

Equine Medication Monitoring Program (EMMP) Advisory Committee
September 27, 2018 Meeting Minutes

Item No.

(1) Call to Order

- a. The meeting was called to order on Thursday, September 27, 2018 at 10:07am by Vice Chairperson Dr. Mike Tomlinson.
- b. Ms. Sandy Arledge joined the meeting as Chairperson during roll call.

(2) Roll Call

Present:

Ms. Sandy Arledge, Chair, California Farm Bureau Federation
Ms. Jody Cutler, American Driving Society
Ms. Karen Dagnan, Equestrian Trails, Inc.
Mr. Robert Gage, California State Horsemen's Association
Ms. Nancy Harvey standing in for Mr. William Hughes, Arabian Horse Association
Ms. Jo Ann Jackson, California Draft Horse & Mule Association
Dr. Michele LaMantia, Pinto Horse Association of America, Inc.
Dr. Jeanette Mero, American Endurance Ride Conference
Ms. Christine Oswald, Pacific Coast Cutting Horse Association
Dr. Russell Peterson, American Association of Equine Practitioners
Mr. William Pettis, American Morgan Horse Association
Ms. Lori Pfaff, Pacific Coast Quarter Horse Association
Dr. Chris Smith, Pacific Coast Horse Show Association
Ms. Rae Stambuk, California Reining Horse Association
Dr. Mike Tomlinson, U.S. Equestrian Federation
Dr. Stephen Schumacher, U.S. Equestrian Federation (non-voting member)

Absent:

Ms. Tania Bennett, Equine Trail Sports
Dr. Marta Granstedt, California Veterinary Medical Association
Ms. Maureen Van Tuyl, California Dressage Society
Ms. Julia Tarnawski, National Plantation Walking Horse Association

CDFA Present:

Dr. Katie Flynn, Staff Veterinarian Equine Programs
Mr. Lee Harrison, Agricultural Program Supervisor, EMMP
Ms. Katie Hatch, Research Scientist, EMMP
Ms. Nancy Ragen, Management Services Technician, EMMP
Dr. Kent Fowler, Chief, Animal Health Branch
Ms. Michele Dias, General Counsel, Executive Office
Ms. Kara Breevaart, Staff Counsel, Executive Office
Mr. Victor Velez, Program Manager, Animal Health and Food Safety Services Division

Others in Attendance:

Dr. Carrie Finno, Director, UC Davis Center for Equine Health

Dr. Heather Knych, Professor, UC Davis California Animal Health and Food Safety Laboratory

(3) Review of Minutes

Minutes of the February 20-21, 2018 meeting were reviewed.

MOTION #1: Dr. Mike Tomlinson motioned to approve the minutes and Ms. Nancy Harvey seconded the motion. Motion was unanimously approved.

(4) UC Davis Center for Equine Health Update

Dr. Carrie Finno, the director for the UC Davis Center for Equine Health (CEH), updated the committee on what services CEH offers along with the research, teaching and programs occurring at CEH. Dr. Finno discussed the use of CEH horses for the education of undergraduate, graduate and veterinary students along with the residents at the veterinary hospital. CEH horses are also used in research including the new equine PET scan and many horse conditions and diseases. Additionally, her presentation highlighted the grant program at CEH which funds dozens of research grants in equine veterinary medicine. Other services CEH offers includes lay-up services, theriogenology services and import quarantine services for Contagious Equine Metritis (CEM). Lastly, Dr. Finno described recent upgrades made to the CEM quarantine facilities which included updated stalls, turnouts, arena and round-pen.

(5) Immune Mediated Myositis in Quarter Horses

Dr. Carrie Finno spoke about her research, in collaboration with Dr. Stephanie Valberg at Michigan State University, which discovered the genetic mutation responsible for Immune Mediated Myositis (IMM) in Quarter Horses. IMM mostly affects horses under the age of five (5) or over the age of nineteen (19) and occurs approximately forty percent (40%) of the time in horses with concurrent infections of *Corynebacterium pseudotuberculosis* (aka "Pigeon fever") or *Streptococcus equi* (aka "Strangles"). Clinical signs include malaise, decreased appetite and acute onset topline atrophy. The drastic changes can occur within two (2) to three (3) weeks. With early diagnosis and appropriate treatment for IMM, there is a good prognosis with most horses returning to previous muscle mass. However, some horses may have persistently lower muscle mass. IMM is a recurring disease; horses that previously were affected may have a reoccurrence and experience other episodes.

As there were issues with the previous diagnosis methods for IMM, namely biopsies to identify lymphocytes, Dr. Finno and Dr. Valberg's study focused on creating a genetic test for horses affected by IMM. For the study performed by

Dr. Finno and Dr. Valberg, they evaluated thirty-six (36) affected Quarter Horses and fifty-four (54) control Quarter Horses which had the same environmental risk factors as the affected horses. After performing whole-genome sequencing, they determined that the mutation for IMM was on Chromosome 11 and that the E321G variant in MYH1 was highly associated with the IMM phenotype of muscle atrophy in Quarter Horse related breeds. The study also discovered that the MYH1 mutation was also associated with horses experiencing non-exertional rhabdomyolysis (aka "Tying-up"). Either a heterozygous or homozygous copy of the MYH1 mutation was found in 90% of non-exertional rhabdomyolysis cases with atrophy and in 60% of non-exertional rhabdomyolysis cases without atrophy.

The prevalence of this mutation in Quarter Horse related breeds was found most commonly in reining horses, then working cow horses then halter horses. It was not found very commonly in cutting or western pleasure horses and was not observed at all in barrel racing horses or racing Quarter Horses tested. Testing for IMM and non-exertional rhabdomyolysis is now available at the UC Davis Veterinary Genetics Laboratory.

<https://www.vgl.ucdavis.edu/services/horse/IMM.php>

(6) Research Update

Dr. Heather Knych, Professor at the UC Davis K.L. Maddy Equine Analytical Chemistry Laboratory, presented an update on EMMP funded research projects. The first study presented was the pharmacokinetics and pharmacodynamics of flunitrazepam (Rohypnol), which is a prohibited substance anecdotally reported to be used as a performance enhancing medication in the competition horse. Post administration parameters such as observed behavior, heart rate, step count and chin to ground distance measurements were recorded for each horse. Serial sampling occurred to quantitate the concentration of the drug in both urine and serum. The results showed that rohypnol is detectable in horses for about 24-36 hours while its metabolites are detectable for over 48 hours. No adverse behavioral effects were noted during the study.

Dr. Knych provided an update on the ongoing hydroxyzine and cetirizine administration research. Hydroxyzine is an antihistamine which has also been reported to have sedative effects and it metabolizes rapidly into cetirizine. The purpose of the study is to determine the pharmacokinetics and pharmacodynamics of hydroxyzine and cetirizine. The administration study has been performed and serial samples collected, and data analysis is underway.

The final research project update provided by Dr. Knych was the study on the effects of betamethasone on synovial fluid. Results showed that after intra-articular injections of betamethasone, anti-inflammatory gene expression was increased, and pro-inflammatory gene expression was decreased. There was also a slight increase in collagen gene expression but minimal effects on structural gene expression.

Lastly, Dr. Knych provided an overview of for the recently approved EMMP funded proposal for research on CBD oil and hemp oil use in horses. Additionally, she provided insight on a new proposed study by the California Horse Racing Board (CHRB) on dexamethasone's effects on hydrocortisone and eicosanoid concentrations. CHRB proposed this as a joint study with EMMP as the findings would be benefit both programs.

(7) United States Equestrian Federation (USEF) Update

Dr. Stephen Schumacher, the Chief Administrator of USEF's Equine Drugs and Medications Program, gave an update on USEF's policies. Recently, USEF enacted a rule requiring event managers to have an isolation plan ready in the case of an infectious disease outbreak at their event. The goal of these plans is to try and minimize the spread of disease to other horses at the equine event. There has been a good buy-in from event managers and over 2,000 plans have been submitted and are in the process of being reviewed. USEF recently produced a video series on how to set up an isolation plan and proper biosecurity.

Dr. Schumacher also discussed USEF's stance on Medroxyprogesterone acetate (MPA). USEF has been screening for MPA for a few years and approximately a year ago, USEF started requiring competitors to fill out an MPA disclosure form. This form allows owners and trainers to keep their horse in competition while still being on MPA. At the end of the year, USEF will be reviewing these disclosures to determine if they will classify MPA as a prohibited drug, similar to the current Federation Equestre Internationale (FEI) classification. FEI currently lists MPA as a controlled prohibited drug, but they are considering making it a banned prohibited drug due to lack of a medically necessary use.

Another drug that was discussed by Dr. Schumacher and the committee was Pergolide, the drug used to treat Cushing's in horses. USEF still lists Pergolide as a prohibited substance but they now allow Pergolide to be given to horses in competition if the owner or trainer fills out a Pergolide Use Exemption form online. This form allows the horse's veterinarian to go in and submit evidence demonstrating medical necessity of the drug. This allows to the horse to continue Pergolide treatment during competition. FEI still does not allow Pergolide to be used at all in competition horses.

Dr. Schumacher provided insight on the recently updated FEI detection time list for FEI that was recently updated. This list provides recommended dosing information for therapeutic drugs, so people can better comply with the drug rules. The list now contains detection time information on twenty-one (21) drugs and can be found at

<https://inside.fei.org/system/files/FEI%20Detection%20Times%202018.pdf>.

(8) Animal Health Updates

Ms. Katie Hatch, Equine Program Research Scientist, presented California's animal health updates including Equine herpesvirus-1 (EHV-1), West Nile Virus (WNV), Equine Infectious Anemia (EIA) and Virulent Newcastle Disease (VND).

To date in 2018, there have been two EHV-1 incidents in 2018. In April, the wild-type non-neuropathogenic strain of EHV-1 was confirmed at an Orange county premise. A total of ten (10) total confirmed cases were identified including, seven (7) febrile only cases and three (3) neurologic cases. A total of fifty-six (56) exposed horses were quarantined on a facility with approximately 450 horses. The quarantine lasted thirty-two (32) days and all horses recovered. A second EHV-1 incident occurred in June at a small private facility in San Mateo county. There were seven (7) horses total on the premise and two (2) of those horses displaying neurologic signs were confirmed positive for the wild-type non-neuropathogenic strain of EHV-1. Both horses were shipped offsite to a veterinary hospital and one (1) horse was euthanized due to severity of neurologic symptoms. The other horse recovered and returned to the home premise after a fourteen (14) day quarantine.

Ms. Hatch also discussed the 2018 equine WNV cases. To date, a total of eight (8) cases have been confirmed. The first case was confirmed in mid-August which was later in the year than typically observed. Five (5) of the affected horses were not vaccinated against WNV, two (2) were vaccinated and one (1) had an unknown vaccine history. Four (4) of the WNV positive horses were euthanized and the other four (4) are alive and recovering. The age range of the infected horses so far have been four (4) months to seventeen (17) years.

Ms. Hatch informed the committee about an EIA case in Colorado. One (1) horse was confirmed positive from a sale in Colorado. The trace-outs from this sale prompted over 250 horses to be quarantined in Colorado and sixty-four (64) exposed horses to be quarantined in other states. There were three (3) horses traced to buyers in California, but all of these horses were never shipped to California.

An update was provided to the committee on the current outbreak of VND which is a highly-contagious disease in poultry and other birds. VND does not affect food safety of poultry products, so it is safe for human consumption. Clinical signs for VND in avians include sudden death, sneezing, nasal discharge, diarrhea, neurologic symptoms and swelling of the eyes and neck. The only way to prevent the disease from spreading is through proper biosecurity. For this incident so far, over 100,000 homes have been visited in the control area and approximately 2,000 homes are under quarantine. The EMMP has been affected as the branch's main focus has been on VND since the incident began in May 2018. Ms. Hatch has been deployed for four (4) weeks so far at this incident and was been unable to do work for EMMP during that time.

(9) Legislative and Legal Updates

Dr. Katie Flynn discussed the various EMMP updates to the California Food and Agriculture Code (FAC) and California Code of Regulations (CCR). The FAC was recently modified to update the definition of a permissible substance and strengthen the quarantine violation definitions. These changes were approved and signed by the Governor's office in September 2018. The first CCR regulation change for EMMP was approved in June 2018 by the Office of Administrative Law. This change clarified the violation and penalty matrix language for serious, moderate or minor violations. A second CCR regulation change packet is currently being drafted to increase the responsibilities of event managers, clarify exhibitor/designated party responsibilities, provide authority for the department program veterinarian to select horses for sampling, update language of permissible substances, add a new violation type for people failing to comply with drug declaration rules, and add a failure to cooperate violation type for event managers and owners/trainers. The committee discussed the pros and cons of when to enact these changes as it could be confusing to some people to make these changes effective mid show season. Once the regulations are posted for comment though, EMMP plans on notifying the event managers of the upcoming changes.

MOTION #2: Ms. Rae Stambuk motioned to have the new CCR regulations become effective in January 2020. Ms. Lori Pfaff seconded the motion. Motion was unanimously approved.

Ms. Michele Dias, general counsel for the CDFA Executive Office, introduced Kara Breevaart who is the new lawyer for CDFA, assigned to the EMMP. Ms. Dias provided an update on the quarantine violation from the Los Angeles Equestrian Center's EHV-1 incident in November 2016. Specifically, a mandatory settlement conference scheduled in October 2018 and an administrative hearing (alongside the Veterinary Medical Board) in November 2018. EMMP staff and advisory committee members discussed how much they appreciate the legal department's assistance with the violation cases, regulation changes and various other program needs.

(10) Program Updates

Program Financial Summary

Ms. Katie Hatch discussed the revenue and expenditures for the 2017-2018 fiscal year. The revenue was \$541,762.01 which is fairly consistent over the past three (3) fiscal years. The highest revenue by event type continues to be hunter/jumper events followed by dressage events and open (multi-breed/multi-discipline) events (note: event type depends on how event manager registers the event). There has been some recent loss of revenue due to some large Western events being moved to other states. However, there has also been recent

additions to revenue due to large dressage and hunter/jumper show series being scheduled in southern California. There are currently twenty-eight (28) unpaid events which is consistent with most fiscal years. Mr. Lee Harrison will be following up with audits for event managers with repeated failures to pay. The total expenditures for this fiscal year were \$823,078.92 which led to a total yearly deficit of \$281,316.91.

Dr. Katie Flynn discussed the proposed spending plan for the 2019-2020 fiscal year. Dr. Flynn noted personal services would decrease next fiscal year, as half of her salary and half of Ms. Hatch's salary will be covered by the Animal Health Branch's budget. Also discussed was that the laboratory testing fees will be increased again in 2019-2020 fiscal year due to the previously agreed upon contract with the laboratory. The proposed spending plan totaled \$1,007,804.00.

MOTION #3: Ms. Lori Pfaff motioned to approve the proposed spending plan for FY 2019-2020. Dr. Mike Tomlinson seconded the motion. Motion was unanimously approved.

MOTION #4: Dr. Mike Tomlinson motioned to approve funds to support out-of-state travel expenditures for Dr. Katie Flynn to attend the American Horse Council, United States Animal Health Association, American Quarter Horse Association, United States Equestrian Federation, American Association of Equine Practitioners and any other trips deemed necessary for the Equine Staff Veterinarian. Mr. Robert Gage seconded the motion. Motion was unanimously approved.

IT Update

Ms. Hatch and Dr. Flynn discussed the costs of moving forward with the IT project to develop and enhance the computer horse data capture system and reports for EMMP. The previous request for IT was to create a form for data entry to capture individual record of sample collections into the EMMP data system (project section 1) along with updating some reports in that system (project section 2). EMMP decided to change the scope of section 2 by adding new desired reports which were subsequently identified to address program needs. EMMP also added to the proposed project plan a request to upload of previous years' data into the system (project section 3) and a request to clean up the event grounds data in the system (project section 4). The total estimated cost provided by the IT department for all four (4) sections of the project was approximately \$87,000. The committee expressed their concerns about the IT department's ability to adhere to the projected cost and timeline for the project. Also questioned was the EMMP project priority for the IT department. Additional concerns were voiced related to the potential impact the change of Administration in November will have on future pricing or priorities.

MOTION #5: Dr. Mike Tomlinson motioned to authorize the program to move forward with IT project sections 1-4 as presented. Ms. Nancy Harvey seconded the motion.

Yes: Ms. Sandy Arledge, Ms. Karen Dagnan, Ms. Nancy Harvey, Ms. Jo Ann Jackson, Dr. Michele LaMantia, Dr. Jeanette Mero, Ms. Christine Oswald, Dr. Russell Peterson, Mr. William Pettis, Ms. Lori Pfaff, Dr. Chris Smith, Ms. Rae Stambuk, Dr. Mike Tomlinson

No: Ms. Jody Cutler, Mr. Robert Gage

Abstain: None

EMMP Tester Shortage

Per EMMP Advisory Committee request, Dr. Katie Flynn researched options for addressing the continued shortage of EMMP testers due to resignations and difficulty hiring new testers. Over the last few years, EMMP has been managing tester shortages by having current testers travel farther and work longer days at assigned events. As some testers stated low salary as reason for resignation, Dr. Flynn investigated other salary options with the Human Resources Department. As a state entity, EMMP cannot provide hiring incentives or recruitment bonuses, so the Human Resources Department proposed the option to convert the testers' positions from Agricultural Technicians to permanent intermittent Livestock Inspectors. Some of the pros of converting to Livestock Inspector positions would be a higher salary for testers, which would possibly increase tester retention, and state service time for the testers. However, this would be a significant cost increase for the program due to the higher salary per field employee and the need to hire an additional Agricultural Program Supervisor to assist with supervision and management of additional permanent employees. Other challenges would include the requirement for testers to pass the Livestock Inspector exam, the longer hiring process to fill the position which must be done off the state list, and there would be increased difficulty in reprimanding and letting go of employees. The advisory committee thanked Dr. Flynn for looking into this as an option but decided that it wasn't feasible for EMMP to change field personnel classification at this time. Dr. Flynn requested committee members assist in advertising the positions to try to increase the number of testers.

EMMP Testing Fees

The committee previously voted to increase fees from \$5 to \$8. However, the department rejected the proposed regulation change until the reserve was at a one-year operating expense level of approximately \$900,000. The EMMP financial reserve currently is at approximately \$1.1 million. The program anticipates a deficit of \$245,000 with resultant reserve of approximately \$865,000 for fiscal year 2018-2019. As this is below the projected yearly budget of \$900,000, a fee increase regulation packaged will be initiated. However, Dr. Flynn presented to the committee a proposal for a two-tier increase in the testing fees where the fee would increase to \$8 in 2020 and then increase to \$10 in 2023. The committee discussed other group testing fees. For reference, the USEF drugs and medication group testing fee is currently \$15. After discussing

all options, the committee agreed to the currently voted on increase to \$8 in 2020. However, they requested a yearly re-evaluation of the revenues and expenditures to determine program needs.

Program Data Summary

Ms. Katie Hatch presented the following program summary data for the 2017-2018 fiscal year:

- A total of 1,251 events were held (approximately the same as previous two fiscal years)
- 369 events were tested (29.5%) (still trying to reach targeted percentage of 40%)
- The highest number of events by event type were hunter/jumper events then dressage and open (multi-breed/multi-discipline) events. However, these numbers are based on what event type the event manager chose at the time of registering the event.
- A total of 676 urine samples and 1,135 blood samples were collected from selected horses at EMMP registered events. This is an all-time high number of samples due to increased number of EMMP approved veterinarians available for testing as well as high percentage of urine collection by testers.

Data was collected on equine demographics for almost 4,000 horses shown in California. Analysis performed showed the average age, gender demographics and top breed(s) for twelve (12) different event types that EMMP regulates. The gender demographics gathered showed that, of the horses with known gender information recorded, 68.2% of the competition horses were geldings/stallions and 31.8% were mares. This data aligns very closely with the 2017 EMMP urine collection/selection percentages which indicated 68.8% geldings/stallions and 31.2% mares. This data supports a lack of gender selection bias by EMMP field personnel selecting horses for urine collection.

(11) Committee New Business Discussion

The committee requested discussion of the extended certificate of veterinary inspection (aka equine passport) and the publishing of EMMP data to the website be added to the agenda for the next meeting.

(12) Closing Comments

Chairperson Ms. Sandy Arledge adjourned the meeting at 3:01pm.