

Policy of the Ayrshire Breeders Association relating to the registration status of potential and known carriers of Arthrogryposis Multiplex (AM) - Curly Calf Syndrome

The phrase "impacted genetics" shall refer to any animal that is a descendant of a confirmed carrier of the Arthrogryposis Multiplex (AM) mutation that does not have an intervening descendant that is tested free of the mutation at a testing center approved by the ABA. Examples of intervening descendant and impacted genetics pedigrees are available.

Date the Association officially recognized the condition: September 1, 2021

Date approved commercial testing offered: December 1, 2021

Effective date of this policy: February 1, 2022

Qualifications and procedures for registration

1. Status of males and females registered prior to the Effective Policy Date (EPD)

- All males and females with impacted genetics in their pedigree shall remain registered. Testing on these animals will not be mandatory. However, if they are tested their status is required to be reported to the ABA and the status will be recorded on the registration certificate and pedigree. **AMC** denotes a carrier of the mutation. **AMF** denotes an animal free of the mutation. Testing is strongly encouraged on all of these animals.

- Pedigrees on impacted untested animals could be designated PAM (potential AM Carrier) for information purposes this could also include animals in the genetic recovery program with one or more unknown parents where the unknown parent happens after 2003).

- International genetics that are known AM carriers or are untested will be designated with the suffix AMC or PAM when they are recognized by the Ayrshire Breeders Association Herdbook. Their resulting offspring will require testing for registry.

2. Registration Status after the Effective Policy Date:

- Males.** All males submitted for registration that have impacted genetics that do not have an intervening ancestor tested free of the mutation must be tested. If the animal is determined to be free of the mutation, AMF, then registration proceeds normally. If the test results show the applicant is a carrier, AMC, of the mutation, registration is denied.

- Females.** All females submitted for registration that have impacted genetics that do not have an intervening ancestor tested free of the mutation must be tested. The results

IMPACTED PEDIGREE EXAMPLE

PALMYRA ROCKSTAR D BRIN
840003146264398 91.06%
2-02 84 P9 +450

NMS +244
PTA +3.05SCC +0.7PL -2.2DPR
PTA -61M +28F +13P 44R
PTAS +244CY 12/21
PTA% +.16 +.08
PTAT +.40T +.52R 12/21
PPA -869M +48F +16P
CLASS ST5 SR3 BD6 DF7 RA6 RW4 LS3 FA7
FU6 UH9 UW7 UC7 UD6 TP5 TL8 LR6

PAM - Potential AMC Carrier
Not tested. Her offspring require testing before registry.

91.06% AYRSHIRE 09/04/17 FEMALE 3153
LAGACE MODEM-ET **AMF**
8389304C

PTA +2.69SCC +1.8PL -1.8DPR
PTA -210M +11F +2P 96R
PTA% +.10 +.05 12/21
PTAT -.20T +.94R 12/21
D/AV 19717M 3.9 774F 3.1 621P 8.4T

KAMOURASKA PETERSLUND RUBY **AMC**
103388533C 74.44%

NMS +555
PTA +2.79SCC +3.2PL +1.0DPR
PTA +839M +45F +41P 69R
PTAS +555CY 12/21
PTA% +.06 +.07
PTAT -.10T 57R 12/21

DHI 2-00 2 305 17639 4.7 825 4.0 703
365 20296 4.8 968 4.1 822
3-03 2 305 17655 4.4 772 3.9 688

KAMOURASKA ROCKSTAR **AMC**
104347733C 87.22%

PTA +2.79SCC +2.2PL -2.2DPR
PTA +339M +33F +30P 97R
PTA% +.10 +.10 12/21
PTAT .95R 12/21
D/AV 22124M 4.1 898F 3.3 730P 8.5T

PALMYRA DREAMER R BRINKLEY-ET **AMF**
840003128668341 94.9%
4-04 90

NMS +71
PTA +3.26SCC -1.4PL -2.4DPR
PTA +25F +4P 55R
PTAS +71CY 12/21
PTA% +.13 +.02
PTAT +.70T +.60R 12/21
PPA +1046M +98F +44P
CLASS ST9 SR7 BD8 DF8 RA5 RW8 LS7 FA6
FU8 UH8 UW8 UC7 UD6 TP7 TL7 LR7

GOLD 2-02 2 305 18560 4.7 873 3.3 620
365 21510 4.7 1005 3.3 720
3-08 2 305 24740 4.2 1028 3.3 813
365 28460 4.3 1223 3.3 953

NEXUS DREAMER **AMF**
103734662C 89.81%

PTA +3.23SCC -3.9PL -4.1DPR
PTA -246M +4F -7P 96R
PTA% +.07 12/21
PTAT +.30T +.96R 12/21
D/AV 20048M 4.1 812F 3.2 638P 8.6T

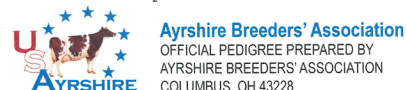
PALMYRA REALITY BONNIE-ET **AMF**
65003767 4-05 88

NMS +258
PTA +3.19SCC -1.0PL -0.9DPR
PTA +604M +55F +21P 75R
PTAS +258CY 12/21
PTA% +.16 +.01
PTAT +1.10T +.78R 12/21
PPA +3434M +224F +117P
CLASS ST9 SR8 BD8 DF7 RA4 RW7 LS7 FA7
FU8 UH8 UW7 UC7 UD7 TP5 TL8 LR5

GOLD 2-03 2 305 21020 4.7 987 3.2 679
365 24810 4.7 1166 3.3 818
3-08 2 305 24440 5.0 1230 3.3 815
311 24850 5.0 1250 3.3 829
4-08 2 305 21470 4.3 928 3.5 753
365 25080 4.3 1079 3.5 883

DHI 3-08 2 278 22360 5.1 1135 3.3 743

*All records reported as TRUE PROTEIN



All complete lactation and type appraisal data for animals will be provided upon request where space limitations prevent printing all performance records.

of the test have to be reported to the ABA and the status will be permanently attached to the registration certificate and pedigree. The animal will be eligible for registration.

c. Generational unknown parent:

Any female offered for registry that has an ancestor in its pedigree not recorded in the Ayrshire Breeders' Association database since 2003 is required to be tested. The test results must be reported to the ABA and the registry certificate and pedigree will be noted with the test results. This animal will be eligible for registration.

**Ayrshire Breeders Association
Sponsored Sales**

This policy pertains to ABA sponsored sale events only and do not rule privately managed events. However, ABA strongly encourages all sale events to follow this policy.

1. Embryos. Embryo consignments will not be accepted that have known AM or PAM carriers in their pedigree unless there is an intervening AMF tested individual in the ancestor line.

2. Males. Only AMF free males will be eligible.

3. Females. Impacted females must be tested for eligibility unless there is an intervening AMF individual in the ancestor line. Regardless of AM status the animal is eligible for participation in the sale. These results will be openly included on registration certificates and pedigrees and will be included in promotional materials.

Homozygous males or females that survive are not eligible for registry.

Clones from AMC individuals or impacted genetics without intervening ancestors not already born and registered will not be eligible for registry.

ABA will make available a list of all tested AMC carriers.

Policy updated June 2022

IMPACTED PEDIGREE EXAMPLE

PALMYRA POWER BP RAYNA									
840003128668339									
4-04 92 P9 90%									
NMS +306 +519									
PTA +2.91SCC +0.7PL +0.2DPR									
PTA +606M +44F +21P 59R									
PTA\$ +306CY 12/21									
PTA% +1.10 +.01 12/21									
PTAT +1.20T +61R 12/21									
PPA +2997M +218F +102P									
CLASS ST9 SR9 BD7 DF8 RA5 RW7 LS5 FA7									
F08 UH8 UW8 UC6 UD7 TP4 TL4 LR8									
GOLD 3-01 2 279 19580 4.9 959 3.4 660									
4-00 2 305 26850 4.8 1297 3.2 867									
365 28930 4.9 1422 3.3 947									
5-05 2 297 29820 3.8 1134 3.2 940									
DHI 1-11 2 305 20080 4.4 891 3.4 683									
355 22570 4.6 1036 3.4 766									
LIFE 1302 101010 4.5 4561 3.3 3318									

AMF

This animal does not need tested because the intervening parent (Power) was tested free of the defect.

ANMAR PETER POWER-ET									
64394151 80%									
PTA +2.87SCC +0.3PL +1.7DPR									
PTA -18M +17F +8P 96R									
PTA% +.09 +.04 12/21									
PTAT -.30T +89R 12/21									
D/AV 20426M 4.1 836F 3.2 656P 8.4T									

TESTED AMF

This generation intervenes and is tested AMF, so all of his descendants are AMF and do not need to be tested.

PALMYRA BURDETTE P RAYNA-ET AMF									
72394511									
7-05 94 3E ELITE									
NMS +417									
PTA +2.93SCC +1.9PL -1.0DPR									
PTA +824M +53F +26P 67R									
PTA\$ +417CY 12/21									
PTA% +.10 12/21									
PTAT +1.50T +68R 12/21									
PPA +4252M +272F +137P									
CLASS ST9 SR9 BD8 DF9 RA4 RW8 LS5 FA7									
F07 UH8 UW7 UC7 UD6 TP4 TL4 LR8									
GOLD 3-03 2 305 33960 4.6 1568 3.1 1068									
4-06 2 305 27750 4.8 1333 3.3 905									
347 29710 4.9 1444 3.3 980									
5-08 2 305 31050 4.7 1470 3.1 969									
365 35590 4.8 1704 3.2 1138									
7-02 2 305 30970 5.0 1534 3.2 991									
333 33140 5.0 1644 3.2 1061									
DHI 1-11 2 305 20480 4.4 895 3.3 677									
365 22930 4.4 1009 3.3 764									
3-03 2 365 38010 4.6 1748 3.3 1223									
LIFE 1947 169340 4.7 8030 3.3 5521									

90% AYRSHIRE									
07/07/15 FEMALE									
2940									
PETERSLUND AMC									
91213C 60%									
PTA +3.12SCC +5.2PL +2.8DPR									
PTA +1582M +90F +67P 99R									
PTA% +.15 +.09 4/12									
PTAT -.60T +99R 12/21									
D/AV 23785M 4.0 954F 3.2 765P 8.4T									

COVEY-FARMS FLINT JESSY AMF									
100257614									
4-08 92									
NMS +196									
PTA +2.82SCC +0.6PL +0.8DPR									
PTA +1034M +25F +26P 76R									
PTA\$ +196CY 12/21									
PTA% -.08 -.03 12/21									
PTAT -.70T +67R 12/21									
PPA +4451M +132F +104P									
CLASS ST8 SR7 BD8 DF8 RA6 RW8 LS6 FA8									
F08 UH9 UW9 UC6 UD6 TP8 TL4 LR8									
GOLD 2-04 2 286 22420 3.8 852 2.8 624									
3-03 2 205 17940 3.7 669 2.9 515									
4-02 2 305 25600 4.8 1234 3.0 764									
365 29110 4.7 1354 3.0 881									
7-08 2 227 10940 3.8 413 3.4 368									
8-06 2 305 20180 3.8 763 3.4 684									
365 23650 3.8 895 3.4 803									
LIFE 1746 127430 4.1 5255 3.1 3987									

PALMYRA TRI-STAR BURDETTE-ET AMF									
100419568									
PTA +2.93SCC +1.1PL -0.8DPR									
PTA +272M +6F +13P 99R									
PTA% -.02 +.02 12/21									
PTAT +1.00T +99R 12/21									
D/AV 19879M 3.9 785F 3.2 634P 8.6T									

PALMYRA POKER LH ROSY-ET AMF									
66596106									
4-01 92									
NMS +328									
PTA +3.09SCC +0.5PL -1.8DPR									
PTA +688M +50F +25P 76R									
PTA\$ +328CY 12/21									
PTA% +.11 +.02 12/21									
PTAT +1.00T +78R 12/21									
PPA +3139M +192F +110P									
CLASS ST7 SR5 BD6 DF7 RA4 RW8 LS5 FA5									
F06 UH8 UW7 UC8 UD6 TP5 TL3 LR7									
GOLD 2-00 2 298 19900 4.5 896 3.3 654									
3-00 2 305 22420 4.5 1012 3.5 789									
365 26100 4.4 1161 3.5 910									

*All records reported as TRUE PROTEIN



Ayrshire Breeders' Association
OFFICIAL PEDIGREE PREPARED BY
AYRSHIRE BREEDERS' ASSOCIATION
COLUMBUS, OH 43228

All complete lactation and type appraisal data for animals will be provided upon request where space limitations prevent printing all performance records.

**KNOWN CURLY CALF
CARRIER SIRES SOLD IN THE US**

(This is the currently known carrier list and may not be complete.)

Distributed by Semex

- Peterslund
- Hauptre Kansas
- Kamouraska Rockstar
- Kamouraska Decaf
- Kamouraska Volvo
- Selwood Viserdale Sunspot
- Des Coteaux Miquelon
- De La Plaine Blink
- La Sapiniere Chelyote
- Ruisseau Clair Tuxedo
- Des Fleurs Paraguay
- Margot Player

Distributed by Blondin Sires

- Marilie Autograph

Distributed by

- Sexing Technologies**
- Des Fleurs Saguenay
- Bold Durango Calder-P

Distributed by Select Sires

- Ruisseau Clair Aslan Americo
- Good-Vue Chaos