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8 **UNITED STATES DISTRICT COURT**
9 **CENTRAL DISTRICT OF CALIFORNIA**

10 UNITED STATES OF AMERICA,)
11 Plaintiff)
12 v.)
13 JORGE SOLORIO-MENDOZA)
14 Defendant.)

Case No. CR 14-642-GW

SUPPLEMENT TO DEFENDANT’S
REQUEST FOR A HEARING
UNDER DAUBERT V. MERRELL
DOW; DECLARATION OF
WARREN JAMES WOODFORD,
PH.D.

Date: November 10, 2015
Time: 9:00 a.m.
Place: Courtroom of the Hon.
George Wu

17 Attached herewith is the declaration of Warren James Woodford, Ph.D.
18 (Woodford Declaration), a forensic chemist who has worked for more than 30
19 years in the field of odor detection. Dr. Woodford is an expert on chemistry,
20 olfaction and training animals to detect odors. Woodford Declaration at ¶ 1. In
21 his declaration, Dr. Woodford reviews the pertinent methods for training dogs to
22 assure reliability and finds that no established protocols or training techniques
23 were employed with respect to Charlie, the dog that allegedly alerted in this case.

24 While courts have long accepted the probative value of dog alerts, this has
25 been based on the assumption that “the canine detects only contraband.”
26 Woodford Declaration at ¶ 4 (quoting *United States v. Beale*, 674 F.2d 1327 (9th
27 Cir. 1982)). Contrary to this belief, Dr. Woodford has discovered and patented the
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1 chemical, methyl benzoate, to which dogs actually alert as the odor of cocaine.
2 Woodford Declaration at ¶ 2. This research has become so widely accepted that
3 police departments widely use methyl benzoate to train dogs for cocaine detection.
4 In the case of methamphetamine, the detected odor is actually that of
5 benzaldehyde. Benzaldehyde is contained in various common products, such as
6 shaving cream, soaps, and hair sprays. Woodford Declaration at ¶ 9.

7 Rather than training dogs on actual drugs, the standard for training drug
8 detection dogs has been through the use of chemicals, like methyl benzoate and
9 benzaldehyde that are also found in many non-contraband items. Woodford
10 Declaration at ¶ 2. There is no standardized dog, and dogs used for narcotics
11 detection have different capabilities and vastly different sensitivities to odor.
12 Some alert to air borne parts per million while others react to parts per trillion.
13 Woodford Declaration at ¶ 10.

14 The actual science behind dog alerts demonstrates that there is a great deal
15 to be considered in the context of a *Daubert* hearing. As the Court's tentative
16 ruling sets forth, the courts have generally focused on the reliability of a given dog
17 based almost exclusively on the lay testimony of the dog's handler and the dog's
18 training records. Such evidence says absolutely nothing about how a given dog
19 came to make an alert and whether the alert should be accepted as evidence. To be
20 admissible under *Daubert*, the Court must make a preliminary assessment of
21 whether the underlying reasoning or methodology for scientific evidence is valid
22 and can properly be applied to the facts at issue. *Daubert v. Merrell Dow*, 509
23 U.S. 579, 592-593 (1993). To resolve this inquiry, the party offering the
24 evidence must establish at least five factors:

- 25 1) The theory or technique can be (and has been) tested; here that would
26 mean that it must be clear that there is a sufficient scientific basis to find
27 that a dog alert indicates the presence of drugs;
- 28 2) The scientific hypotheses and conclusions must be based on peer

1 review and publication so that the court can assess the assumptions
2 underlying the proffered evidence and what the margin of error is;

3 3) The proffered evidence has a known or potential error rate; to be
4 meaningful the error rate must be tested in the field as well as in the
5 laboratory;

6 4) There must be standards for maintaining and controlling its operation
7 and such standards must have been clearly established, subject to a known
8 protocol and carefully adhered to in a given case; it must be shown that
9 dogs, like other detection devices, have been carefully calibrated to produce
10 meaningful results;

11 5) The theory or technique must have widespread acceptance in the
12 relevant scientific community; courts themselves are not a scientific
13 community, and assumptions made at an earlier time, without the benefit of
14 scientific evidence, such as that dogs detects only contraband, *e.g.*, *Beale*,
15 674 F.2d 1327, are subject to being revisited in light of further scientific
16 evidence.

17 *Daubert*, 509 U.S. at 593-595.

18 It thus must be shown that there is empirical support for the conclusions of
19 the party offering the evidence and that there is a lack of a scientific basis to refute
20 it. *United States v. \$30,670*, 403 F.3d 448, 460 (7th Cir. 2005). In upholding the
21 use of a drug-detecting canine in *Beale*, 674 F.2d at 1334, the Court assumed that
22 the use of dogs “is distinguishable from all other search activities in that there is
23 no risk that an innocent person's privacy will be intruded upon.” Not only does
24 Dr. Woodford’s well accepted research refute this, in that dogs are trained to alert
25 to odors found in many other non-contraband substances, the haphazard
26 techniques and lack of methodology exhibited in the present case provide no
27 reason to find that Charlie, the dog in this case, was trained to the standards that
28 even the *Beale* court anticipated. Because dog handlers report their dog’s error

1 rates, there is no way to determine the accuracy of these records. Woodford
2 Declaration at ¶13(a).

3 Moreover, training logs are only meaningful if they show more than a dog's
4 mere success rate when presented with a controlled substance. As Dr. Woodford
5 explains, scientific literature, including his own, identifies at least six key
6 elements to training narcotics dogs. The first is "proofing," assuring that dogs are
7 actually trained to alert to narcotics, as opposed to packaging or materials used to
8 construct a training aid. Woodford Declaration at ¶ 13(c)(1). The dog must not
9 confuse the target odor with an irrelevant one. So that dogs do not alert to stale
10 scents from narcotics long removed from a location, it is also essential that dog's
11 receive "extinction training" so that they are likely to only alert to a substance that
12 is actually present. Woodford Declaration at ¶ 13(c)(2).

13 Because of the odor to which dogs alert, benzaldehyde, in the case of
14 methamphetamine, records should show that the training also included, "odor
15 discrimination," teaching the dog to distinguish between methamphetamine and
16 the non-methamphetamine odor of benzaldehyde. Woodford Declaration at ¶
17 13(d)(1). A corollary to this is "odor generalization" where a dog starts to react to
18 items that have a similar odor to benzaldehyde. Training records should reflect
19 that a dog was tested for "odor generalization" and was redirected to the correct
20 odor. Woodford Declaration at ¶ 13(d)(2).

21 Further, training should reflect that efforts were made to eliminate or
22 minimize "cuing" and "handlers' beliefs." "Cuing" occurs by way of subtle signs
23 dog picks up from its handler signaling it to alert." Woodford Declaration at ¶
24 13(e)(1). Dog's have also been shown to be sensitive to their "handlers' beliefs"
25 that drugs may be present. Training should show that efforts were taken to make
26 certain that a dog's alert was made independently. Woodford Declaration at ¶
27 13(e)(2).

28 Upon reviewing 142 pages of Charlie's training log sheets, Dr. Woodford

1 found little or no evidence that these training protocols had been adhered to,
2 leading him to conclude “I find nothing that would give me confidence in
3 ‘Charlie’s’ alert in this case.” Woodford Declaration at ¶ 16.

4 In most of the records that Dr. Woodford reviewed, the proofing column
5 was blank. In fact, Dr. Woodford found only three examples of trainings in which
6 possibly relevant materials were used to proof Charlie. Doctor Woodford states,
7 “Three instances of proofing training with unidentified materials are insufficient.”
8 Woodford Declaration at ¶ 18. Dr. Woodford found that where other items were
9 listed, they were “not at all helpful to proof a dog for training purposes.”
10 Woodford Declaration at ¶ 19.

11 With respect to other training criteria, such as for “odor generalization” and
12 “odor discrimination,” the records were devoid of evidence that such training had
13 taken place. The records also fail to disclose whether ‘Queuing’ or ‘Handler
14 Belief contributed to the drug finds attributed to ‘Charlie.’” Woodford Declaration
15 at ¶ 20.

16 In short, Dr. Woodford found that “‘Charlie’s’ training does not comply with
17 any scientific peer literature on the nature of drug detection by dogs.” As Dr.
18 Woodford explains, “I have found no evidence that ‘Charlie’ was trained to these
19 standards or that appropriate methods were used to allow any confidence in his
20 purported drug detection.” Woodford Declaration at ¶ 30.

21 Dr. Woodford also emphasizes the importance of maintaining field records.
22 While the Court quotes Detective Price as stating that he and Charlie have
23 conducted over 775 searches, the results of those searches are unknown other than
24 that Charlie’s alerts were used as probable cause for six search warrants. From
25 this information, there is no way to know what Charlie’s real-life error rate has
26 been or whether there are complete and accurate records of every time Charlie has
27 been deployed.

28 Relying on *Florida v. Harris*, 133 S.Ct. 1050, 1057 (2013), this Court

1 explained that defendant may challenge evidence of a dog's reliability either by
2 cross-examining the testifying officer or by introducing his own fact or expert
3 witness. The defendant has clearly presented an expert, Dr. Woodford, who
4 meets the criteria of being an expert capable of explaining whether Charlie's
5 training records establish that he meets the scientific standard for reliability.
6 Based upon Dr. Woodford's conclusion, there appears to be no evidence that
7 Charlie's training met any of these criteria.

8 **CONCLUSION**

9 For the foregoing reasons, defendant requests that this court hold a hearing
10 and find that Charlie's training is not based on underlying scientific reasoning and
11 methodology that would make it possible to consider his alleged alert to
12 defendant's car to be valid and reliable. *Daubert*, 509 U.S. at 592-593.

13 DATED: October 26, 2015

Respectfully submitted,

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15 /s/Victor Sherman

16 By:

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Attorney for Defendant
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