

March 28, 2017

The Honorable Trey Gowdy, Chair  
The Honorable Sheila Jackson Lee, Ranking Member  
House Committee on the Judiciary  
Subcommittee on Crime, Terrorism, Homeland Security, and Investigations  
2138 Rayburn House Office Building  
Washington, DC 20515

**RE: Hearing “To examine the state of forensic science in the United States”**

Dear Chairman Gowdy and Ranking Member Jackson Lee:

We write to you regarding the hearing “To examine the state of forensic science in the United States.”<sup>1</sup> We welcome your leadership on this critical issue and look forward to working with you and your staff.

EPIC is a public interest research center established in 1994 to focus public attention on emerging privacy and civil liberties issues.<sup>2</sup> Of particular interest to EPIC is the impact of new forensic techniques in the criminal justice system. In a brief for the Ninth Circuit, more than a decade ago, EPIC explained:

DNA reveals vastly more information than a fingerprint. DNA profiles may also implicate an individual’s family. Moreover, the collection of DNA samples for a widely accessible national DNA database raises the very real possibility that DNA samples collected at one point in time for one purpose will be used in the future for unrelated purposes.<sup>3</sup>

Acknowledging the critical work of the National Academies of Science, EPIC wrote more recently in an *amicus* brief for the Supreme Court in *Florida v. Harris*:

The development of new investigative techniques is important for effective law enforcement, but these techniques should be constantly evaluated to determine

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<sup>1</sup> *To examine the state of forensic science in the United States*, 115th Cong. (2017), H. Comm. the Judiciary, <https://judiciary.house.gov/hearing/examine-state-forensic-science-united-states/> (March 28, 2017).

<sup>2</sup> See EPIC, *About EPIC*, <https://epic.org/epic/about.html>.

<sup>3</sup> Brief of *Amicus Curiae* EPIC, *United States v. Kincade*, 379 F. 3d 813 (9<sup>th</sup> Cir. 2004), [https://epic.org/privacy/genetic/kincade\\_amicus.pdf](https://epic.org/privacy/genetic/kincade_amicus.pdf).

their reliability. Forensic science has been widely criticized in recent years because of a lack of clear standards and credible research to support technical conclusions. See National Research Council of the National Academies, *Strengthening Forensic Science in the United States: A Path Forward 2* (2009)<sup>4</sup>

EPIC warned in *Harris*, “When a new investigative technique is used in an attempt to identify a hidden substance, flag a possible threat, or gather evidence, the government should bear the burden of establishing its reliability. Otherwise, impermissible searches will result.”

Secret algorithms are now deployed in the criminal justice system to assess forensic evidence, determine sentences, to even decide guilt or innocence.<sup>5</sup> Last year, EPIC submitted public records requests to numerous states to obtain the source code of “TrueAllele,” a software product used in DNA forensic analysis.<sup>6</sup> Several states use proprietary commercial systems, not subject to open government laws, to determine guilt or innocence.<sup>7</sup> Proprietary software such as Cybergenetics’ TrueAllele technology (“TrueAllele”) is being used by law enforcement officials across the nation to automatically analyze and interpret DNA data, and individuals accused of crimes are being denied the ability to ascertain the accuracy of the software’s results by examining its source code.

Earlier this year, a similar program used by New Zealand prosecutors was found to have a coding error that provided incorrect likelihood ratio DNA match statistics in approximately 60 cases, including a high-profile murder case.<sup>8</sup>

DNA match statistics provided by TrueAllele have been entered into evidence in numerous criminal cases in Virginia.<sup>9</sup> In California, defendant Martell Chubbs challenged his inability to examine the source code of the software that was providing evidence against him, but his request was denied.<sup>10</sup> In New York, a Schenectady Supreme Court Justice found that Cybergenetic’s TrueAllele software is “generally accepted” under the *Frye* standard despite not reviewing the source code.<sup>11</sup> The TrueAllele results were admitted at trial and the defendant was

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<sup>4</sup> Brief of *Amicus Curiae* EPIC, *Florida v. Harris*, 568 US \_\_ (2013), <https://epic.org/amicus/harris/EPIC-Amicus-Brief.pdf>; see also Brief of *Amicus Curiae* EPIC, *Maryland v. King*, 133 S. Ct. 1958 (2013); *United States v. Pool*, 659 F.3d 761(9th Cir. 2011), Brief of *Amicus Curiae* EPIC, *Maryland v. Raines*, 481 Md. 1 (Md. 2004), [https://epic.org/privacy/genetic/raines\\_amicus.pdf](https://epic.org/privacy/genetic/raines_amicus.pdf).

<sup>5</sup> *EPIC v. DOJ (Criminal Justice Algorithms)*, EPIC, <https://epic.org/foia/doj/criminal-justice-algorithms/Algorithms in the Criminal Justice System>, EPIC, <https://epic.org/algorithmic-transparency/crim-justice/>.

<sup>6</sup> *State FOIA: Secret DNA Forensic Source Code*, EPIC, <https://epic.org/state-policy/foia/dna-software/>.

<sup>7</sup> Rebecca Wexler, *Convicted by Code*, Slate (Oct. 6, 2015, 12:28 PM), [http://www.slate.com/blogs/future\\_tense/2015/10/06/defendants\\_should\\_be\\_able\\_to\\_inspect\\_software\\_code\\_used\\_in\\_forensics.html](http://www.slate.com/blogs/future_tense/2015/10/06/defendants_should_be_able_to_inspect_software_code_used_in_forensics.html).

<sup>8</sup> David Murray, *Queensland authorities confirm ‘miscode’ affects DNA evidence in criminal cases*, The Courier Mail (March 21, 2015 12:00 AM), <http://www.couriermail.com.au/news/queensland/queensland-authorities-confirm-miscode-affects-dna-evidence-in-criminal-cases/story-fnn8dlfs-1227272252768>.

<sup>9</sup> Cybergenetics :: Criminal Trials, [http://www.cybgen.com/news/criminal\\_trials.shtml](http://www.cybgen.com/news/criminal_trials.shtml).

<sup>10</sup> *People v. Chubbs*, No. B258569 (Cal. Ct. App. 2015), available at <https://www.courtlistener.com/opinion/2768743/people-v-chubbs-ca24/>.

<sup>11</sup> *People v. Wakefield*, 9 N.Y.S.3d 540 (Sup. Ct. 2015).

convicted and sentenced to life in prison.<sup>12</sup> Secrecy of the algorithms used to determine guilt or innocence undermines faith in the criminal justice system.

In response to EPIC's public records requests, agencies in California, Louisiana, Pennsylvania, and Virginia stated that they do not have access to the TrueAllele source code that they are using to produce evidence against defendants.<sup>13</sup> Questions have long existed about the reliability of forensic evidence.<sup>14</sup> Potential flaws in forensic scientific techniques combined with potential errors in the algorithms analyzing that science weaken our criminal justice system. New forensic techniques require changes to our criminal justice system, including out-of-court oversight.<sup>15</sup>

As Professor Erin Murphy has said:

The code is critical to understanding and assessing the reliability of the program and the statistic that it ultimately generates. Just as courts would not accept opinions from witnesses not shown to have qualifications as an expert, so, too, should courts not accept opinions from digital "experts" without probing the "qualifications" of the technology... If there are concerns about intellectual property, then such information may be disclosed under a protective order. In any case, courts should disallow statistical evidence generated by probabilistic software whose operators refuse to reveal their code.<sup>16</sup>

We ask that this letter be entered in the hearing record. EPIC looks forward to working with the Subcommittee on these issues of vital importance to the American public.

Sincerely,

/s/ Marc Rotenberg  
Marc Rotenberg  
EPIC President

/s/ Caitriona Fitzgerald  
Caitriona Fitzgerald  
EPIC Policy Director

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<sup>12</sup> Robert Gavin, *John Wakefield sentenced to life for Schenectady murder*, Albany Times Union (May 27, 2015, 8:26AM), <http://www.timesunion.com/news/article/John-Wakefield-to-be-sentenced-for-murder-6288635.php>.

<sup>13</sup> *State FOIA: Secret DNA Forensic Source Code*, EPIC, <https://epic.org/state-policy/foia/dna-software/>.

<sup>14</sup> Jennifer Mnookin, *The Courts, The National Academy of Science, and the Future of Forensic Science*, 75 Brooklyn Law Review 1209 (2010); Jennifer Mnookin, *The Need for a Research Culture in the Forensic Sciences* (with Simon A. Cole, Itiel Dror, Barry A.J. Fisher, Max M. Houck, Keith Inman, David H. Kaye, Jonathan J. Koehler, Glenn Langenburg, Michael D. Risinger, Norah Rudin, Jay Siegel, and David A. Stoney), 58 UCLA Law Review 725 (2011).

<sup>15</sup> Erin E. Murphy, *The Mismatch Between Twenty-First-Century Forensic Evidence and Our Antiquated Criminal Justice System*, 87 S. Cal. L. Rev. 633 (2014); Erin Murphy, *DNA in the Criminal Justice System: A Congressional Research Service Report\* (\*From the Future)*, 64 UCLA L. Rev. Disc. 340 (2016).

<sup>16</sup> Erin Murphy, *Inside the Cell: The Dark Side of Forensic DNA*, 282 (Nation Books 2015).