert to Criminal Justice*, Vol. 95, No. S1, Am. J. Pub. Health S107, S109 (Sept. 1, 2005); Risinger, *Navigating Expert Reliability: Are Criminal Standards of Certainty Being Left on the Dock*, 64 Alb. L. Rev. 99, 149 (2000); *see* Garrett, et al., *Invalid Forensic Science Testimony and Wrongful Convictions*, 95 Va. L. Rev. 1, 32-33 (2009). Since 2003, the same may have been so in Mississippi, or at least it so appears.

Great judicial scrutiny is given opinions proffered by forensic experts in important civil matters where, for example, the value of property is in contest, *see, e.g., Gulf South Pipeline Co. v. Pitre*, 35 So.3d 494, 498-500 (¶¶ 7-10) (Miss. 2011); *MTC v. McLemore*, 863 So.2d 31, 41-42 (¶¶ 33-39) (Miss. 2003). The same is so in arguably more serious cases where medical negligence and disease causation are charged. *See, e.g., Sherwin-Williams Co. v. Gaines on behalf of Pollard*, 75 So.3d 41, 45-46 (¶¶ 14-16) (Miss. 2011); *Hill v. Mills*, 26 So.3d 322, 329-33 (¶¶ 23-42) (Miss. 2010); *Bullock v. Lott*, 964 So.2d 1119, 1128-32 (¶¶ 26-35) (Miss. 2007). This is appropriate and in the public interest.

The problem is that such scrutiny seems seldom to have been brought to bear in homicide cases where life is at stake.¹⁹ One would think the opposite should be so, that scrutiny would be stricter as the stakes rise, and strictest of all in capital cases.

What is at issue here is Dr. McGarry's purported ability to determine (on the autopsy findings shown in the record) that the victim's anal injury was caused by a penis and that the anal penetration was resisted. Before *Daubert*, this Court repeatedly insisted that "[e]xpert witnesses, however qualified, may not present the jury with rank speculation." *Fowler v. State*, 566 So. 2d 1194, 1200 (Miss. 1990). Post-2003 Rule 702, the Court explained in *Edmonds v. State*, 955 So. 2d 787, 792 (Miss. 2007), even when a witness is qualified as an expert in pathology, a court must not give him or her "carte blanche to proffer any opinion he chooses." *Pitre*, 35 So.3d at 499 (¶ 8). *See also McLemore*, 863 So. 2d at 37 (¶ 13) (a trial court must not "'admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert,' as self-proclaimed accuracy by an expert is an insufficient measure of reliability").

¹⁹ Amici have been able to find only one post-2003 Rule 702 based reversal of a criminal conviction, and that occurred in *Edmonds v. State*, 955 So.2d 787, 792-93 (¶¶ 8-11) (Miss. 2007) (the prosecution's forensic pathologist's "two-shooter theory should not have been admitted under our standards." [¶ 8]).

A jury is ill-equipped to recognize unreliability in testimony by an experienced medical examiner. Dr. McGarry said, “[T]his is exactly what she had. She had the injury of forceful penetration by a penis of a sexual event,” R. 739-40. In context, this is speculation if not a “classic logical fallacy.” *See Pollard*, 75 So.3d at 46 (¶14). And even more so, Dr. McGarry’s assertion “[I]t causes enough pain that it would be resisted,” R. 678, boot straps logic of the first order, among other concerns. Dr. McGarry’s absolute exclusion of the motor vehicle rollover as a reasonable cause for the autopsy findings, R. 676, 677, 738-39, is very close to his taking “carte blanche to proffer any opinion he chooses.” *Pitre*, 35 So.3d at 499 (¶ 8). This is so **before** we factor in the post-mortem effects of decomposition.

IV. CONCLUSION

With respect, what we have here is little more than “the *ipse dixit* of the expert.” *McLemore*, 863 So. 2d at 37 (¶ 13). “[S]elf-proclaimed accuracy by an expert is an insufficient measure of reliability.” *Id.* Neither is it professionally proper in the case of a forensic pathologist on the witness stand in a case such as this. Amici appreciate the Court hearing us out. As before, by what procedural mechanism the views of Amici may be implemented is the business of this Court alone.

Respectfully submitted,

DR. MICHAEL M. BADEN, New York, New York; DR. ANDREW M. BAKER, Minneapolis, Minnesota; DR. VINCENT J. M. DI MAIO, San Antonio, Texas; DR. JAMES CLAUDE UPSHAW (JAMIE) DOWNS, Savannah, Georgia; DR. JAMES R. LAURIDSON, Montgomery, Alabama; DR. GERALD EDWARD LIUZZA, New Orleans, Louisiana; DR. LEROY M. RIDDICK, Mobile, Alabama; DR. LINDSEY CAROL THOMAS, Hastings, Minnesota; and DR. ROSS E. ZUMWALT, Albuquerque, New Mexico

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Dr. Andrew M. Baker and Dr. Vincent J.M. Di Maio each provided an independent analysis of autopsy findings, and of the trial testimony and exhibits in regard thereto. These analyses have been invaluable, and not only because of the differing backgrounds and forensic pathology expert witness experiences of Dr. Baker and Dr. Di Maio. Past this, the undersigned hereby certifies that each of the nine above named board-certified forensic pathologists has received and reviewed multiple drafts of this Brief of *Amici Curiae*, including a final draft substantially identical to that presented herewith, and has authorized the filing of this Brief of *Amici Curiae* on his or her behalf.



JAMES L. ROBERTSON

CERTIFICATE OF SERVICE

I, James L. Robertson, attorney for *Amici Curiae*, Dr. Michael M. Baden, Dr. Andrew M. Baker, Dr. Vincent J.M. Di Maio, Dr. James Claude Upshaw (Jamie) Downs, Dr. James R. Lauridson, Dr. Gerald Edward Liuzza, Dr. LeRoy M. Riddick, Dr. Lindsey Carol Thomas and Dr. Ross E. Zumwalt, do hereby certify that I have this day served a true and correct copy of the foregoing Brief of *Amici Curiae* via first class mail, postage prepaid, on the following:

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JAMES L. ROBERTSON

APPENDIX A

APPENDIX A

DR. MICHAEL M. BADEN, New York, New York

Dr. Michael M. Baden is a world-renowned physician and board-certified forensic pathologist. He currently maintains a private practice and also serves as the co-director of the New York State Police Medicolegal Investigation Unit. He is known for his work investigating high-profile deaths, including Medgar Evers, the victims of TWA flight 800, John Belushi, and Czar Nicholas II and his family. Dr. Baden served as Chairman of the Forensic Pathology Panel of the House Select Committee on Assassinations that investigated the assassinations of John F. Kennedy and Martin Luther King, Jr.

Dr. Baden received his medical degree from the New York University School of Medicine. He worked in the Office of the Chief Medical Examiner in New York City for 25 years and served as its Chief Medical Examiner for two years. He has also served as Deputy Chief Medical Examiner for Suffolk County and held professional appointments at Albert Einstein Medical School, Albany Medical College, New York Law School, and John Jay College of Criminal Justice.

During his 12-year affiliation with the New York State Police, Dr. Baden worked closely with the agency's Child Abuse and Violent Crime Analysis Unit. He has served as President of the Society of Medical Jurisprudence and Vice President of the American Academy of Forensic Sciences. Dr. Baden is the author or co-author of more than eighty professional articles and books on aspects of forensic medicine and the author of two popular non-fiction books, *Unnatural Death: Confessions of a Medical Examiner* and *Dead Reckoning: the New Science of Catching Killers*. He is also the Forensic Science Contributor for Fox News Channel and for the past several years has been the host of HBO's popular TV show, *Autopsy*.

Dr. Baden has been called as an expert witness in forensic pathology in criminal and civil matters arising in and before courts in the State of Mississippi, some of which were ultimately considered by the Supreme Court of Mississippi.

Dr. Baden's Curriculum Vitae is included in this Appendix A as Exhibit 1.

DR. ANDREW M. BAKER, Minneapolis, Minnesota

Dr. Andrew Baker is a board-certified forensic pathologist who currently serves as the Chief Medical Examiner for the Hennepin County Medical Examiner's Office, in Minneapolis, Minnesota, a position he has held since 2004. He is the President of the National Association of Medical Examiners (NAME), and has served on NAME's Board of Directors since 2006. Before joining the Hennepin County Medical Examiner's Office, Dr. Baker served as the Chief Deputy Medical Examiner for the Office of the Armed Forces Medical Examiner, Armed Forces Institute of Pathology, in Washington, D. C. He has also served as a Staff Pathologist with the National Naval Medical Center. Dr. Baker is currently an Assistant Professor in the Laboratory Medicine and Pathology Department at the University of Minnesota Medical School.

Dr. Baker is a Fellow of the American Academy of Forensic Sciences and a Fellow of the College of American Pathologists. He has served on the Board of Directors of the Minnesota Coroners' and Medical Examiners' Association since 2002. Since March 2011, he has served on the Editorial Board of *Academic Forensic Pathology*, the official publication of the National Association of Medical Examiners. He also serves on the Test Development and Advisory Committee of the American Board of Pathology. From 2003-2009, he was a Medical Officer on the National Disaster Medical System Disaster Mortuary Operational Response Team. He has been a Faculty Member and presenter at dozens of professional conferences and courses, including the National District Attorneys Association's *ChildPROOF* course, the *Masters Conference for Advanced Death Investigation*, the United States Army Judge Advocate General's School's *Criminal Law, New Developments* course, and the Naval Justice School's *Government Capital Litigation and Defense Capital Litigation*, the annual conference of the National Black Prosecutors Association, and the Minnesota County Attorneys Association.

On January 14, 2009, Dr. Baker was an invited participant who presented

- *Fracture Evaluation in the Pediatric Autopsy: Detection and Pathologic-Radiographic Correlation*. Grand Rounds for Departments of Radiology, Pathology and Pediatrics, University of Mississippi Medical Center, Jackson, Mississippi.
- *Death Scene Investigations for Infants and Children*. Children's Justice Center, Jackson, Mississippi.

Dr. Baker has received numerous awards and honors, including the Joint Meritorious Unit Award and the Joint Service Commendation Medal from the Armed Forces Institute of Pathology, Department of Defense and recognition as a Distinguished Graduate of the Commissioned Officer Training at Maxwell Air Force Base in Alabama from the United States Air Force.

Dr. Baker received his undergraduate and medical degrees from the University of Iowa. He is the author or co-author of numerous publications, including *Medical Examiners, Coroners, and Biologic Terrorism: A Guidebook for Surveillance and Case Management*, MMWR Recomm Rep 2004; 53(RR-8): 1-36. Dr. Baker has testified in countless criminal cases, most frequently on behalf of the prosecution.

Dr. Baker's Curriculum Vitae is included in this Appendix A as Exhibit 2.

DR. VINCENT J. M. DI MAIO, San Antonio, Texas

Dr. Vincent Di Maio is a nationally renowned board-certified anatomical, clinical and forensic pathologist, and a private forensic pathology consultant, with more than 40 years of experience. He attended St. John's University and the State University of New York, and received postgraduate training at Duke University, SUNY, and the Office of the Chief Medical Examiner of Maryland.

Dr. Di Maio is a veteran of the U.S. Army Medical Corps. For many years, he served as Chief Medical Examiner of San Antonio, Texas, where he was called by the prosecution as an expert in forensic pathology in countless death penalty cases. He retired from that office in 2006. Dr. Di

Maio has been editor-in-chief of the Journal of Forensic Medicine and Pathology, and a professor of the Department of Pathology at the University of Texas Health Science Center at San Antonio. Di Maio is a fellow of the National Association of Medical Examiners (NAME) and the American Academy of Forensic Sciences and has served on the NAME Standards Committee. In 2011, he was appointed to the Texas Forensic Science Commission by Governor Rick Perry.

Dr. Di Maio has authored or co-authored four books and numerous articles related to forensic pathology, and has won several awards for his work, including the Outstanding Service Award from NAME. His books Forensic Pathology and Handbook of Forensic Pathology are widely used reference guides by medical examiners, prosecutors, law enforcement officers, defense attorneys, and other participants in the criminal justice system.

Extensive further details of Dr. Di Maio's public career in forensic pathology are easily googled.

DR. JAMES CLAUDE UPSHAW (JAMIE) DOWNS, Savannah, Georgia

Dr. J. C. Upshaw ("Jamie") Downs is coastal Georgia's first Regional Medical Examiner. He has worked continuously as a Medical Examiner & consultant in Forensic Pathology since 1989 and was Alabama's State Forensics Director and Chief Medical Examiner from 1998 to 2002. He completed Peace Officers Standards and Training at the Southwest Alabama Police Academy, receiving distinction as class president, top academic student, and best defensive driver. Dr. Downs received his doctor of medicine degree, medical residency training in anatomic and clinical pathology, and fellowship in forensic pathology from the Medical University of South Carolina. The latter included a rotation through the Metropolitan Dade County Florida (Miami) Medical Examiner Department and internship at the FBI's Behavioral Sciences Unit in Quantico, Virginia. He is board certified in anatomic, clinical, and forensic pathology.

Dr. Downs has lectured extensively in the field of forensic pathology and has presented at numerous national and international meetings in the fields of anatomic and forensic pathology. Notable past cases have included the Forensic Pathology examination of the crew of the *H.L. Hunley*, the first successful combat submarine in history. He was the Pathologist on the first capital murder DNA trial in the history of the state of South Carolina. He has served as consultant to forensics fiction writer Patricia Cornwell whose Charleston-set Book of the Dead (2007) was researched in Dr. Downs' lab in Savannah. Dr. Downs is a consultant to the FBI Behavioral Science Unit in Quantico, Virginia, having authored four chapters in their manual Managing Death Investigation, and was primary author of the FBI's acclaimed Forensic Investigator's Trauma Atlas. He has authored several books and chapters in the fields of forensic pathology and child abuse, including Abusive Head Trauma in Infants and Children: A Medical, Legal & Forensic Reference with CD-ROM and Child Fatality Review: A Clinical Guide and A Color Atlas. Dr. Downs is presently finishing the manuscripts for The Primer on Medicolegal Death Investigation and Judging Morality: the Ethics of Forensic Science. He has lectured hundreds of times, including at the National Forensic Academy and at the FBI's National Academy. His audiences have included law enforcement, social services, attorneys, judges, university undergraduate & pre-professional students, medical personnel, and graduate medical audiences.

Dr. Downs is the Co-Editor (with Anjali R. Swienton, J.D.) of *Ethics in Forensic Science*, scheduled to be published by Elsevier Publishing, later in 2012 (manuscript in press)

Dr. Downs has testified in numerous state and federal courts, as well as before committees of both the United States Senate and the House of Representatives. Dr. Downs is a Fellow of the National Association of Medical Examiners and the American Academy of Forensic Sciences. He served as Scientific Program Chair for and host of the National Association of Medical Examiners 2007 annual meeting in Savannah. In 2010, Dr. Downs was selected to serve as an advisory member of the Standards and Protocols Interagency Working Group under the National Science and Technology Council Subcommittee on Forensic Science, to advise and assist the Executive Office of the President of the United States. He chaired the Steering Committee for the first ever Forensic Death Investigation Symposium and gave the keynote address to the multidisciplinary assembly in 2010. Dr. Downs completed two terms service on the Board of Directors of the National Association of Medical Examiners. He is on the Board of Advisors for the Law Enforcement Innovation Center at the University of Tennessee, the Board of Directors of the Consortium of Forensic Science Organizations (Vice Chair), and the Board of Directors of the National Forensic Science Technology Center. He serves on the Forensic Committee of the International Association of Chiefs of Police. He also serves on boards of American Board of Medicolegal Death Investigators, the Medical/Investigational Advisory Board of the Sudden Unexplained Death In Childhood Program, and the R.O.C.K. (Raising Our Children Kindly) Group.

Dr. Downs' Curriculum Vitae is included in this Appendix A as Exhibit 3.

DR. JAMES R. LAURIDSON, Montgomery, Alabama

Dr. James Lauridson is a nationally-known, board-certified forensic pathologist based in Montgomery, Alabama. From 1986 to 2006, he held various medical-examiner positions with the Alabama Department of Forensic Sciences, rising eventually to Chief Medical Examiner. A veteran of the Medical Corps of both the U.S. Army Reserve and the U.S. Navy, he began his work as a medical examiner in 1985 in the Dade County Medical Examiner's Office.

Dr. Lauridson has held various offices in state and local government, including the chair of the Montgomery County Child Death Review Team and membership from 1998 to 2001 and 2003 to present on the State of Alabama Child Death Review Team. Dr. Lauridson is the former Director of Graphics, Office of Prosecution Services, at the Alabama District Attorney's Association. He is a former member of the Scientific Working Group on Imaging Technology for the Federal Bureau of Investigation.

He received his B. S. in Electrical Engineering at the University of Colorado, Boulder, and his M. D. from the University of Colorado School of Medicine in Denver. He has testified in countless criminal cases, including death penalty cases, most often on behalf of the prosecution. Dr. Lauridson has been called as an expert witness in forensic pathology in criminal and civil matters arising in and before courts in the State of Mississippi, some of which were ultimately considered by the Supreme Court of Mississippi.

Dr. Lauridson's Curriculum Vitae is included in this Appendix A as Exhibit 4.

DR. GERALD EDWARD LIUZZA, New Orleans, Louisiana

Dr. Gerald Liuzza, based in New Orleans, Louisiana, is a Pathologist at the Touro Infirmary and a Partner at Prytania Pathology Associates. He received his undergraduate and medical training from Louisiana State University. He undertook his residency training at Charity Hospital in New Orleans, Earl K. Long Memorial Hospital in Baton Rouge, and Veterans Administration Hospital in New Orleans. Dr. Liuzza is board-certified by the American Board of Pathology in both anatomical and clinical pathology and forensic pathology. He is a Fellow of the American Society of Clinical Pathology and a member of the US-Canadian Academy of Pathology, the American Academy of Forensic Sciences, and the American Association for Clinical Chemistry. He has served as President of the Greater New Orleans Pathology Society.

Dr. Liuzza served as a Lieutenant Colonel in the Medical Corps of the United States Army Reserve in the Office of the Armed Forces Medical Examiner and as the Reserve Regional Medical Examiner of the Armed Forces Institute of Pathology. He was honorably discharged in 2009.

Dr. Liuzza has been an Associate Professor in the Department of Pathology at the LSU Medical Center in New Orleans since 1996; before that, he was an Assistant Professor of Pathology and a Clinical Assistant Professor of Pathology. Since 2002, he has worked as a Pathologist at the Orleans Parish Coroner's Office, and has had previous appointments as a pathologist with that office, from 1984-1990 and 1998-2001, and as an autopsy assistant from 1980-1982 and in 1983. He has been a Guest Lecturer at both the LSU Dental School and the Tulane University School of Medicine for more than 20 years. For 10 years, he served as a Consultant in Pathology for the Louisiana State Department of Health. He has presented at pathology conferences across the country, with a concentration in New Orleans and the Gulf Coast.

Dr. Liuzza has testified for the prosecution more than 80% of the criminal cases in which he has been called as a witness.

Dr. Liuzza's Curriculum Vitae is included in this Appendix A as Exhibit 5.

DR. LEROY M. RIDDICK, Mobile, Alabama

Dr. LeRoy Riddick is a board-certified forensic pathologist and the former State Medical Examiner for Alabama. He served that position from 1984 to 2006, when he retired. Since 1990, he has been an Adjunct Professor in the Pathology Department at the University of South Alabama College of Medicine, a position he still holds today. Prior to his appointment as an Adjunct Professor, he served as a Clinical Professor of Pathology for 11 years. For nearly 20 years, he served as the Mobile County Medical Examiner in Mobile, Alabama. For 20 years, he was also Laboratory Director at the Alabama Department of Forensic Sciences and has an Alabama state laboratory named in his honor. He has also served as a forensic pathologist at the Alabama Department of Forensic Sciences and as a Deputy Medical Examiner in Washington, D. C.

Dr. Riddick attended Princeton University and Columbia University before joining the U.S. Army. He completed his medical degree at the New Jersey College of Medicine and Dentistry, Newark, N.J. He received his residency training at Cornell University. Dr. Riddick served the military in the United States Army Medical Corps Reserves. He has authored or co-authored several dozen publications and presented at dozens of forensic science conferences in the United States and abroad. From 1996-2002, he was a member of the Board of Directors for the National Association of Medical Examiners. In 2002, he was appointed to the Scientific Review Board for the Armed Services Institute of Pathology. He was recently honored with the Milton Helpern Award, bestowed by the American Academy of Forensic Sciences to honor outstanding medical examiners across the nation. He has also received the National Association of Medical Examiners' Distinguished Service Award for Contribution to the Improvement of Death Investigation. He is a member of both of these professional organizations. He has testified in more than 500 court cases, including death penalty prosecutions. He has been called as a witness for the State in countless criminal cases approximately 85% of the time. Dr. Riddick has been called as an expert witness in forensic pathology in criminal and civil matters arising in and before courts in the State of Mississippi, some of which were ultimately considered by the Supreme Court of Mississippi.

Dr. Riddick's Curriculum Vitae is included in this Appendix A as Exhibit 6.

DR. LINDSEY CAROL THOMAS, Hastings, Minnesota

Dr. Lindsey Carol Thomas has been the Medical Examiner at the Minnesota Regional Medical Examiner's Office serving six counties, since 2006. Prior to her appointment as Medical Examiner, she served as a Coroner in that office for more than 7 years.

She graduated from the University of Michigan Medical School in 1980 and received her residency training at the school's Department of Pathology. She received her fellowship training at the Hennepin County Medical Examiner's Office in Minnesota. Dr. Thomas is board-certified by the American Board of Pathology in both Anatomic and Clinical Pathology and Forensic Pathology. She is a member of the National Association of Medical Examiners and the American Academy of Forensic Sciences, among other professional organizations, a Fellow of the College of American Pathologists, and a Fellow of the American Society of Clinical Pathologists. She served as President of the Minnesota Coroners' and Medical Examiners' Association.

She has presented at dozens of professional conferences across the country and abroad. She has presented multiple times over the last 25 years at the Trial Advocacy Course for the Minnesota County Attorneys' Association.

On November 4, 2010, Dr. Thomas was an invited speaker at the University of Mississippi Medical Center Forum on Mississippi's medico-legal system, with emphasis on safeguarding the independence and integrity of the office of State Medical Examiner. This was an informational program (attended by House and Senate committee chairmen and other legislative leaders) that in part led to the Legislature's 2011 amendment to Miss. Code § 41-61-55, as per S. B. 2435, Reg. Sess. 2011, Miss Laws, ch. 499, § 1 (2011).

Dr. Thomas' Curriculum Vitae is included in this Appendix A as Exhibit 7. An extensive but incomplete list of the cases in which she has testified in recent years is attached to her Curriculum Vitae.

DR. ROSS M. ZUMWALT, Albuquerque, New Mexico

Dr. Ross Zumwalt is the Chief Medical Investigator of the State of New Mexico. He received his undergraduate degree at Wabash College in Indiana and his medical degree from the University of Illinois. He received his residency training in pathology at the Mary Imogene Bassett Hospital, Cooperstown, New York, and at the Southwestern Medical School, Dallas. He received his forensic fellowship training at the Dallas County Medical Examiner's Office. Dr. Zumwalt also served in the military as director of laboratories at the Navy Regional Medical Center in Camp Lejeune, North Carolina. He spent two years as Deputy Coroner in Cleveland, Ohio, and six years as Deputy Coroner in Cincinnati, Ohio, before coming to the Office of the Medical Investigator in New Mexico in 1987. Dr. Zumwalt is board-certified in anatomic and forensic pathology by the American Board of Pathology. He was a trustee of the American Board of Pathology from 1993 to 2004.

Dr. Zumwalt has served as president of the National Association of Medical Examiners (NAME) and is also a member of the National Association of Medical Examiners; the American Academy of Forensic Sciences; College of American Pathologists; American Society of Clinical Pathologists; United States and Canadian Academy of Pathology; American Medical Association; and the American Association for the Advancement of Science. He served on a National Academy of Sciences Committee on Identifying the Needs of the Forensic Science Community from 2007-2009.

On November 4, 2010, Dr. Zumwalt was an invited speaker at the University of Mississippi Medical Center Forum on Mississippi's medico-legal system, with emphasis on safeguarding the independence and integrity of the office of State Medical Examiner. This was an informational program (attended by House and Senate committee chairmen and other legislative leaders) that in part led to the Legislature's 2011 amendment to Miss. Code § 41-61-55, as per S. B. 2435, Reg. Sess. 2011, Miss Laws, ch. 499, § 1 (2011). Dr. Zumwalt has served as a consultant to review the Winnipeg Medical Examiner's system in December 2011.

Dr. Zumwalt's Curriculum Vitae is included in this Appendix A as Exhibit 8.

APPENDIX B

APPENDIX B

DR. MICHAEL M. BADEN, New York, New York

Dr. Baden has been called by the prosecution in homicide cases countless times throughout his long career, including the following cases: *State v. Jaramillo*, 2008 WL 3890655, *5 (N.J. Super. A.D. Aug. 25, 2008) (aggravated assault); *Folger v. Conway*, 443 F.Supp.2d 438, 442 (W.D.N.Y. 2006)(1st degree manslaughter); *Boggs v. Olivarez*, 216 F.3d 1082, 1082 (9th Cir. 2000) (1st degree murder); *State v. Bumgardner*, No. 97 CA 103, 1998 WL 892120, *9-10 (Ohio App. Dist. Aug. 21, 1998) (manslaughter); *People v. Pope*, 241 A.D.2d 756, 757 (N.Y.A.D. 3rd Dept. 1997) (2nd degree murder); *People v. Hofmann*, 238 A.D.2d 716, 721 (N.Y.A.D. 3 Dept. 1997) (criminally negligent homicide); *State v. Lumbrera*, 891 P.2d 1096, 1100 (Kan. 1995) (1st degree murder); *People v. Engler*, 540 N.Y.S.2d 591, 593-94 (N.Y.A.D. 3 Dept. 1989) (2nd degree manslaughter); *Com. v. Fried*, 555 A.2d 119, 123 (Pa. Super. 1989) (1st degree murder); *People v. Hendricks*, 495 N.E.2d 85, 90-91 (Ill. App. Dist. 1986) (1st degree murder).

He has called by the prosecution in Mississippi homicide cases, most famously in the prosecution of Byron De La Beckwith for the murder of Medgar Evers, *Beckwith v. State*, 707 So. 2d 547, 560 (¶¶ 29-30) (Miss. 1997), as well as *DeHenre v. State*, 43 So. 3d 407, 411 (¶ 5), 417 (¶ 43) (Miss. 2010) (manslaughter) and *Mosby v. State*, 749 So. 2d 1090, 1098 (¶ 37) (Miss. Ct. App. 1999) (capital murder, life sentence).

DR. ANDREW M. BAKER, Minneapolis, Minnesota

Dr. Baker has been called by the prosecution in numerous homicide cases, including the following: *State v. Bobo*, 770 N.W.2d 129, 134 (Minn. 2009)(1st degree murder); *State v. Johnson*, 756 N.W.2d 883, 887 (Minn. App. 2008) (homicide); *State v. Scott*, No. C8-99-1880, 2000 WL 1693610, *2 (Minn. App. Nov. 14, 2000) (2nd degree murder). The State of Minnesota does not have the death penalty.

DR. VINCENT J. M. DI MAIO, San Antonio, Texas

Dr. Di Maio has been called by the prosecution in countless death penalty cases throughout his career. These include: *Garcia v. Thaler*, 793 F.Supp.2d 909, 913 n.25 (W.D. Tex. 2009) (death sentence); *Hernandez v. Thaler*, 787 F.Supp.2d 504, 551 (W.D. Tex. 2011) (death sentence); *Trevino v. Thaler*, 678 F.Supp. 445, 451 n.13 (W.D. Tex. 2009) (death sentence); *Bartee v. Quarterman*, 574 F.Supp. 2d 624, 679 (W.D. Tex. 2008) (death sentence); *Parades v. Quarterman*, Civil No. SA-05-CA-870-FB, 2007 WL 760230 *2, n.30 (W.D. Tex. Mar. 8, 2007) (death sentence); *Amador v. Dretke*, No. Civ.SA-02-CA-230-XR, 2005 WL 827092, *5, n.44 (W.D. Tex. Apr. 11, 2005) (death sentence); *Moreno v. Dretke*, 362 F.Supp.2d 773, 780 n.7 (W.D. Tex. 2005) (death sentence); *Leal v. Dretke*, No. Civ.SA-99-CA-1301-RF, 2004 WL 2603736, *3, n.28(W.D. Tex. Oct. 20, 2004) (death sentence); *Cockrell v. Cockrell*, No. Civ.SA-99-CA-1119-FB, 2003 WL 1906163, *2, n.13 (W.D. Tex. Mar. 31, 2003) (death sentence); *Hinojosa v. State*, 4 S.W.3d 240, 243 (Tex. Crim. App. 1999) (death sentence);

Chambers v. State, 903 S.W.2d 21, 25-26 (Tex. Crim. App. 1995) (death sentence); *State v. Martini*, 619 A.2d 1209, 1219 (N.J. 1993) (death sentence); *Alexander v. State*, 740 S.W.2d 749, 753 (Tex. Crim. App. 1987) (death sentence); *Commonwealth v. Mollett*, 5 A.3d 291, 299 (Pa. Super. 2010) (1st degree murder); *Martinez v. Quarterman*, No. Civ. SA-04-CA-1023-R, 2006 WL 2042958 *1, n.11 (W.D. Tex. July 11, 2006) (capital murder, life imprisonment). Dr. Di Maio has been called by the prosecution in countless other homicide cases where the death penalty was not sought.

Many members of the criminal justice system, including Mississippi prosecutors, have relied on Dr. Di Maio's textbook in understanding the best practices and procedures in death investigations. See, e.g., Radley Balko, *Mississippi Supreme Court Considering Two Death Penalty Cases Involving Dr. Steven Hayne* (Mar. 2, 2008) available at <http://reason.com/blog/2008/03/02/mississippi-supreme-court-cons> (a "prosecutor went on to question [another pathologist's] methods and practices During his questioning, the prosecutor read from the text of Forensic Pathology, considered the premiere text book in the field, written by the renowned medical examiner Dr. Vincent Di Maio.").

DR. JAMES CLAUDE UPSHAW (JAMIE) DOWNS, Savannah, Georgia

Dr. Downs has been called by the prosecution to testify in countless homicide cases, including death penalty cases. Some of these include: *Blackmon v. State*, 7 So. 3d 397, 407 (Ala. Crim. App. 2005) (death sentence); *Minor v. State*, 914 So. 2d 372, 386 (Ala. Crim. App. 2004) (death sentence); *McGowan v. State*, 990 So.2d 931, 946 (Ala. Crim. App. 2003) (death sentence); and *Ward v. State*, 814 So.2d 899, 906 (Ala. Crim. App. 2000) (death sentence). Dr. Downs has been called by the prosecution in countless other homicide cases where the death penalty was not sought.

The defense has designated Dr. Downs as an expert in forensic pathology and filed his report in Steven T. Hayne vs. The Innocence Project, Et Al., U. S. Dist. Ct., S. D. Miss., Civil Action No. 3:09cv218-KS-LRA, presently pending.

DR. JAMES R. LAURIDSON, Montgomery, Alabama

Some of the capital cases in which Dr. Lauridson has been called to appear on behalf of the prosecution include: *Geralds v. State*, Nos. SC06-761, SC07-716, 2010 WL 3582955, *13 (Fla. 2010) (death sentence); *Orme v. State*, 25 So. 3d 536, 551 (Fla. 2009) (death sentence); *Irvin v. State*, 940 So. 2d 331, 340 (Ala. Crim. App. 2005) (death sentence); *Flowers v. State*, 799 So. 2d 966, 977 (Ala. Crim. App. 1999) (death sentence); *Jackson v. State*, 836 So. 2d 915, 953 (Ala. Crim. App. 1999) (death sentence); *Dunaway v. State*, 746 So. 2d 1021, 1025 (Ala. Crim. App. 1998) (death sentence); *Landers v. Hooks*, No. 2:06-cv-975, 2011 WL 2261979, *1 (M.D. Ala. June 8, 2011) (capital murder, life sentence); *Sullivan v. DeLoach*, 459 F.3d 1097, 1100-01 (11th Cir. 2006) (murder, life sentence).

Dr. Lauridson was called by the defense in the capital murder prosecution of juvenile Tyler Edmonds in Oktibbeha County, in which Dr. Steven T. Hayne testified for the prosecution that he could tell from the gunshot wound alone that two people had pulled the trigger that fired the fatal shot to a reasonable degree of medical certainty. Dr. Lauridson “categorically disputed any suggestion that a forensic pathologist or anyone else could look at a wound and the trajectory of the bullet that caused the wound and tell how many persons fired the shot.” *Edmonds v. State*, 955 So. 2d 864, 886 (¶ 53) (Miss. App. 2006). This Court, reversing the conviction, agreed. *Edmonds v. State*, 955 So. 2d 787, 792 (Miss. 2007).

He has also been called as an expert witness in Mississippi courts in the following cases: *Causey v. Sanders*, 998 So. 2d 393, 401 (¶ 18) (Miss. 2008) (on behalf of a physician-defendant in a malpractice/wrongful death action); *Bullock v. Lott*, 964 So. 2d 1119, 1123 (¶ 8) (Miss. 2007) (on behalf of physician-defendant in a malpractice/wrongful death action; Court reverses judgment against defendant); *Moffett v. State*, 49 So. 3d 1073, 1101-02 (¶ 94), 1108 (¶¶ 117-18), 1110 (¶ 124) (Miss. 2010) (retained by defense in capital case); *Havard v. State*, 988 So. 2d 322, 327-28 (¶¶ 8,11), 331-33 (¶¶ 27-31) (Miss. 2008) (retained post-trial by defense in capital case).

DR. GERALD EDWARD LIUZZA, New Orleans, Louisiana

Dr. Liuzza has been called by the prosecution in death penalty cases. Recent cases include *United States v. John W. Johnson*, 04:00017, in the Eastern District of Louisiana, and *State v. Mathieu*, 980 So. 2d 716, 718 (La. App. 4th Cir. 2008) (death penalty sought, life sentence imposed).

Among many others, Dr. Liuzza has also been called by the prosecution in the following serious homicide cases: *State v. Rose*, 949 So. 2d 1236, 1241 (La. 2007) (2nd degree murder); *State v. Magee*, 576 So. 2d 605, 609 (La. App. 4th Cir. 1991) (1st degree murder, life imprisonment); *State v. Burrow*, 565 So. 2d 972, 973 (La. App. 5th Cir. 1990) (2nd degree murder, life imprisonment); *State v. Ray*, 542 So. 2d 1124, 1125 (La. App. 4th Cir. 1989) (2nd degree murder, life imprisonment).

Defense counsel sought to retain Dr. Liuzza in the capital murder case of Henry Lee Harrison in Jackson County, Mississippi, but the trial court denied the funds. *Harrison v. State*, 635 So. 2d 894, 901 (Miss. 1994). In that same case, appellate counsel submitted an affidavit from Dr. Liuzza to this Court. *Id.* at 902 n.2.

DR. LEROY M. RIDDICK, Mobile, Alabama

Dr. Riddick has been called by the prosecution in a number of Mississippi homicide cases, including *James v. State*, 777 So. 2d 682, 690 (Miss. App. 2000) (capital murder); *Fisher v. State*, 481 So.2d 203, 208 (Miss. 1985) (capital murder); *Simpson v. State*, 993 So. 2d 400, 404 (¶¶ 12-13) (Miss. App. 2008) (manslaughter), and *Starns v. State*, 867 So. 2d 227, 229 (¶ 6), 234 (¶¶ 28-29) (Miss. 2003) (murder).

Beyond these, Dr. Riddick has also participated in the Mississippi court system in the following cases: *Miss. Crime Lab. vs. Douglas*, 70 So. 3d 196, 200 (Miss. 2011) (Dr. Riddick performed a second autopsy on the child, concluding he had died of natural causes); *Univ. of Miss. Med. Center v. Johnson*, 977 So. 2d 1145, 1150 (¶ 13), 1154 (¶ 29), 1155-56 (¶¶ 38-39) (Miss. App. 2007) (Dr. Riddick was retained by UMMC in medical malpractice action); *Jordan v. State*, 912 So. 2d 800 (Miss. 2005) (retained by defense in capital murder prosecution); *Shaffer v. State*, 740 So. 2d 273, 277 (Miss. 1998) (retained by defense in capital murder prosecution); *Holland v. State*, 705 So. 2d 307, 322 (Miss. 1997) (testimony proffered by defense to challenge Dr. Paul McGarry's testimony in capital murder prosecution); *Evans v. State*, 725 So. 2d 613, 671 (¶ 243), 673 (¶ 247) (Miss. 1997) (called by defense in capital murder prosecution).

In Alabama, Dr. Riddick has been called by the prosecution in many homicide cases. These appearances include: *Hutcherson v. State*, 677 So. 2d 1174, 1178 (Ala. Crim. App. 1994) (death sentence); *Martin v. State*, 931 So. 2d 774, 781 (Ala. Crim. App. 2005) (death sentence); *Peraita v. State*, 897 So. 2d 1161, 1178 (Ala. Crim. App. 2003) (death sentence); *Ziegler v. State*, 886 So. 2d 127, 130 (Ala. Crim. App. 2003) (death sentence); *Clark v. State*, 896 So. 2d 584, 599 (Ala. Crim. App. 2000) (death sentence); *Thomas v. State*, 824 So. 2d 1, 40 (Ala. Crim. App. 1999) (death sentence); *Lucas v. State*, 792 So. 2d 1161, 1164 (Ala. Crim. App. 1999) (death sentence); *Williams v. Mosley*, No. Civ. A. 03-0050-CG-M, 2005 WL 1026742, *2 (S.D. Ala. 2005) (murder, life sentence).

DR. LINDSEY CAROL THOMAS, Hastings, Minnesota

Dr. Thomas has frequently been called by the prosecution in homicide cases. Some of the more serious homicide cases in which she has testified include: *State v. Heiges*, 806 N.W.2d 1 (Minn. 2011) (second degree murder); *State v. Jones*, 2005 WL 2008492 (Minn. App. 2005) (prosecution for third degree murder and third degree criminal sexual conduct); *State v. McBride*, 666 N.W.2d 351, 355 (Minn. 2003) (first degree murder, sentence of life imprisonment without parole); *Wayne v. Benson*, 89 F.3d 530, 535 (8th Cir. 1996) (murder, life sentence). An extensive but incomplete list of the cases in which she has testified in recent years is included in Exhibit 7 to Appendix A. The State of Minnesota does not have the death penalty.

DR. ROSS E. ZUMWALT, Albuquerque, New Mexico

Dr. Zumwalt has been frequently called by the prosecution in homicide cases. Some of these cases include: *Powell v. Collins*, 332 F.3d 376, 382 (6th Cir. 2003) (death sentence); *State v. Huber*, 140 P.3d 1096, 1102 (N.M. App. 2006) (2nd degree murder); *State v. Smith*, 19 P.3d 254, 258 (N.M. 2001) (1st degree murder); *State v. Foster*, 974 P.2d 140, 146 (N.M. 1999) (1st degree murder); *U.S. v. Treas-Wilson*, 3 F.3d 1406, 1410 (10th Cir. 1993) (1st degree murder); *Reaves v. State*, 586 N.E.2d 847 (Ind. 1992) (felony-murder); *State v. Flatowicz*, 1980 WL 355369 (Ohio. App. 8 Dist. 1980) (aggravated murder); *State v. Rumbold*, No. 41487, 1980 WL 355074, *2 (Ohio App. 8 Dist. 1980) (aggravated murder). The State of New Mexico no longer has the death penalty.