

finding competency and concluded that an “incoherent” *pro se* motion, alone, is not enough to require a formal evaluation of competency.

It is well settled that a competent defendant has the right to refuse to pursue an insanity defense. However, Mr. Robidoux had explicitly refused to receive a mental health evaluation, but had not necessarily refused to offer an insanity defense. The court examined whether Mr. Robidoux’s lawyer should have attempted to raise the insanity defense without expert assistance. The court concluded that counsel had not been deficient, given the particular facts of the case, which it found unresponsive of an insanity defense. Notable was that Mr. Robidoux had no mental health history. The court also stated, citing *Lundgren v. Mitchell*, that “deific decree” defenses are rarely successful. In their analysis, the court implied that if the facts of the case had been different, such an obligation might have existed.

The court’s analysis of diminished capacity is particularly of interest, as the court recognized that it is not considered a defense in Massachusetts, but nonetheless obliged itself to examine whether Mr. Robidoux’s counsel had been deficient in not pursuing it. In justifying this, the court apparently felt that diminished capacity is not dissimilar from a defense based on inability to form intent. However, it ultimately rejected this argument based on the facts of the case, in particular a diary entry by Mr. Robidoux that could be interpreted as indicating that he did have the ability to form intent.

In summary, in this case, the First Circuit Court was confronted with three points of major importance at the intersection of mental health and the law. The court’s analysis and holdings will inform our understanding of these issues.

Disclosures of financial or other potential conflicts of interest: None.

## Admission of Brain Imaging in Criminal Proceedings

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### Different Standards Regarding the Admissibility of Scientific Expert Testimony During the Guilt and Penalty Phases of a Capital Trial

In the case of *United States v. Montgomery*, 635 F.3d 1074 (8th Cir. 2011), a federal jury convicted Lisa Montgomery of kidnapping resulting in death. Upon recommendation by the jury, the district court sentenced her to death. She appealed, arguing that the trial court committed errors in excluding neuroimaging evidence. The Eighth Circuit Court of Appeals examined the standards for admission of positron emission tomography (PET) and magnetic resonance imaging (MRI) evidence during both the guilt and penalty phases of the trial.

#### Facts of the Case

Mrs. Montgomery and Bobbie Jo Stinnett met in April 2004 through an online message board dedicated to dog breeding. Ms. Stinnett became pregnant in the spring of 2004 and shared the news with her virtual community. Around this time, Mrs. Montgomery also reported being pregnant. However, she was unable to become pregnant due to a sterilization procedure that she had undergone more than a decade before. Mrs. Montgomery contacted Ms. Stinnett in December 2004 when she was eight months pregnant. They arranged a meeting for the following day. Mrs. Montgomery drove to Ms. Stinnett’s farm. She brought a kitchen knife and a white cord and attacked Ms. Stinnett.

Mrs. Montgomery strangled Ms. Stinnett with the cord, eventually killing her, and, opening the abdomen with the knife, she removed the fetus from the body and departed with the infant. She drove to another location, called her husband, and told him she had delivered the child at a clinic. The next day law enforcement officers arrived at her home, and she confessed to killing Ms. Stinnett.

Mrs. Montgomery was charged with violating 18 U.S.C. § 1201 (a)(1) (2003), kidnapping resulting in death. She intended to assert an insanity defense and to present evidence regarding mental defect or disease. It was without dispute that she had PTSD, borderline personality disorder, and depression. However, defense and government experts disagreed as to whether she carried a diagnosis of pseudocyesis.

At trial, defense expert Dr. Ruben Gur was prepared to testify that Mrs. Montgomery's brain had abnormalities consistent with pseudocyesis. His diagnosis was based on an MRI showing reduced brain volumes in the right hemisphere and a PET scan showing increased activity throughout the limbic and somatomotor regions. Dr. Gur testified that the purpose of the PET scan was to identify abnormalities in Mrs. Montgomery's brain that might help explain her extreme behavior. Mrs. Montgomery argued that this evidence was probative and met the standards in Federal Rule of Evidence 702 (2009) and the Federal Death Penalty Act (18 U.S.C. § 3593 (2009)).

A government expert, Dr. Alan Evans, opined that the MRI abnormalities were less than one standard deviation from normal and that 50 percent of the population would have comparable results. In response to Dr. Evan's assertion that the deviations were not statistically significant, Dr. Gur testified that, based on his eyeball comparison, they were nonetheless clinically significant.

Dr. Evans noted that the PET scan could be consistent with both pathological and normal neurological states. Another expert, Dr. Helen Mayberg, indicated that a PET scan would not be requested by a treating physician to determine whether a patient had pseudocyesis. She opined that PET scans could not be used to diagnose psychiatric disorders or predict behavior. Furthermore, Drs. Mayberg and Evans took issue with the methodology of Dr. Gur, saying that they could replicate his calculations only if they used one method for a control group and a different method for Mrs. Montgomery. The government therefore argued that Dr. Gur's methods and principles were not reliable and challenged his testimony pursuant to *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993).

The court initially indicated that it would admit the neuroimaging evidence regarding the abnormalities in Mrs. Montgomery's brain. However, it subsequently excluded the evidence because of questionable underlying methodology and minimal probative value.

Mrs. Montgomery was found guilty. The jury recommended the death penalty and the court sentenced her to death.

#### *Ruling and Reasoning*

In regard to the district court rulings, the court of appeals made four rulings related to the admissibility

of the neuroimaging. It noted that Federal Rule of Evidence 702 requires the district court to serve as a gatekeeper to "ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable" (*Montgomery*, p 1089 (citing *Daubert*, p 589)).

With this in mind, first the court held that the testimony of Dr. Gur regarding the fact that the PET scan showed abnormalities in the somatomotor and limbic regions of Mrs. Montgomery's brain was reliable enough to have been admitted because there is "no question that the PET scan is scientifically reliable for measuring brain function" (*Montgomery*, p 1090 (citing *Hose v. Chi. Nw. Transp. Co.*, 70 F.3d 968 (8th Cir. 1995)). In other words, if the scan had not been used to contend that the abnormalities found on it could aid in the diagnosis of pseudocyesis or predict Mrs. Montgomery's behavior, then it would have been admissible. Nonetheless, the court found that, in this case, the PET findings were of minimal probative value and that any error arising from their exclusion was harmless.

Second, the court of appeals concluded that Dr. Gur's opinion that the PET scan revealed abnormalities consistent with pseudocyesis did not meet the reliability requirement of Federal Rule of Evidence 702 and that the district court did not abuse its discretion in excluding the testimony. The court noted that Dr. Gur's opinion "was at most a working hypothesis, not admissible scientific 'knowledge'" (*Montgomery*, p 1090 (citing *Tamraz v. Lincoln Elec. Co.*, 620 F.3d 665, p 670 (6th Cir. 2010)). The court concluded that the defense failed to demonstrate that Dr. Gur's opinion was based on scientifically valid principles, noting "a hypothesis without support, like the one posited here, is no more than a subjective belief or an exercise in speculation" (*Montgomery*, p 1091).

Third, with respect to the structural MRI findings, the appellate court upheld the district court's exclusion. Because the exclusion was based on the "unreliable. . . methodology underlying Dr. Gur's opinion" (*Montgomery*, p 1093), the appellate court ruled that the district court had not abused its discretion.

Finally, the court acknowledged that the threshold for admissibility under the Federal Death Penalty Act is low and noted that the exclusion of Dr. Gur's testimony from the penalty phase represented a reversible error. It noted that Dr. Gur's interpretation

of the PET scan as it pertained to a diagnosis of pseudocyesis was arguably admissible when this lower standard was used. However, it concluded that any error resulting from its exclusion was ultimately harmless. Furthermore, because the MRI evidence was both methodologically unreliable and, in this case, “had no scientifically recognized significance,” the district court acted within its authority when it concluded that “the results were irrelevant to Montgomery’s insanity defense and the mitigating factors she pleaded” (*Montgomery*, p 1093).

*Discussion*

In this case, the Eighth Circuit addressed the evidentiary rules regarding the admissibility of brain imaging and scientific testimony during the guilt and penalty phases of a capital trial. The court noted that during the guilt phase, Federal Rule of Evidence 702, informed by *Daubert*, governs the admission of scientific testimony. The earlier “general acceptance test,” originally established in *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923), held that scientific evidence is admissible at trial so long as it is “sufficiently established to have gained general acceptance in the particular field in which it belongs” (*Frye*, p 1014). The stricter *Daubert* standard requires that the district court act as gatekeeper and “ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable” (*Daubert*, p 589). The decision in *Daubert* stressed that the inquiry “must be solely on principles and methodology, not on the conclusions that they generate” (*Daubert*, p 595). In the present case, the court of appeals went on to explain that the threshold governing admissibility of scientific expert testimony was lower during the sentencing phase of a capital trial.

In *Daubert*, the court outlined five guidelines to assist judges in determining scientific validity. It noted that judges should consider whether the methodology is falsifiable, subject to publication and peer review, based on a technique with a known or potential error rate, standardized, and generally accepted within the scientific community.

Although the court in *Daubert* assigned the status of gatekeeper to district judges, best practice requires that forensic psychiatrists do the same. Ideally, the scientific community should hold the evidence and testimony it puts forward to standards as high or higher than those of judges. Whether it is neuroimaging as it pertains to psychiatric diagnoses or any

other scientific assertion, it is paramount that the methodology on which the expert’s assertions are based be relevant, reliable, and grounded in science. Holding experts to such high standards is vital to engendering the trust of both the public and the legal system as to the value of their testimony. It is imperative that testimony by forensic psychiatrists carry more weight than “subjective belief or unsupported speculation” (*Montgomery*, p 1090 (citing *Tamraz*, p 670)).

Disclosures of financial or other potential conflicts of interest: None.

## Burden of Proof in a Retrospective Competency to Stand Trial Hearing

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### Requiring Defendants to Bear the Burden of Proof in Retrospective Competency Hearings Does Not Violate Due Process Guarantees

In the case of *People v. Ary*, 246 P.3d 322 (Cal. 2011), during a retrospective competency hearing, a California trial court ruled that Mr. Ary did not carry his evidentiary burden of proving he was incompetent to stand trial when he was tried. The First Appellate District Court of Appeal vacated this decision and held that the trial court violated Mr. Ary’s due process rights by assigning him the burden of proving he was incompetent when tried. The California Supreme Court reversed the court of appeal’s judgment.

*Facts of the Case*

James Ary, Jr, was charged with capital murder for the 1997 killing of Ronnie Ortega in Contra Costa County. Mr. Ary was advised of and waived his constitutional rights under *Miranda v. Arizona*, 384 U.S. 436 (1966) and confessed to shooting Mr. Ortega. During pretrial motions, Mr. Ary moved to suppress his confession, arguing that his *Miranda*