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JUNK SCIENCE

FEATURED CASE
The recent case of **Jimmy Ray Bromgard** exposes the perils of junk science in the courtroom. Bromgard was convicted in 1987 of the brutal rape of an eight-year-old girl in Billings, Montana. The fraudulent testimony of the state's forensic scientist played a huge role in Bromgard's wrongful conviction, testifying that the head and pubic hairs found on the victim's bed sheets matched Bromgard and would matched less than one in ten thousand (1/10,000) people in a given population. His testimony and statistics were based not on science but only on baseless conjecture. In light of Bromgard's exoneration and release, six eminent forensic scientists have reviewed the forensic testimony and issued a report.

Click for a printer friendly version of the **Peer Review Report: Montana v. Bromgard**

As finders of fact in a trial, the ultimate determination of truth is up to the jury. In twenty-five of the first eighty-two DNA exonerations, scientists and prosecutors presented bad or tainted evidence to the judge or jury. In these cases, it was fortunate that DNA testing could ultimately expose the truth. Examples of junk science include: experts testifying about tests that were never conducted, suppression of evidence and/or exculpatory results of testing, falsified results, falsified credentials, misinterpretation of test results, and statistical exaggeration. The following suggestions, once implemented, would limit or eliminate the phenomenon of junk science being presented in courtrooms.

The scientific bases for forensic testing of all kinds must be reexamined in an objective manner. These evaluations should follow the standards put forth by the Supreme Court in recent cases, which are specifically designed to keep junk science out of the courtroom.

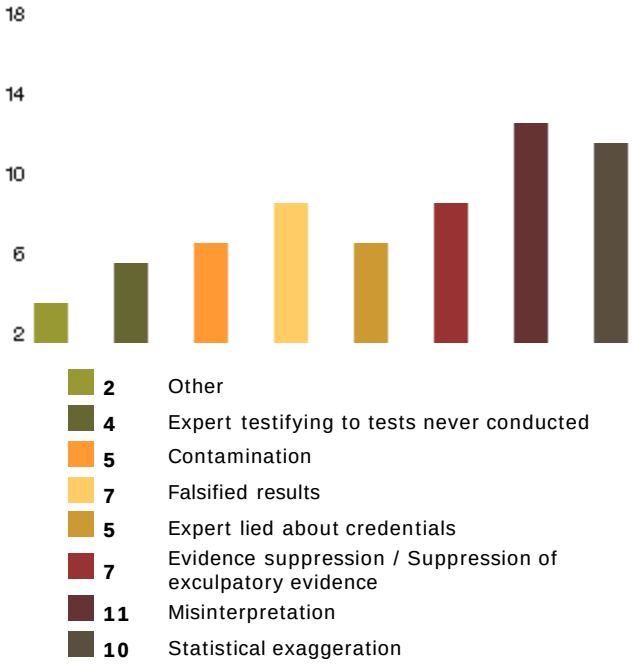
All crime laboratories should be subject to the same or better standards of professional organizations, like all medical laboratories. Regulatory oversight agencies, like New York's Forensic Science Review Commission, should be created and given the authority to regulate the practices of laboratories as well as set standards for the use of private laboratories or other outsourcing. These agencies or commissions should be comprised of scientists, prosecutors, defense attorneys, judges, and laboratory directors.

All crime laboratories must be reviewed. Accreditation standards should include rigorous quality control, spot-checking, quality assurance reviews, and periodic inspection by a regulatory body.

Laboratories should be submitted to proficiency testing, including blind proficiency testing. Laboratories should subsequently be rated on their performance and ability to provide valid data.

Microscopic hair comparisons should give way to mitochondrial DNA testing.

DEFECTIVE OR FRAUDULENT SCIENCE
Scientific fraud by type. Many cases featured a combination of these types of fraud.



Information regarding controls must be presented at trial, whether or not they failed in the instant case, as well as error rates for any given testing procedure.

Defense attorneys should have relevant scientific evidence and results independently examined and/or re-tested. Public defenders and court appointed attorneys must receive funds to retain said experts.

Every public defender and prosecutor's office should have on staff at least one attorney acting as a full time forensic expert.

Forensics experts and crime laboratory directors should formally agree that crime laboratories should act as independent entities within the criminal justice system. They would, thereby, be released from pressure from the prosecution and defense. These laboratories should be staffed by professionals who can present data objectively, without regard for either the prosecution or defense.

Crime laboratory budgets should not be linked, in any way, to the fiduciary process of any police agency. Police agencies should not be allowed to exercise supervisory responsibility of the crime laboratory or its employees.

Complete discovery of all data from forensic tests should be provided in all criminal cases to all parties involved. Reports should include explanations of the testing involved, not just the results of said procedure. All potentially exculpatory inferences drawn from any testing should also be disclosed.

Protection should be extended to "whistle blowers" in any crime laboratory who have concerns about the reliability of testing or results. Experienced expert personnel should be available to settle disputes among scientists.

State and local governments should establish an office for an independent reviewer who is authorized to investigate allegations of misconduct in crime laboratories. The federal government provided a good example in the case of the investigation of FBI laboratories.

Law and medical schools should sponsor the creation of postgraduate forensic science programs and degrees.