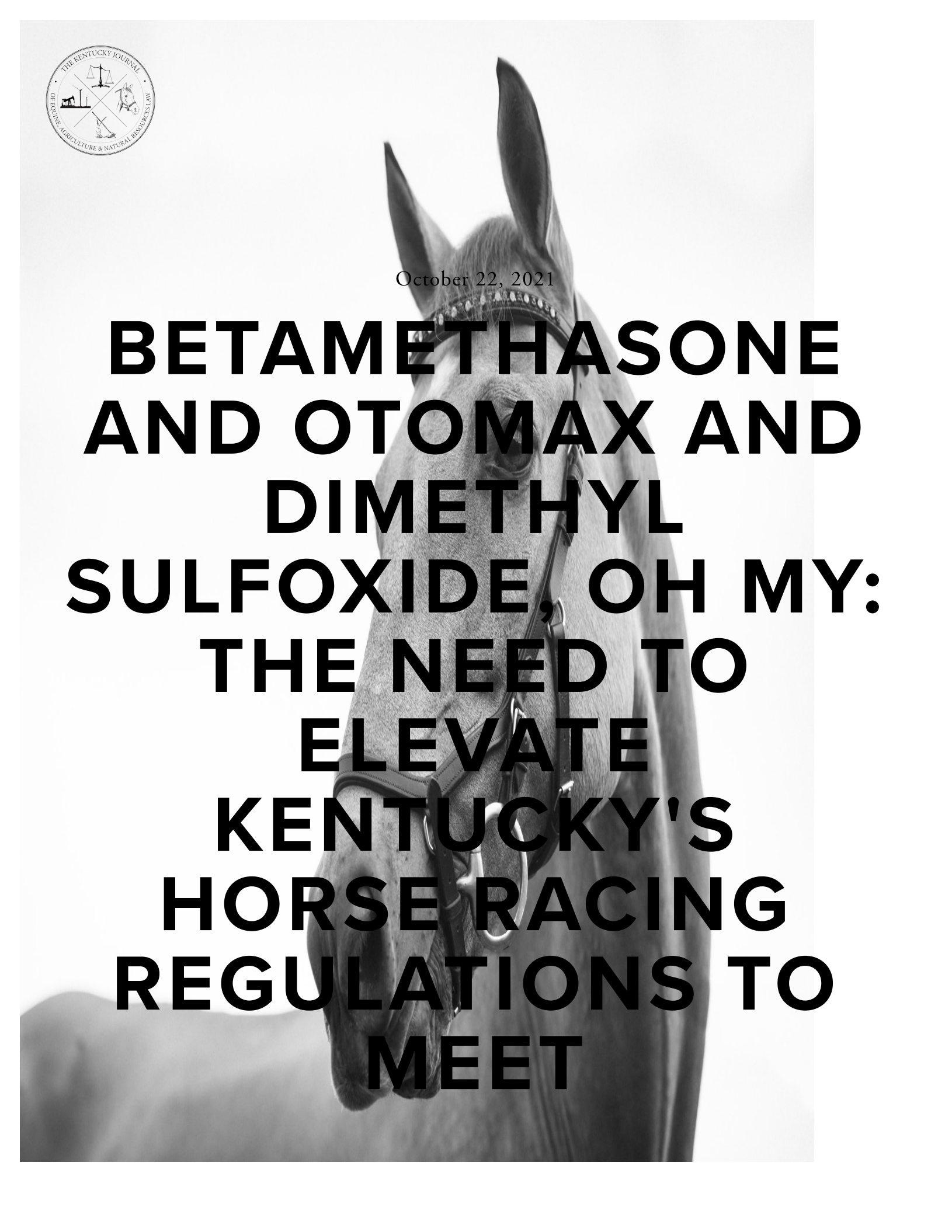




October 22, 2021



**BETAMETHASONE
AND OTOMAX AND
DIMETHYL
SULFOXIDE, OH MY:
THE NEED TO
ELEVATE
KENTUCKY'S
HORSE RACING
REGULATIONS TO
MEET**

INTERNATIONAL STANDARDS

Equine (</full-blog/category/Equine>), Impact! (</full-blog/category/Impact%21>)

BY: ROBERT SCOTT ABNEY

Although no horse-racing fan would be surprised to see a photo finish, far fewer would expect the outcome of a race to rest on twenty-one picograms.[i] However, that is exactly what happened at the 147th running of the Kentucky Derby.[ii] Eight days after Medina Spirit's controversial win, the horse's trainer, Bob Baffert, announced that Medina Spirit had tested positive for twenty-one picograms of betamethasone,[iii] recognized by the Kentucky Horse Racing Commission ("KHRC") as a Class C substance.[iv] After the primary sample revealed twenty-one picograms of betamethasone per milliliter of blood, a "split sample"[v] confirmed twenty-five picograms of the substance.[vi]

Betamethasone, and other corticosteroids, such as hydrocortisone and prednisone, suppress inflammation.[vii] This means that corticosteroids can be used to reduce inflammatory conditions such as rashes, inflammatory bowel disease, asthma, or arthritis.[viii] Meaning corticosteroids are functionally different from anabolic steroids, which are sometimes used to treat diseases that cause muscle loss and sometimes misused by athletes and bodybuilders attempting to boost performance or appearance.[ix] This begs the question, where did the twenty-five picograms of betamethasone come from? Baffert explained that Medina Spirit had been treated for dermatitis[x] with Otomax,

an ointment which contains: gentamicin, an antibiotic; clotrimazole, an antifungal; and of course, betamethasone. Merck, the company that produces the ointment explained that Otomax is an antifungal ointment used to treat ear infections in animals such as dogs, cats, and horses.[xi]



Although the KHRC provides withdrawal guidelines to ensure regulation compliance, some horse owners and trainers, unsurprisingly including Baffert, claim that guidelines are vague and violation thresholds are too low.[xii] For example, although the KHRC provides a recommended stand down period of fourteen days for *intra-articular*[xiii] *injections*, including Betamethasone-Intra-Articular (9mg), KHRC also notes (1) that “withdrawal time should be increased for use of betamethasone products with a ratio of >1:1 betamethasone acetate to betamethasone sodium phosphate,” and (2) that “*intramuscular*[xiv] *administration* is associated with substantially longer withdrawal times.”[xv] Further, the KHRC provides limited guidance with regard to betamethasone contained in ointments, stating only that “*topical applications* such as... ointments which may contain antibiotics or dimethyl sulfoxide (“DMSO”), but do not contain steroids, anesthetics, or other prohibited substances, may be administered or applied up to the scheduled paddock time of the race.”[xvi] This subjective guesswork is further complicated by low violation thresholds. In fact, the presence of Non-steroidal Anti-inflammatory drugs (“NSAIDs”), such as phenylbutazone,

flunixin, or ketoprofen, respectively found at three-tenths (0.3) microgram/mL, five (5) nanograms/mL, or two (2) nanograms/mL, constitute a violation.[xvii] This means that horse owners and trainers are left with a substantial amount of guesswork when attempting to accurately gauge withdrawal times for substances which the KHRC has failed to provide adequate guidance, while simultaneously imposing strict violation thresholds.

Further vague withdrawal guidance imposes even more doubt on KHRC regulations. For example, Withdrawal Guideline (2) states that topical applications which may contain DMSO may be administered up to the scheduled paddock time of the race, while Withdrawal Guideline (5)(A) states that horse trainers and owners should adhere to a forty-eight hour withdrawal period in administering DMSO, either orally or topically.[xviii] Additionally, DMSO moves through membranes and substitutes for water so that it pulls substances through cells that ordinarily would not move through them.[xix] Meaning, not only can DMSO move through cells, but it can also move other substances through the skin. Such a reaction could result in an increase of medication in the bloodstream, which could ultimately result in disqualification.[xx] Meaning, horse owners and trainers must choose between a guideline that recommends discontinuing DMSO forty-eight hours prior to the scheduled post time of the race or one that permits the use of topical substances, which may contain DMSO, up to the scheduled paddock time of the race.

Luckily, there are improvements that can be made to existing withdrawal guidance and regulations, many of which have been utilized by the Fédération Equestre Internationale (“FEI”). The FEI is the international governing body for eight equestrian disciplines, including jumping, dressage, vaulting, and endurance.[xxi] The FEI Equine Anti-Doping and Controlled Medication Regulations, FEI veterinary regulations, and FEI prohibited substance list provide manageable guidelines. The list is composed of two sections, banned substances[xxii] and controlled medication[xxiii] substances.

Controlled medicines must be administered at the direction of an official FEI veterinarian and must be logged in an official record.[xxiv] Requiring an official record for horse races would enable racing officials and stewards to ascertain when medications were administered and whether the horse owner and trainer complied with KHRC withdrawal guidelines. Additionally, the FEI testing program is standardized, meaning the procedure standards and paperwork are the same. Further, samples are analyzed in FEI approved labs.[xxv] Ultimately, testing standardization and lab approval ensure the accuracy and integrity of test results. Lastly, if FEI regulations are violated, intentionally or unintentionally, the athlete and support team may be held liable. Currently, Kentucky regulation imposes monetary penalties only on the horse owner and trainer,[xxvi] under a regulation modeled after FEI regulation, all members of the support team would be subject to penalty, further disincentivizing the use of banned substances.

Currently, regulations governing the “most exciting two minutes in sports,” have left horse owners and trainers grasping at straws to make amends of vague and conflicting regulations. In order to rectify these inconsistencies, the KHRC should consider adopting procedures and regulations that more closely align with FEI guidelines. In doing so, the KHRC will ensure that the integrity and health of Kentucky tourism will prosper.

[i] Paulick Report Staff, *Why Regulators Test For Picograms of Betamethasone*, Paulick Report (May 10, 2021), <https://www.paulickreport.com/horse-care-category/report-why-regulators-test-for-picograms-of-betamethasone/> [https://perma.cc/FP3L-P545].

[ii] Jason Frakes, *Kentucky Derby winner Medina Spirit faces disqualification after second failed drug test*, USA Today (June 2, 2021, 11:03 AM), <https://www.usatoday.com/story/sports/horses/triple/derby/2021/06/02/medina-spirit-kentucky-derby-drug-test-confirmed-positive/7505962002/> [https://perma.cc/CV6L-YXE9].

[iii] *Id.*

[iv] *Uniform Drug, Medication, and Substance Classification Schedule*, Ky. Horse Racing Comm’n (Sept. 12, 2021) <https://khrc.ky.gov/Documents/Chapter%208-020-1-Drug%20and%20Medication%20Classification%20Schedule%20-%20Final.pdf> [https://perma.cc/8D6J-BRXD].

[v] 810 KAR 8:010 § 1(7).

[vi] Frakes, *supra* note 2.

[vii] Mayo Clinic Staff, *Prednisone and other corticosteroids*, Mayo Clinic (Dec. 16, 2020), <https://www.mayoclinic.org/steroids/art-20045692> [https://perma.cc/4ZT4-TBR6].

[viii] *Id.*

[ix] *Corticosteroids*, Cleveland Clinic (Jan. 20, 2020), <https://my.clevelandclinic.org/health/drugs/4812-corticosteroids> [https://perma.cc/WN5L-FBKQ].

[x] Mayo Clinic Staff, *supra* note 7.

[xi] Darcy Costello & Mary Ramsey, *What is betamethasone? What to know about drug in Kentucky Derby winner Medina Spirit*, Louisville Courier Journal (May 9, 2021, 11:44 AM) <https://www.courier-journal.com/story/sports/horses/kentucky-derby/2021/05/09/betamethasone-what-know-drug-derby-winner-medina-spirit/5013447001/> [<https://perma.cc/3VVT-5F6F>].

[xii] See e.g., Travis Ragsdale, *Baffert files lawsuit saying Medina Spirit's positive test didn't violate state racing rules*, WDRB (June 8, 2021) https://www.wdrb.com/in-depth/baffert-files-lawsuit-saying-medina-spirits-positive-test-didnt-violate-state-racing-rules/article_cac75eae-c86e-11eb-a18f-6f3cf3e930f4.html. See also, *Gamine fails Oaks drug test; Baffert's team discredits report*, Horse Racing Nation (Oct. 4, 2021, 4:00 PM) https://www.horseracingnation.com/news/KHRC_Class_C_medication_found_in_Oaks_Day_sample_12 [<https://perma.cc/H2Y9-VNWX>].

[xiii] An intra-articular injection is a shot that is administered directly into a joint.

[xiv] An intramuscular injection refers to the administration of medication deep into the muscles.

[xv] Ky. Horse Racing Comm'n (Sept. 12, 2021) <https://khrc.ky.gov/Documents/Chapter%208-020-1-Drug%20and%20Medication%20Classification%20Schedule%20-%20Final.pdf> (<https://khrc.ky.gov/Documents/Chapter%208-020-1-Drug%20and%20Medication%20Classification%20Schedule%20-%20Final.pdf>) [<https://perma.cc/Z2SR-DQN9>].

[xvi] *Id.*

[xvii] 810 KAR 8:010 § 8(2).

[xviii] Ky. Horse Racing Comm'n, *supra* note 15.

[xix] Heather Thomas, *Harnessing the Power of DMSO*, EQUUS (Feb. 8, 2012) <https://equusmagazine.com/lameness/dms0-for-horses-8468> (<https://equusmagazine.com/lameness/dms0-for-horses-84688>) [<https://perma.cc/HC7V-F8UL>].

[xx] Christine Barakat, *7 things you may not have known about DMSO use in horses*, EQUUS (Jan. 17, 2019) <https://equusmagazine.com/diseases/seven-things-about-dms0> [<https://perma.cc/K64S-HML4>].

[xxi] *International Equestrian Federation*, International Olympic Committee (Mar. 17, 2020), <https://www.fei.org/?&content=2> [<https://perma.cc/EJ7B-Z2L2>].

[xxii] In the FEI's view, banned substances should never be used on a sport horse.

[xxiii] In the FEI's view, controlled medicines are those substances that are commonly used in equine medicine but are prohibited in competition, as they could give athletes an unfair advantage.

[xxiv] *Welcome to FEI Clean Sport*, Federal equestrian Int'l (Sept. 15, 2021), <https://inside.fei.org/fei/cleansport> [<https://perma.cc/UQ84-W4P3>].

[xxv] *Id.*

[xxvi] 810 KAR 8:030 § 4.

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