

**Stud Book and Registration Committee
2022 Convention
Las Vegas, Nevada**

Mister President, the stud book and registration committee makes the following recommendations:

1. With respect to agenda item 14, the committee approves the recommendation to amend REG109 to change the reference of overo paint characteristics to white coat patterning.
2. With respect to agenda item 19, the committee approves the following recommendations made by the genetic testing task force (full rule change attached for reference): **
 - a. Add Myosin-Heavy Chain Myopathy (MYHM) to the panel and to the required testing for stallions. Stallions previously tested to satisfy the rule will not be required to retroactively add MYHM but will have the option to add it.
 - b. Modify REG109 and REG108 so that PSSM, GBED, HERDA and MH are not listed in REG109 as a genetic defect and undesirable trait, but instead listed in REG108 for required testing.
 - c. Strike the term gene and replace with the term variant and strike the term defect and replace with the term disorder throughout REG108 and REG109 to be more in line with correct scientific phrasing.
 - d. Change the name of the Genetic Disease Panel to Genetic Health Panel.
3. With respect to agenda item 25, the committee approves the recommendation to amend REG104.4 and REG105.5 to clarify the owner must sign the application for registration of horses being registered through an international affiliate that operates its own stud book. The rule to read as follows:
REG104.4 and REG105.5 To receive a certificate from AQHA, the horse's owner as recorded with the international association is responsible for submitting a properly completed and signed AQHA registration application to the recognized international association in the country he resides. The international association is responsible for supplying AQHA with the owner's application and all required proof of breeding and identification documents. Applicable fees must accompany the application to AQHA.
4. With respect to agenda item 26, the committee approves the recommendation to allow international affiliates to submit international applications on behalf of the owner if proper authorization is provided.
5. With respect to agenda item 29, the committee approves the recommendation to amend REG103.1.3 to clarify that special characters are not allowed in a horse's name. The rule will read as follows:

REG103.1.3 Punctuation marks **and special characters** are not permitted.

6. With respect to agenda item 30, the committee approves the recommendation to amend REG127.2 to change the age a horse is presumed deceased from 25 to 30 years. **
7. With respect to agenda item 31, the committee approves the task force's recommendation to adopt a digital certificate of registration beginning with 2024 foals, subject to programming.
8. With respect to agenda item 11, the committee denies the request to amend REG110 to allow ICSI breeding to be reported for stallions without a breeding date and REG112 to require ICSI embryos to be certified/recorded with AQHA since stallion owners do not always know when the semen is used, and it is not always used in the same year it is shipped. A recommendation was made to create a task force to evaluate the processes and reporting options to aid breeders and owners.
9. With respect to agenda items 20, 21 and 22, the committee denies the requests to require parentage verification and HERDA testing for descendants of HERDA carriers and prohibit registration of homozygous positive horses. A recommendation was made to create a task force to identify educational opportunities. Additionally, the committee requests (1) educational material be developed to notify breeders of implications and risks associated to breeding a carrier, (2) develop notification to new owners when a transfer is processed, and (3) develop an educational forum.
10. With respect to agenda item 27, the committee recommends the creation of a joint task force between the stud book and registration committee and the international committee to review the international registration process for affiliates with an approved stud book.
11. With respect to agenda item 7, the committee denies the recommendation to amend REG102.8.5 to allow a horse more than 48 months old to be registered without being parentage verified when a dam is not available to be DNA typed.
12. With respect to agenda item 8, the committee denies the recommendation to amend REG102.4 to freeze/suspend an owner at time of foaling until their membership dues are paid in full when a new owner of a foal is not able to register a foal because of the unpaid membership.
13. With respect to agenda item 9, the committee denies the recommendation to amend REG102.3 to allow APHA-registered horses to be listed with AQHA for breeding purposes so that offspring can be registered in AQHA's appendix registry.
14. With respect to agenda item 10, the committee denies the recommendation to amend REG105 to allow APHA-registered breeding stock horses with at least one AQHA parent to be eligible for registration with AQHA in the Appendix registry.

15. With respect to agenda item 12, the committee denies the recommendation to amend REG104.2 to allow Appendix registered horses to advance to the numbered registry when they have markings considered to be excessive white.
16. With respect to agenda item 13, the committee denies the recommendation to amend REG105 and REG106 to allow foals resulting from Appendix registered sire and Appendix registered dam to be eligible for registration.
17. With respect to agenda item 23, the committee denies the recommendation to amend REG111.2 to allow a former stallion owner to remain the owner of the frozen semen unless a bill of sale includes the frozen semen rights in the sale of the horse.
18. With respect to agenda item 24, the committee denies the recommendation to remove REG111.6 and REG112.10 that affects the use of frozen semen and frozen embryos for foals born 2015 or later so that there is no time limit for its use.
19. With respect to agenda item 28, the committee denies the member's recommendation to implement a \$1 fee to be collected with each registration application to then be distributed to state/province affiliates for promotion and education of the American Quarter Horse in the state/province.
20. The committee re-elected Ross Roark as the studbook and registration committee chairman.

On behalf of the studbook and registration committee, I move that the board of directors approve the recommendations as read.

Ross Roark, chair

In accordance with its Mission Statement and Welfare Policy Statement, AQHA endeavors to educate its membership and protect the welfare and integrity of the breed. Part of such endeavor includes AQHA's efforts associated with the research, identification and promulgation of rules and regulations concerning genetic disorders defects and other undesirable traits through AQHA's governance process.

In that regard, researchers have noted that the American Quarter Horse does not have more genetic disorders/diseases than other equine breeds but rather, AQHA has just been proactive and taken the lead at assisting in the identification of genetic variants contributing to disorders in identifying genetic diseases-affecting the American Quarter Horse and associated breeds. A genetic health panel is available for such tests which have been scientifically validated to be used as a tool to assist owners of American Quarter Horses in producing and managing healthier horses.

REG108. GENETIC TESTING

REG108.1 If there is justifiable cause to question parentage of a foal, the Executive Committee may require the foal, sire and dam to be genetically tested, the expenses of which shall be allocated as the Executive Committee determines. The results of this test, together with other available information, may be taken into consideration by the Executive Committee in its determination of the foal's parentage as recognized by AQHA. Such genetic testing shall be done by an organization approved by AQHA.

REG108.2 The owner or lessee of a stallion exposed to one or more mares, shall, at his own expense, file with AQHA a written report of the stallion's DNA type, obtained from a laboratory approved by AQHA, and in accordance with procedures adopted by AQHA. Once such type is filed with AQHA, it is not necessary to repeat such filing annually, except as requested by AQHA.

REG108.3 A DNA type for the stallion and mare must be on file with AQHA prior to the registration of any foal.

REG108.4 All stallions are required to have a genetic ~~disease-health~~ panel test results on file with AQHA prior to the registration of their foals resulting from breeding's occurring after January 1, 2015. A test added to the health panel after January 1, 2015, will reflect a separate effective date. Stallions tested prior to an effective date to comply with the rule will not be required to re-test for a new variant added unless the rule explicitly enforces it. Genetic health panel includes:

REG108.4.1 Polysaccharide Storage Myopathy (PSSM) which is an inherited autosomal dominant genetic disease that causes excess glycogen storage in muscles which can result in tying-up, muscle tremors, and/or gait abnormalities. Effective January 1, 2015.

REG108.4.2 Glycogen Branching Enzyme Disease (GBED) is an inherited autosomal recessive disease that terminates protein synthesis which can result in late-term abortions or death in foals shortly after they are born. Effective January 1, 2015.

REG108.4.3 Hereditary Equine Regional Dermal Asthenia (HERDA), also known as ~~Hyperelastosis Cutis (HC)~~, is an inherited autosomal recessive disease that weakens collagen fibers that connect the skin of a horse to the rest of the horse. Affected horses can have fragile hyperextensible skin which can result in tears, scars and lesions. Affected horses are also known to exhibit impaired healing to such injuries. Effective January 1, 2015.

REG108.4.4 Hyperkalemic Periodic Paralysis (HYPP), is an inherited autosomal dominant muscular disease that may lead to uncontrolled muscle twitching or profound muscle weakness, and in severe cases, may lead to collapse and/or death. Effective January 1, 2015.

REG108.4.4 Malignant Hyperthermia (MH) is an inherited autosomal dominant disease that causes a life-threatening condition that is usually triggered by exposure to certain drugs used for general anesthesia. In susceptible horses, these drugs can induce an uncontrolled increase in skeletal muscle oxidative metabolism which affects the body's capacity to supply oxygen, remove carbon dioxide, and regulate body temperature, potentially leading to circulatory collapse and death if not treated quickly. In addition, research shows that horses with the PSSM1 variant and the MH variant may exhibit more severe clinical symptoms than those horses who have PSSM1 but do not have the MH variant. Effective January 1, 2015.

REG108.4.5 Myosin-Heavy Chain Myopathy (MYHM) is an inherited disease that results in two distinct clinical disease presentations, immune-mediated myositis (IMM) and non-exertional rhabdomyolysis. Immune-mediated myositis or IMM is characterized by episodes of severe muscle atrophy following an autoimmune event. The second is severe muscle pain and damage termed non-external rhabdomyolysis that is not associated with exercise and may or may not have muscle atrophy. Effective January 1, 2023.

REG108.5 Effective January 1, 2015, only those parentage-verified foals whose sire and dam have tested negative for all genetic diseases on the genetic panel test will receive the designation "N/N" for each of the genetic tests.

REG109. GENETIC DEFECTS AND UNDESIRABLE TRAITS. ~~In accordance with its Mission Statement and Welfare Policy Statement, AQHA endeavors to educate its membership and protect the welfare and integrity of the breed. Part of such endeavor includes AQHA's efforts associated with the research, identification and promulgation of rules and regulations concerning genetic defects and undesirable traits through AQHA's governance process. In that regard, researchers have noted that the American Quarter Horse does not have more genetic diseases than other equine breeds rather, AQHA has just been proactive and taken the lead at identifying genetic diseases affecting the American Quarter Horse breed.~~ The conditions listed below and commonly considered undesirable traits or genetic defects by the Board of Directors shall be indicated on the registration certificate for horses foaled on or after the indicated date, once the condition is known. Upon discovery, the owner shall immediately report such condition to AQHA for marking its condition on the registration certificate as provided below. Failure to timely report these conditions may subject the owner to possible disciplinary action. ~~Genes come in pairs; each parent contributes one copy to the offspring. With respect to the autosomal dominant genetic diseases listed below (HYPP, PSSM, and MH), only one defective gene is necessary to express the genetic disease in question. Such gene can be inherited from either of the parents or from both of the parents. With respect to autosomal recessive genetic diseases listed below (GBED and HERDA), typically, two copies of an abnormal gene (two copies = a pair) must be present in order for the horse to show signs of the genetic defect in question. Horses with only one copy of the defective gene are considered "carriers".~~

REG109.1 Parrot Mouth - either overshot or undershot, defined by the American Association of Equine Practitioners as "no occlusal contact between the upper and lower central incisors." Genetic variant/s contributing to this condition are at this time unknown. Designation effective for foals born on or after January 1, 1992. _____

REG109.2 Cryptorchid - meaning less than two visible testicles descended into the scrotum. Genetic variant/s contributing to this condition are at this time unknown. Designation effective for foals born on or after January 1, 1992.

REG109.3 Hyperkalemic Periodic Paralysis (HYPP) - designation effective for foals born on or after January 1, 1998. HYPP is an inherited autosomal dominant genetic disease. An inherited muscular disease ~~caused by a hereditary genetic defect that may lead leads~~ to uncontrolled muscle twitching or profound muscle weakness, and in severe cases, may lead to collapse and/or death. According to research, this condition exists in certain descendants of the stallion Impressive, AQHA registration number 0767246. The genetic variant that causes this condition is known and this is part of the genetic health panel.

REG109.3.1 The following notification shall be placed on registration certificates of foals descending from the stallion Impressive or any other bloodline determined to carry the HYPP genevariant: "This horse has an ancestor known to carry HYPP, designated under AQHA rules as a genetic defect. AQHA recommends testing to confirm presence or absence of this variantgene." ~~When the parent(s) tracing from the HYPP line has tested negative for HYPP with an appropriate designation appearing on their registration certificate, the above notification is not required, and will, instead, be substituted by the designation "N/N"; or, after testing negative for the gene, the notification may be substituted by the designation "N/N" upon request of the owner at his or her expense.~~

REG109.3.2 Mandatory testing for HYPP. ~~At such time as~~ AQHA requires mandatory parentage verification of any foals to be registered in either the Numbered or Appendix registry, per REG102.8 any foal tracing to bloodlines known to carry have the HYPP variantgene shall be tested for HYPP at the time the genetic testing for parentage is performed. The results will be designated on the registration certificate in lieu of the above notification. ~~Such testing will not be necessary if the foal's closest ancestors (parents), tracing to the HYPP line, have been tested negative and designated on their registration certificates; these foals will automatically be designated "N/N" on their registration certificate.~~

REG109.3.3 Effective with foals born on or after January 1, 2007, all descendants of the stallion Impressive, #0767246, shall be required to be parentage verified and HYPP tested, ~~subject to the conditions in REG109.3.2 above.~~ Any foal testing homozygous positive for for the HYPP variant (H/H) will not be eligible for registration with AQHA.

~~REG109.4 Polysaccharide Storage Myopathy (PSSM) is an inherited autosomal dominant genetic disease that causes excess glycogen storage in muscles which can result in tying up, muscle tremors, and/or gait abnormalities.~~

~~REG109.5 Glycogen Branching Enzyme Disease (GBED) is an inherited autosomal recessive disease that terminates protein synthesis which can result in late term abortions or death in foals shortly after they are born.~~

~~REG109.6 Hereditary Equine Regional Dermal Asthenia (HERDA), also known as Hyperelastosis Cutis (HC), is an inherited autosomal recessive disease that weakens collagen fibers that connect the skin of a horse to the rest of the horse. Affected horses can have fragile hyperextensible skin which can result in tears, scars and lesions. Affected horses are also known to exhibit impaired healing to such injuries.~~

~~REG109.7 Malignant Hyperthermia (MH) is an inherited autosomal dominant disease that causes a life-threatening condition that is usually triggered by exposure to certain drugs used for general anesthesia. In susceptible horses, these drugs can induce an uncontrolled increase in skeletal muscle oxidative metabolism which affects the body's capacity to supply oxygen, remove carbon dioxide, and regulate body temperature, potentially leading to circulatory collapse and death if not treated quickly.~~

REG109.8 White Markings: A horse having white markings with underlying light skin beyond any one of the following proscribed lines shall be eligible for registration by AQHA only if its parentage verified through DNA typing the offspring, its sire and its dam. Breeders should be aware that the American Quarter Horse, while long recognized, identified and promoted as a solid-colored horse, can and does occasionally produce offspring with overo paint characteristics. Such markings are uncharacteristic of the breed and are considered to be undesirable traits. The following notification shall be placed on registration certificates of horses exceeding these marking limitations: "This horse has white markings designated under AQHA rules as an undesirable trait and uncharacteristic of the breed."

REG109.8.1 A line parallel with the ground drawn around the front leg at the point halfway between the point of the elbow (the center of the olecranon tuberosity or proximal epiphysis of the ulna) and the protrusion on the back of the knee (the accessory carpal bone or lateral styloid process).

REG109.8.2 A line parallel with the ground at the center of the gaskin on the hind legs. (The center of the gaskin shall be defined as an imaginary point on the front of the gaskin equidistant between the stifle joint and the center of the hock.) The top point of reference to be the bony protrusion on the inside (medial) of the stifle region (technically known as the medial condyle of the tibia) and the most prominent bony protrusion at the top and inside of the hock (technically known as the medial malleolus of the tibia).

REG109.8.3 A line around the horse's neck immediately behind the poll and through the midpoint of the throat latch.

REG109.8.4 Within an area described as two inches on either side of the ventral midline, beginning at a point midway between the front legs and extending to, and including, the sheath and udder.

REG109.8.5 Additionally, there is allowed a single area of white marking with underlying light skin, such that it can be completely covered with a disk one inch in diameter, either free standing on the horse's body or being a portion of white marking extending past the above proscribed lines.

REG109.8.76 For determining the above defined marking limitations, an inspection of a horse, including a horse in a standing position, may be conducted from any angle or distance from the horse, and the person conducting the inspection may be in a standing, crouching or any other position.