

Fwd: CDPHE DUI bloodwork

Vincent C. Todd [vincent.todd@coloradowrits.com]

Sent: Thursday, May 10, 2012 6:35 PM

To: The Orr Law Firm, L.L.C.

Begin forwarded message:

From: Gary Pirosko <piroskolaw@gmail.com>
Date: May 9, 2012 4:30:48 PM MDT
To: Vincent Todd <vincent.todd@coloradowrits.com>, Nancy Johnson <ncjonson@earthlink.net>, "Maureen O'Brien" <CrimLaw@ECENTRAL.COM>, Will Herringer <herringer.work@gmail.com>
Subject: Fwd: CDPHE DUI bloodwork

----- Forwarded message -----

From: Cardona, Felisa <FCardona@denverpost.com>
Date: Wed, May 9, 2012 at 4:24 PM
Subject: RE: CDPHE DUI bloodwork
To: Gary Pirosko <piroskolaw@gmail.com>

Yes, I am right now working on another story that the affidavit Burbach sent out is false because the DUI test in at least one case did not come back in the defendants' favor which is contrary to what she swore to in the record and what the state told us. I am waiting on a response for that.

I have looked at the information you sent along and we intend to continue following the DUI lab stuff as it has been unfolding and then get to the information you sent us regarding her background, education and claims of published work.

Unfortunately, I am in transition right now. I have turned in an involuntary resignation to my employer and will be notified in a few days whether it will be accepted. If I leave, I have talked to reporter John Ingold about taking over the information you sent to me. He is interested.

From: Gary Pirosko [mailto:piroskolaw@gmail.com]
Sent: Wednesday, May 09, 2012 4:22 PM
To: Cardona, Felisa
Subject: Re: CDPHE DUI bloodwork

Felisa, can you give me any update? Thank you.

On Fri, Apr 20, 2012 at 11:10 AM, Cardona, Felisa <FCardona@denverpost.com> wrote:

Thanks for sending this along. I am going to take a look at this and it might take me a few days. If it seems like I am taking a long time, please don't think I am ignoring you or this information. Thanks again, Felisa

From: Gary Pirosko [<mailto:piroskolaw@gmail.com>]

Sent: Friday, April 20, 2012 11:05 AM

To: Cardona, Felisa

Subject: CDPHE DUI bloodwork

Stay tuned to this story. I'll bet you are going to find Burbach's signature on a lot, if not every single one, of those test results as the supervisor who signed off attesting that they were done in strict compliance with CDPHE rules and regs. Turns out they shut down the Colorado Springs Police Lab recently too even though they had a CDPHE lab certification. And Burbach has refused to disclose her college transcripts.

This is a discovery motion that I have filed in numerous cases around the state. Most of the time I and now other defense attorneys, file it, the Attorney General's Office enters in on the case on behalf of Ms. Burbach as a state employee, an fight to quash the motion. Almost every Judge has refused to order the discovery although one or two have ordered production under seal.

I have copies of the transcripts if you need to confirm the testimony.

This would make an interesting follow up to Ms. Burbach's assertion that one of the employees she probably hired and trained was the sole cause of lab failures. She signs off on most if not all test results even though she not in the lab a large amount of the week. Other private toxicologists say that it would be physically impossible for her to do all the reviews that she claims.

Ms. Burbach's Wavering Educational Background

1. **Please provide:** Certified copies of Ms. Burbach's college transcripts

including all classes taken and all degrees awarded. _____ **GRANTED**

During the summer of 2008, Mr. Pirosko had University of Denver Law School intern James Ahern start compiling information on Ms. Burbach from various sources. After several months of research Mr. Ahern found:

At a minimum, Ms. Burbach claimed she has:

- . An undergraduate in biology and chemistry;
- . She never received a degree in chemistry;
- . She does not have a minor in chemistry;
- . A bachelor's in science and biology;
- . A degree only in biology;
- . A bachelor degree in biology and a chemistry minor;
- . A degree in biochemistry (Based upon information and good-faith belief, New Mexico State University never offered a degree in biochemistry);
- . Somewhere between 36 and 64 hours of chemistry classes;
- . Over 60 some hours of chemistry and more than that of biology;
- . She considers having a chemistry degree because she took a lot of classes;
- . A master's in management;
- . Some masters level hours in forensic toxicology;
- . An education involving chemistry;
- . Two separate majors in Biology and chemistry;
- . A bachelor of science in biology and a chemistry minor;
- . No involvement in postgraduate classes (Although this statement was made in June of 1995);
- . Some involvement in the Ph.D. program at the CU School of Pharmacy;

. Some PhD hours and some master's level hours in forensic toxicology;

. She took a couple of classes at the doctoral level.

Burbach: My undergraduate is in biology and chemistry and my post-graduate is in management. *P. v. Stacy Smith*, Denver County Court, 05M05129, 3/13/2006, Chris Cessna, Esq.

Burbach: My undergraduate's in biology and chemistry. And my master's is in management. It's a public administration degree. And then I just finished my first as the – in the Ph.D. program at the school pharmacy. *P. v. James Wagner*, Weld County Court, 05T8993, 3/06/2007, Trenton Mannina, Esq.

Burbach: My education is involving chemistry; my master's is in management that I'm currently in a Ph.D. – mulling around if I'm going to get a Ph.D. I'm in a Ph.D. program at the University of Colorado School of Pharmacy (pg. 3). *P. v. Dustin Crain*, Denver County Court, 05M11717, 10/2-3/2006, Hagerman & Rodriquez: Student Lawyers DU

Burbach: Undergraduate in biology and chemistry, and masters in management. *P. v. Phillip Ray Cuny*, Weld County Court, 05CR138, 3/28/2006, Jeri Shepherd, Esq.

Burbach: I have a bachelors in Science and Biology and I have a Masters in Public Management and then 21 years in forensic toxicology. *P. v. Byron Linnzie*, Douglas County Court, 04T5498, 6/15/2005, Randy Canney, Esq.

Cross-examination by attorney Canney:

Canney: Your graduate degree was in Biology and Chemistry?

Burbach: Biology sir.

Canney: Was there any emphasis in your undergraduate degree on toxicology?

Burbach: No.

Canney: Have you ever taken any graduate level classes in colleges or universities in the field of toxicology?

Burbach: Actually yes I studied with Dr. Ruth at the School of Pharmacy.

Canney: You actually took a class, a formal university class?

Burbach: No.

Canney: Have you ever taught a formally accredited university class in toxicology or pharmacy?

Burbach: No. *P. v. Byron Linnzie, Douglas County Court, 04T5498, 6/15/2005, Randy Canney, Esq.*

DA: *What sort of educational background do you need to get to become a forensic toxicologist?*

Burbach: Well everybody in our lab has to have a Bachelor's Degree. Mine specifically is in biology and chemistry and I have a master's in public administration, which is a management degree. And then I have some post graduate work. I have some PhD hours and some masters level hours in forensic toxicology (P. 3). *P. v. James Nelson, Mesa County Court, 07T3922, 5/06/2008, Tom Silverman, Esq.*

Silverman: *Ms. Burbach, in your testimony you said you have a Bachelor of Science Degree, correct? (beginning on p. 69)*

Burbach: Yes, in biology.

Silverman: *And you said also biology and chemistry, didn't you?*

Burbach: Yes, I had chemistry in there, yes.

Silverman: *Well by having a degree, do you mean you have a major in biology and a major in chemistry?*

Burbach: Yes. Well I have a Bachelor of Science in Biology and a chemistry minor.

Silverman: *You have a chemistry minor?*

Burbach: Yes, yes.

Silverman: *You have testified in those numerous other occasions saying that you have a major in chemistry, is that true?*

Burbach: I said chemistry and biology, they encompass the same thing.

Silverman: *Chemistry and biology are the same thing?*

Burbach: Yes. I have over 60 some hours of chemistry and more than that of biology.

Silverman: *And so you have a minor in chemistry and a major in biology. Is that your testimony today?*

Burbach: Yes. Well as I say, how I say it is, I have a Bachelor of Science in Biology and Chemistry. That's how I say it in court.

Silverman: *And that's the way you put it on your curriculum vitae, right? Which is a list of the things that you..*

Burbach: No, that's not how I put it on the curriculum vitae, if you look it says major area of, if you look at it, it says major area of, well you will have to look at it, it says, major area of study, biology and chemistry.

Silverman: *Ms. Burbach, actually it says right here, BS Biology/Chemistry from New Mexico State, doesn't it?*

Burbach: Yes, biology and chemistry. My Bachelor is in biology.

Silverman: *You testified before that you have an undergraduate degree in chemistry, have you not?*

Burbach: No. I said I have a Bachelor's in biology and chemistry, that's what my testimony is.

Silverman: *You have testified that you had a dual major in biology and chemistry, isn't that true?*

Burbach: Well, dual major meaning I have chemistry. Yes, I had enough to get a Bachelor's I just never did.

Silverman: *Do you recall being asked these questions and giving these answers (while testifying in the Judson Lightsey – case in Boulder):*

Q. So what was your degree in?

A. It's in biology and chemistry.

Q. So you had two separate majors?

A. Yes.

Burbach: That's exactly what I said.

Silverman: And you said that you had to take 36 hours of chemistry, including biochemistry, inorganic and P-Cam analytical.

Burbach: Correct.

Silverman: How many classes in chemistry did you complete (in undergrad)?

Burbach: I don't know, I don't remember. Let's see, organic, inorganic, biochemistry. I'm thinking I had organic, a PhD, I mean on toxicology, chemistry. I don't recall. Somewhere between 36 and 64 hours.

Silverman: Ms. Burbach you don't have a major in chemistry from New Mexico State, do you?

Burbach: Do I, no I have chemistry classes.

Silverman: The truth is, you completed two classes in chemistry at New Mexico State.

Burbach: That's not true. That's not true.

Silverman: The two classes that you completed were Chem 102, a general chemistry class, and Chem 302, an organic chemistry class.

Burbach: Correct. Did you forget about Organic 101 and 102?

Silverman: The truth is that you signed up for it but withdrew from two other classes in chemistry.

Burbach: That's not true. Are you looking at the right Cynthia Silva? Do you know that Silva is like a name of Martinez in New Mexico?

Silverman: The one born on November the 7th of 1958?

Burbach: It could have been. You know, I went to school with a bunch of Cynthia Silvas that were in the chemistry program. You better look up the right one before you accuse someone of something.

Silverman: The truth is that you are not listed as having a chemistry major or even a minor according to the Registrar at New Mexico State, isn't that true?

Burbach: Well I would probably agree with that. I still consider it a chemistry degree because I have a lot of hours in chemistry.

Silverman: The truth is you needed two chemistry classes to obtain a degree in biology, correct?

Burbach: No, that's not true.

Silverman: Well a current biology degree would require taking two chemistry classes, 111 and 112 General Chemistry, 211 Organic Chemistry, or Chem 313, 314 or 315 just like back when you were there, correct?

Burbach: You know how can I remember that, I've been out of there 20 some years. I don't remember that. But I can guarantee that there wasn't two classes of chemistry to get a biology degree (p. 69-77).

P. v. James Nelson, Mesa County Court, 07T3922, 5/06/2008, Tom Silverman, Esq.

Silverman: You also testified that you are in a PhD program, is that right?

Burbach: No, I have taken PhD classes, I dropped the program. I can't do a PhD and work at the same time.

Silverman: What was your doctoral thesis?

Burbach: I didn't have a thesis, I just barely took a couple of classes, I didn't even get that far.

P. v. James Nelson, Mesa County Court, 07T3922, 5/06/2008, Tom Silverman, Esq.

Ms. Burbach's Work History

2. **Please provide:** A definitive work history for Ms. Burbach while employed by the Colorado Department of Health including dates, positions held, and specific duties in each position. **GRANTED**

During the summer of 2008, Mr. Pirosko had University of Denver Law School intern James Ahern start compiling information on Ms. Burbach from various sources. Mr. Ahern found:

Ms. Burbach claimed she has 21 years in forensic toxicology.

Burbach: I have a bachelor's in Science and Biology and I have a Masters in Public Management and then *21 years in forensic toxicology*. *P. v. Byron Linnzie, Douglas County Court, 04T5498, 6/15/2005, Randy Canney, Esq. [Emphasis supplied]*

June 12, 1984 - Started in the laboratory as a lab assistant. "As a lab assistant you basically wash glassware and clean up after the chemists." "...I started in the lab as a lab assistant washing dishes

Unknown date - Became a lab technician. "And then as a lab tech, you get to do a little bit more sorting the samples and as a chemist, actually analyze the samples." As a lab assistant you basically wash glassware and clean up after the chemists. And then as a lab tech, you get to do a little bit more sorting the samples and as a chemist, actually analyze the samples.

"Then I moved up to an analyst technician where I screened over 600 to 700 urine samples a day for about five years." [Emphasis supplied as Ms. Burbach was merely screening samples, not analyzing them]

Unknown date to 1995 – Chemist in the toxicology unit. "And then I moved up to a Chemist 1, and then a Chemist 2, and then a Chemist 3 where I did a lot of the gas chromatograph work and was a lead." [Actually started analyzing samples?].

1995 to 2000 - Chemist at Hazardous Materials and Waste Management Division

November 2000 - Become the supervisor of the toxicology unit. (Testified she was called back to be the supervisor of the toxicology lab in 2000 but also testified she's been the supervisor since 2005, supervising 8 chemists). "As a supervisor I still do laboratory work. I'm vacation relief, and then when somebody's sick, I step in because I know how to run all the instruments in the laboratory, and I know all the standard operating procedures and all the theory of the instruments. So, I'm kind of a working supervisor. But I still have to do budget and run the lab." [Emphasis supplied]

2005 - I've been a supervisor since November 2005, and I supervise eight chemists in the laboratory

Burbach: I work for the State of Colorado. And the department I work for is the Department of Health and Environment. And the section I work for is the laboratory division in the toxicology unit.

DA: What is your specific title in the toxicology unit?

Burbach: Forensic toxicologist, and I'm supervisor, supervisor over the toxicology unit (the state toxicologist)

Burbach: I started in the laboratory as a lab assistant on June 12, 1984. I was promoted all the way up to chemist, and left for a period of time in 1990 to be an environmental chemist within the Department of Health. And that was in 1995. And then in November, 2000, the director of the lab called me up and asked me to become the supervisor of the toxicology unit. So minus that five years, it will be 22 years I've been with the State on June 12th of this year, so minus about five years. *P. v. Phillip Ray Cuny, Weld County Court, 05CR138, 3/28/2006, Jeri Shepherd, Esq.*

Burbach: I'm a forensic toxicologist, which is a person that identifies poisons in the bodies and interprets those in a court of law to jurors.

Burbach: I started in '84 and then I left for a period of time to another division within the Department of Health and then in November 2000, the director asked me to come back and run the state lab -- the tox lab.

Burbach: I do vacation relief. I do -- when somebody's sick, I step in and do the analysis. We are also getting American Board Forensic Toxicology certified so I have to know every procedure in the laboratory. *P. v. James Wagner, Weld County Court 05T8993, 3/06/2007, Trenton Mannina, Esq.*

Burbach: Started with the Department of Health in 1984. And I stayed in the toxicology section working my way up from a laboratory technician -- from lab assistant to a lab technician to a chemist, and then I stayed a chemist until about 1995. I went over to the Hazardous Materials and Waste Management Division for about five years as a chemist. And then in November of 2000 the director of the laboratory called me to come back and manage the toxicology unit; so I accepted that position, and I've been a supervisor since November 2005, and I supervise eight chemists in the laboratory (p. 2)

Burbach: As a lab assistant you basically wash glassware and clean up after the chemists. And then as a lab tech, you get to do a little bit more sorting the samples and as a chemist, actually analyze the samples.

Burbach: As a supervisor I still do laboratory work. I'm vacation relief, and then when somebody's sick, I step in because I know how to run all the instruments in the laboratory, and I know all the standard operating procedures and all the theory of the instruments. So, I'm kind of a working

supervisor. But I still have to do budget and run the lab (p. 3) *P. v. Richter, Teller County District Court, Sommer Spector, Esq.*

Rule 703. Bases of Opinion Testimony by Experts

The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to the expert at or before the hearing. If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence in order for the opinion or inference to be admitted. Facts or data that are otherwise inadmissible shall not be disclosed to the jury by the proponent of the opinion or inference unless the court determines that their probative value in assisting the jury to evaluate the expert's opinion substantially outweighs their prejudicial effect.

Crim. P. Rule 16, Part I(a)(1) expressly requires the prosecution to provide the defense with the following information automatically: reports and statements of experts, including results of all physical or mental examinations and of scientific tests, experiments or comparisons. Crim. P. Rule 16, Part I(d)(3) authorizes the Court to order the prosecution to disclose underlying facts or data supporting the opinion of experts endorsed as witnesses by the prosecutor. The Court may require the prosecutor to direct any expert who has not prepared a written report to provide a written summary of testimony describing the witness' opinions and the bases and reasons therefore, including results of examinations, scientific tests, experiments or comparisons. **This Rule is designed to allow the defense sufficient meaningful information to conduct effective cross-examination under CRE 705.**

3. **Please provide:** A report or summary from Ms. Burbach containing a complete statement of all opinions to be expressed and the basis and reasons therefore; the data or other information considered by Ms. Burbach in forming the opinions; any exhibits to be used as a summary of or support for the opinions; Ms. Burbach's qualifications, including a list of all publications, if any, she authored within the preceding ten years; the compensation for the study and testimony; and a listing of any other cases in which she testified as an expert at trial or by deposition within the preceding four years.[1] [2] _____
GRANTED

Without this information the Defense may be forced to seek a continuance mid-trial in order that relevant testimony, bearing on the reliability of the People's Rule 702, COLORADO RULES OF EVIDENCE, testimony may be considered by the Court and, where appropriate, the trier of fact, in evaluating the People's case.

In order to facilitate an informed inquiry in criminal cases, Rule 16 (I)(d) (3), COLORADO RULES OF CRIMINAL PROCEDURE, provides:

(3) Where the interests of justice would be served, the court may order the prosecution to disclose the underlying facts or data supporting the opinion in

that particular case of an expert endorsed as a witness. If a report has not been prepared by that expert to aid in compliance with other discovery obligations of this rule, the court may order the party calling that expert to provide a written summary of the testimony describing the witness's opinions and the bases and reasons therefore, including results of physical or mental examination and of scientific tests, experiments, or comparisons. The intent of this section is to allow the defense sufficient meaningful information to conduct effective cross-examination under CRE 705.

"Trial by ambush is no longer acceptable as a means for ascertaining the truth." *People v. Roblas*, 193 Colo. 496, 568 P.2d 57 (1977). Liberal discovery procedures in criminal cases are to be encouraged so as to avoid surprise or deception in the production of evidence. "The trial of a criminal case is not a game of fox and hounds in which the state attempts to outwit and trap a quarry. *Giles v. Maryland*, 386 U.S. 66, 87 S.Ct. 793, 17 L.Ed.2d 737 (1967) (Fortas, J., concurring). It is, instead, a sober search for truth, in which not only the resources of the defendant, but those readily available to the state must be put to work in aid of that search." *Garcia v. District Court*, 197 Colo. 38, 589 P.2d 924 (1979); *City of Englewood by and on Behalf of People v. Municipal Court In and For City of Englewood*, 687 P.2d 521, 523 (Colo.App. 1984).

The Defendant requests an Order prohibiting Ms. Burbach from testifying to anything that is not included in her expert report.

The Eerie Similarity Between Ms. Burbach's Previously

Submitted "Expert" Reports and Copy written Materials

4. **Please provide:** Copies of all expert opinion letters submitted by Ms. Burbach over the last four (4) years. _____ **GRANTED**

An expert's opinion must not be predicated, in whole or in part, on opinions of others, expert or lay. *People v. Beasley*, 43 Colo. App. 488, 608 P.2d 835 (1979); *People v. District Court*, 647 P.2d 1206 (Colo. 1982). An expert opinion buttressed by assumed facts at variance with the actual facts has no evidential efficacy. See *High v. Industrial Comm'n*, 638 P.2d 818 (Colo. App. 1981).

On April 13, 2008, Mr. Pirosko took one of Ms. Burbach's expert reports from another one of his cases and cut and pasted two full sentences to Google. He got hits to *The American Prosecutor's Research Institute, Admissibility of Horizontal Gaze Nystagmus Evidence Targeting Hardcore Impaired Drivers*. The copyright disclaimer and use limitation by APRI is footnoted below.

The following is Ms. Burbach's own statement in paragraph two of an opinion letter to Deputy District Attorney Jonathan Datz, dated January 15, 2008, in *P. v. Gregory Balmer*, Broomfield County Court. This "expert" opinion was used in the prosecution of Mr. Balmer.

"There are no known conditions other than impairment with alcohol and other specific drugs that produce exactly the types of eye movements associated with such impairment when assessed with the Horizontal Gaze Nystagmus (HGN) and Vertical Gaze Nystagmus Maneuver (VGN). A properly trained police officer will know how to distinguish such eye movements. HGN observations require no specialized equipment, and all of the signs can be easily observed. Most importantly, the eye movement signs are not subject to control, practice or tolerance. The U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA) sponsored a study of sobriety test (Burns & Moskowitz, 1971). Statistical analysis from that study identified HGN as the single best test. Although HGN provides only one part of the evidence that leads to an arrest decision, the maneuver is very reliable. The HGN maneuver enables officers to detect the presence of an impairing substance even in individuals who have developed sufficient tolerance to alcohol and where other behavioral cues are minimal. It should be also noted that the absence of nystagmus can protect the innocent or non-impaired driver who for some reason is unable to perform balance and walking test and who has not ingested any alcohol or drug and is not impaired.

Three Standard Filed Sobriety studies were undertaken between 1995 and 1998: Colorado-1995, Florida-1997 and San Diego-1998. Correct arrests decisions were made 93% of the time based on the 3-test battery (HGN, WAT, OLS) in the Colorado study, 95% in the Florida Study and 91% in the San Diego study. The results of these studies provide clear evidence of the validity of the 3-test battery to support arrest decisions at above or below 0.08 grams of ethyl alcohol per 100/ml of blood. The studies also accurately discriminate blood alcohol contents at 0.04 grams of ethyl alcohol per 100/ml of blood and above.

Alcohol affects the brain's main Inhibitory neurotransmitter, which causes sedation, relaxed muscle tone, and impairment of memory. The intensity of the Central Nervous System effects of alcohol is proportional to the concentration of alcohol in the blood. These effects are considerably more pronounced when the blood level is rising than when falling. Memory, fine discrimination and concentration functions are dulled as the blood alcohol level rises, and vision and coordination also become impaired. All bodily functions and abilities governed by the brain are impaired progressively. The effects of a blood alcohol content on the brain at 0.242 BrAC/Grams of

Alcohol per 210 Liters of Breath includes diminished cognitive skills such as judgment, information processing, divided attention, reaction time and concentration capabilities, which are all essential skills for handling a motor vehicle. In addition alcohol effects tracking performance, visual acuity and increases the probability of causing an accident. If you should have any questions or concerns regarding this correspondence please contact me at 303-692-3491.

Sincerely,

//Signature//

Cynthia Silva Burbach

Forensic Toxicologist-Toxicology Unit Leader

CDPHE/Laboratory Services Division

The following excerpts are found in *American Prosecutors Research Institute, Admissibility of Horizontal Gaze Nystagmus Evidence, Targeting Hard Core Impaired Drivers*. © 2003 by the American Prosecutors Research Institute, the non-profit research, training and technical assistance affiliate of the National District Attorneys Association.[3] **The bold portions appear to have been cut and pasted directly into Ms. Burbach's opinion letter with no reference to the source.**

No conditions other than impairment with alcohol and other specific drugs will produce exactly the types of eye movements associated with such impairment when assessed with the HGN and VGN tests. A properly trained police officer will know how to distinguish such eye movements." Page 20,

HGN observations require no specialized equipment, and all of the signs can be easily observed when the officer stands about arm's-length from the subject. With regular use, an officer quickly gains skill and confidence in administering the test and interpreting the observed signs. **Most importantly, the eye movement signs are not subject to control, practice or tolerance.** Page 5

The U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA) sponsored a study of sobriety tests (Burns & Moskowitz, 1977). The investigators initially conducted a laboratory experiment with six tests that met the restrictive criteria of roadside use. Subjects, 238 adult licensed drivers, were given alcohol to produce

BACs in the range 0.00% - 0.15%. Traffic officers, who had been trained to administer the six tests, examined the subjects under double blind conditions (i.e., neither the officers nor the subjects knew how much alcohol the subjects drank), and recorded their arrest/don't arrest decisions for a 0.10% BAC limit. Seventy-six percent of the officers' arrest/release decisions were correct. **Statistical analysis identified HGN as the single best test.** The investigators recommended HGN, walk-and-turn (WAT), and one-leg stand (OLS) as an optimal three-test battery. Page 22

Although HGN provides only one part of the evidence that leads to an arrest decision, officers report that they rely heavily on it. **HGN enables them to detect the presence of an impairing substance even in individuals who have developed sufficient tolerance that other behavioral cues are minimal.** Note, too, **that the absence of nystagmus can protect the innocent or non-impaired driver who for some reason is unable to perform balance and walking tests but who has not ingested any alcohol or drug and is not impaired for driving.** Page 24

The following **bold** excerpts from paragraph 3 of Ms. Burbach's expert opinion appear to have been cut and pasted from page 79 of:

Drug-Facilitated Sexual Assault, A forensic Handbook, Edited by Marc L. LeBeau, & Asraf Mozayani, Copyrighted Material

Drug-facilitated Sexual Assault: A Forensic Handbook

By Marc A. LeBeau, Ashraf Mozayani

Contributor Marc A. LeBeau

Published by Academic Press, 2001

ISBN 0124402615, 9780124402614

326 pages

"In terms of DFSA, alcohol has other effects that may be desirable to a sexual offender. **As the blood alcohol level rises, usually (0.10 g / dl and above), memory, fine discrimination and concentration functions are dulled, with vision (occipital lobe), and coordination (cerebellum) also become[ing] impaired. All bodily functions and abilities governed by the brain are impaired progressively. ...**"

On June 24, 2009, Mr. Pirosko obtained the following partial boiler-plate letter submitted by Ms. Burbach in Arapahoe County Court Division A, Case No.: 08T185. Mr. Pirosko was advised by Mr. Johnnie Jones' defense counsel that Ms. Burbach wrote this report without ever speaking to the arresting Trooper or listening to him testify. Ms. Burbach reportedly was not available at the motions hearing date or later when the Trooper testified at the jury trial.

July 13th, 2008

Ms. Cara Morlan

Deputy District Attorney Office of the
District Attorney 1690 W. Littleton Blvd., #
203 Littleton, Colorado 80120

Dear Ms. Morlan:

The data or other information I considered in forming my opinion relative to this case includes my twenty four years in Forensic Toxicology and Chemistry, my training and experience in Standard Field Sobriety Maneuvers, and over two thousand hours in the effects of alcohol on Human Performance and Driving.

This correspondence is regard to Mr. Johnnie L. Jones. The following are the facts of this case: Mr. Jones was observed going 70 MPH in a posted 55 MPH zone on December 27th, 2007. While driving in his vehicle he passed Trooper Lowe on the left and then he immediately hit his brakes. Upon contact the Trooper detected a slight odor of an unknown alcoholic beverage on his breath. He had bloodshot, glassy and watery eyes. Mr. Jones stated he had 1.5 drinks. Mr. Jones did consent to roadside maneuvers. The Trooper observed 6/6 clues during the Horizontal Gaze Nystagmus. During the Walk and Turn, Mr. Jones could not keep his balance, and missed heel to toe. During the One Leg Stand he swayed and put his foot down. His internal clock was an estimated 41 seconds as 30 seconds. The HGN maneuver is the most accurate of the roadside Maneuvers and is not subject to tolerance of Ethanol. In the absence of a chemical test, Standard Field Sobriety Tests and HGN together are 96% reliable. These statistics are backed by Standard Field Sobriety Validation Studies.

Alcohol affects the brain's main inhibitory neurotransmitter, which causes sedation, relaxed muscle tone, and impairment of memory. The intensity of the Central Nervous System effects of alcohol is proportional to the concentration of alcohol in the blood. These effects are considerably more pronounced when the blood level is rising than when falling. Memory, fine discrimination, and concentration functions are dulled as the blood alcohol level rises, and vision and coordination also become impaired. All bodily functions and abilities governed by the brain are impaired progressively. The effects of a blood alcohol content on the brain cause diminished cognitive skills such as: judgment, information processing,

divided attention, reaction time and concentration capabilities, which are all essential skills for handling a motor vehicle. In addition alcohol effects tracking performance, visual acuity and increases the probability of causing an accident. It is my expert opinion that Mr. Jones was at the very least impaired by alcohol at the time of the incident on December 27, 2007. If you should have any questions or concerns regarding this correspondence please contact me at 303-692-3491.

Sincerely,

/s/

Cynthia Silva Burbach

Forensic
Toxicologist-
Toxicology Unit
Leader
CDPHE/Laboratory
Services Division

Ms. Burbach's Credibility

Although the present case does not involve urine testing, the examples clearly describe Mr. Burbach's lack of credibility *as a matter of law*.^[4]

In March of 2007, Ms. Burbach testified under oath that she analyzed close to 150,000 urine samples.

That same month, March of 2007, Ms. Burbach testified under oath that she analyzed greater than 300,000 urine samples.

One year later, in March of 2008 Ms. Burbach testified under oath that she has probably analyzed 750,000 to 850,000 urine samples. (600 to 700 every day for 5 years)

That same month, March of 2008 Ms. Burbach testified under oath that she has probably analyzed over one million urine samples.^[5]

Burbach: I've probably analyzed greater than 15,000 blood and close to about 150,000 urines (p. 4, lines 10-12)

P. v. Richter, Teller County District Court, Sommer Spector, Esq.

Burbach: It's on the job training back in 1984 when I started. I started in the lab as a lab assistant washing dishes and then I worked my way up to the manager. So, I've done probably greater than 300,000 urine samples, tested them.

P. v. James Wagner, Weld County Court 05T8993, 3/06/2007, Trenton Mannina, Esq.

Burbach: Well you know, I was trying to think about that one time, but it just would be an estimate of urine. It's got to be over a million because I did 600 or 800 a day for many, many years, five days a week all day long. And so urine tests have to be over a million.

Burbach: The blood alcohol test is probably about 10,000 and blood drugs are probably closer to a couple of hundred because that program was pretty new (p. 6).

P. v. James Nelson, Mesa County Court, 07T3922, 5/06/2008, Tom Silverman, Esq.

Burbach: Well I started in the lab June 12th, 1984, and I washed dishes. Then I moved up to an analyst technician where I screened over 600 to 700 urine samples a day for about five years. And then I moved up to a Chemist 1, and then a Chemist 2, and then a Chemist 3 where I did a lot of the gas chromatograph work and was a lead. And then for a brief period of time I went to the Hazardous Materials and Waste Management Division within the Department of Health and worked as a chemist at Rocky Flats. And in November, 2000, the director asked me if I would come back and run the laboratory and I said sure. And I've been there in management since November 1st of 2000 (p. 4)

P. v. James Nelson, Mesa County Court, 07T3922, 5/06/2008, Tom Silverman, Esq.

The number of blood alcohol samples personally analyzed by Ms. Burbach

In March of 2007, Ms. Burbach testified under oath that she analyzed greater than 15,000 blood samples.

Burbach: The blood alcohol test is probably about 10,000 and blood drugs are probably closer to a couple of hundred because that program was pretty new (p. 6).

P. v. James Nelson, Mesa County Court, 07T3922, 5/06/2008, Tom Silverman, Esq.

Ms. Burbach's time commitments

Burbach: I spend a lot of time on it because I have to look in the computer and I have to review the raw data... (p. 80).

Silverman: You testified that you sign off on 100 tests a day, you have testified that you talk to 10 attorneys a day, and you testified that you testify in court five days a week.

Burbach: Sometimes, sometimes, sometimes (p. 81).

P. v. James Nelson, Mesa County Court, 07T3922, 5/06/2008, Tom Silverman, Esq.

Burbach: I receive probably 1100 subpoenas a year. I don't appear on all of those. I probably appear about 70 times a year because a lot of the cases don't go. But when I review a case, it's a case that district attorney calls – a deputy district attorney calls or a defense attorney calls and says, "This case may go to trial, could you review the documents?" And so it's in the normal course of my job to do that (p. 17, lines 14-21)

Burbach: I'll put the CD rom into my computer and go through all the original documents associated with that case, from chain of custody to the results from all the original chromatograms, which is original data, in looking at the quality control and quality assurance (p. 18, lines 1-6).

Burbach: I probably sign about a hundred a day (p. 18, line 17)

P. v. Richter, Teller County District Court, Sommer Spector, Esq.

Ms. Burbach's Claimed Courtroom testimony (overall)

5. **Please provide:** A list of cases where Ms. Burbach has testified, who Ms. Burbach testified for, and the nature of her testimony. _____ **GRANTED**

6. **Please provide:** If Ms. Burbach is unable to produce a complete list, please provide a list, to the best of her recollection, of all the defense attorneys she has testified for. _____ **GRANTED**

7. **Please provide:** Copies of Ms. Burbach's 2007, 2008 and 2009 work calendars. _____ **GRANTED**

Burbach: Probably out of eleven hundred times, maybe in the course of 24 years, 150 times. And most recently about, I think it's been three months ago (p. 14).

Silverman: *How much do you testify for the prosecution compared to the defense?* (p. 83)

Burbach: So you are looking at it in terms of we talked about those eleven hundred times. Maybe out of a course of 24 years, 150 times for the defense. [6]

Silverman: *How many times have you been scheduled to testify this year?*

Burbach: I have no way of knowing that. We would have to go back and look at them. **We would have to go back and look at my calendar.**

P. v. James Nelson, Mesa County Court, 07T3922, 5/06/2008, Tom Silverman, Esq.

Burbach: I've lost count, but greater than 1,100 times (p. 26, line 24).

Burbach: All criminal proceedings (p. 27, line 2)

P. v. James Wagner, Weld County Court 05T8993, 3/06/2007, Trenton

Mannina, Esq.

**Number of Years as a Chemist and Toxicologist that Ms. Burbach
has Analyzed Samples for Blood Alcohol Content**

Burbach: About 17 ½ (p. 4, line 5)

P. v. Richter, Teller County District Court, Sommer Spector, Esq.

Recent Tests Personally Performed by Ms. Burbach

Burbach: (Does she perform the analyses of blood, breath, urine samples as part of regular duties?) I do. Not so much anymore as a supervisor. I do vacation relief.

P. v. Stacy Smith, Denver County Court, 05M05129, 3/13/2006, Chris Cessna, Esq.

Silverman: You don't do bench testing anymore, do you?

Burbach: Yes I do.

Silverman: You don't do it much, do you?

Burbach: No, because I'm here in court a lot. (p. 79)

P. v. James Nelson, Mesa County Court, 07T3922, 5/06/2008, Tom Silverman, Esq.

8. **Please provide:** If Ms. Burbach will be testifying to the number of alcohol, drug and/or urine tests she personally performed or personally supervised, provide the type of workload report information found in Appendix A, page 25, in the 2007 / 2008 CDPHE Annual Report, for all years in which Ms. Burbach was employed at the Colorado Department of Health.

Such information should include, but not be limited to: the number of "Blood alcohol" tests performed by the Toxicology Department as a whole and performed or supervised by Ms. Burbach in particular; the number of "Blood drug analysis" tests performed by the Toxicology Department as a whole and performed or supervised by Ms. Burbach in particular; the number of "Blood drug confirmations" performed by the Toxicology Department as a whole and performed or supervised by Ms. Burbach in particular; the number of "Urine analysis" tests performed by the Toxicology Department as a whole and performed or supervised by Ms. Burbach in particular; the number of "Urine drug confirmations" performed by the Toxicology Department as a whole and performed or supervised by Ms. Burbach in particular; the total specimens received; the Total analysis (includes confirmations); the QA/QC; the court appearances of Ms. Burbach including the jurisdiction, case name, and case number. _____ **GRANTED**

Participation in clinical studies

9. **Please provide:** Discovery generally outlining the dates and locations of each study that Ms. Burbach will testify about and describe her participation. _____ **GRANTED**

10. **Please provide:** For any study which Ms. Burbach will testify about, whether she participated in said study or not, provide a copy of that study if one was published. _____ **GRANTED**

Burbach: I've been part of the studies that other forensic toxicologists in other states have completed. *P. v. Stacy Smith*, Denver County Court, 05M05129, 3/13/2006, Chris Cessna, Esq.

Claimed teaching positions

11. **Please provide:** Proof of Ms. Burbach's University-level teaching positions. _____ **GRANTED**

Canney: Have you ever taught a formally accredited university class in toxicology or pharmacy?

Burbach: No

P. v. Byron Linnzie, Douglas County Court, 04T5498, 6/15/2005, Randy Canney, Esq.

Burbach: I currently teach in the University of Colorado, Colorado Springs in the Master of forensic toxicology program. (p. 25, line 14) [7]

P. v. James Wagner, Weld County Court 05T8993, 3/06/2007, Trenton Mannina, Esq.

Published articles and abstracts

12. **Please provide:** Copies of all of Ms. Burbach's published articles and abstracts. _____ **GRANTED**

Burbach: I've published one article that was in the March 2006 issue of Journal of Forensic Sciences with regard to driving under the influence of inhalants. And I just presented one at the American Academy of Forensic Toxicologists in Cocaine impairment and under the influence of cocaine and that will be published in the summer in American Journal. (p. 25, line 20-25)

People v. James Wagner, 05T8993, 3/06/2007, Trenton Mannina, Esq.

Burbach: I have a couple abstracts. I have one that was presented at the Society of Forensic Toxicologists in Nashville, Tennessee, in 2005. It was published in the Journal of American Toxicology in March of 2006. That one was on micro extrapolations of inhalants and getting down to parts per million, parts per billion. And that correlates to both bioterrorism and it also correlates to driving under the influence. It detects your limits and sensitivity of that instrument. And the second one is on cocaine, the isotopic dilution of cocaine. And that relates to correlation of a linear line with cocaine and statistically how that affects the driving samples that we have (p. 8).

People v. James Nelson, 5/06/2008, Thomas Silverman, Esq.

Burbach: I presented a publication to the Society of Forensic Toxicologists in October, and it was just published in the March Journal of the Analytical Toxicology Journal. And in the March Journal. So it's being peer reviewed now (p. 6-7)

People v. Richter, Marc Milavitz Esq.

From: jfs.editor@att.net
To: mulliganlaw@msn.com
Subject: RE: Can't find article
Date: Mon, 4 Feb 2008 20:18:40 -0600

Ms. Mulligan,

Thank you for your email. In searching our records, we can confirm that we have published no manuscript with Burbach as either corresponding or first author. If you need further information please contact us.

Michael A. Peat, Ph.D.

Editor, Journal of Forensic Sciences

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Email: jfs.editor@att.net

From: Mulligan & Mulligan PLLC [<mailto:mulliganlaw@msn.com>]
Sent: Monday, February 04, 2008 5:40 PM
To: jfs.editor@att.net
Subject: Can't find article

I have been searching for an article in the March 2006 edition of your journal. According to Cynthia Burbach, who is a toxicologist with the Colorado Department of Public Health and Environment, she published an article that month regarding driving and inhalants. I have searched online through our university library system, but have not found any article that month on that topic, nor any article in any edition in which she is listed as an author. Do you have any suggestions for me, or could you please send me a copy of the article?

Thank you for your time,

Mary Claire Mulligan
Attorney at Law
Mulligan & Mulligan, PLLC
4410 Arapahoe Avenue, Suite 140

Boulder, Colorado 80303
303-939-8100
mulliganlaw@msn.com

[1] Crim. P. Rule 57(b) states “If no procedure is specifically prescribed by rule, the court may proceed in any lawful manner not inconsistent with these Rules of Criminal Procedure or with any directive of the Supreme Court regarding the conduct of formal judicial proceedings in the criminal courts, and shall look to the Rules of Civil Procedure and to the applicable law if no Rule of Criminal Procedure exists.”

[2] Colorado Civil Procedure Rule 26(a)(2)(B)(I) states, “With respect to a witness who is retained or specially employed to provide expert testimony, or whose duties as an employee of the party regularly involve giving expert testimony, be accompanied by a written report or summary. The report or summary shall contain a complete statement of all opinions to be expressed and the basis and reasons therefore; the data or other information considered by the witness in forming the opinions; any exhibits to be used as a summary of or support for the opinions; the qualifications of the witness, including a list of all publications authored by the witness within the preceding ten years; the compensation for the study and testimony; and a listing of any other cases in which the witness has testified as an expert at trial or by deposition within the preceding four years. In addition, if a report is issued by the expert it shall be provided.”

[3] *The American Prosecutor's Research Institute, Admissibility of Horizontal Gaze Nystagmus Evidence Targeting Hardcore Impaired Drivers* carries the following disclaimer:

This publication was produced thanks to a charitable contribution from the Anheuser-Busch Foundation in St. Louis, Missouri. Its support in assisting local prosecutors' fight against impaired driving is greatly acknowledged. **This information is presented for educational purposes only and is not to be considered legal advice.** Points of view or opinions expressed are those of the authors and do not necessarily represent the official position or policies of the Anheuser-Busch Foundation, the National District Attorneys Association, the American Prosecutors Research Institute or the U.S. Department of Transportation. [**Emphasis supplied**]

[4] One must keep in mind that during Ms. Burbach employment with the Department of Health: She was not in the toxicology lab for 5 years and her duties were constantly changing. She certainly was not testifying in court during the early years where she was washing out lab equipment and screening samples and she certainly wasn't analyzing large numbers of samples in the years where she would be supervising 5 to 8 employees, be reading hundred or thousands of pages of reports each day and testifying in court around the state. Such facts need to be factored into her claims of numbers of tests performed, numbers of trials where she testified, etc.

[5] Ms. Burbach testified under oath that "Per month we do probably anywhere from 600 to 800 blood alcohols, probably close to 80 blood drugs and about 200 to 300 urine." At 300 urine samples a month, it would take Ms. Burbach 3,333 years and 4 months to analyze 1 million urine samples.

[6] Through an informal query of the Colorado Criminal Defense Bar listserve, Mr. Pirosko was able to find three (3) possible criminal defense attorneys for whom Ms. Burbach has testified.

[7] Ms. Burbach is not listed as a professor with the University of Colorado, Colorado Springs.

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