PROHIBITED LIST

This List shall come into effect on 1 January 201X

THE 201X PROHIBITED LIST

Valid 1 January 201X

In accordance with ARCI-011-015/ARCI-025-015 all substances in the categories below shall be strictly prohibited unless otherwise noted. Any reference to substances in this section does not alter the requirements for testing concentrations in race day samples.

SUBSTANCES AND METHODS PROHIBITED AT ALL TIMES (IN- AND OUT-OF-COMPETITION)

PROHIBITED SUBSTANCES

Nothing in this list shall alter the requirements of post-race testing.

S0. NON-APPROVED SUBSTANCES

Any pharmacologic substance which is not addressed by any of the subsequent sections of the List and with no current approval by any governmental regulatory health authority for human or veterinary use (e.g., drugs under pre-clinical or clinical development, discontinued drugs, and designer drugs) is prohibited at all times.

S00. THERAPEUTIC SUBSTANCES

Therapeutic substances that are not otherwise prohibited pursuant to this list are permitted provided such substances:

- Have current approval for use in human, horse, or other animal by any governmental regulatory health authority in the jurisdiction where the horse is located

S1. ANABOLIC AGENTS

Anabolic agents are prohibited.

1. Anabolic Androgenic Steroids (AAS)

1.1. Exogenous* AAS, including:

1-androstenediol (5α-androst-1-ene-3β,17β-diol); 1-androstenedione (5α- androst-1-ene-3,17-dione); bolandiol (estr-4-ene-3β,17β-diol); bolasterone; boldenone; boldione (androsta-1,4-diene-3,17-dione); calusterone; clostebol; danazol ([1,2]oxazolo[4',5':2,3]pregna-4-en-20-yn-17α-ol);dehydrochlormethyltestosterone (4-chloro-17β-hydroxy-17α-methylandrosta- 1,4-dien-3-one); desoxymethyltestosterone (17α-methyl-5α-androst-2-en- 17β-ol); drostanolone; ethylestrenol (19-norpregna-4-en-17α-ol); fluoxymesterone; formebolone; furazabol (17α-methyl[1,2,5]oxadiazolo[3',4':2,3]-5α-androstan-17β-ol); gestrinone; 4- hydroxytestosterone (4,17β-dihydroxyandrost-4-en-3-one); mestanolone; mesterolone; metandienone (17β-hydroxy-17α-methylandrosta-1,4-dien-3- one); metenolone; methandriol; methasterone (17β-hydroxy-2α,17α- dimethyl-5α-androstan-3-one); methyldienolone (17β-hydroxy-17α- methylestra-4,9-dien-3-one); methyl-1-testosterone (17β-hydroxy-17α-methyl-5α-androst-1-en-3-one); methylnortestosterone (17β-hydroxy-17α-methylestr-4-en-3-one); methyltestosterone; metribolone (methyltrienolone, 17β-hydroxy-17α-methylestra-4,9,11-trien-3-one); mibolerone; nandrolone; 19-norandrostenedione (estr-4-ene-3,17-dione); norboletone; norclostebol; norethandrolone; oxabolone; oxandrolone; oxymesterone; oxymetholone; prostanozol (17β-[(tetrahydropyran-2-yl)oxy]-1'H-pyrazolo[3,4:2,3]-5α- androstane); quinbolone; stanozolol; stenbolone; 1-testosterone (17β- hydroxy-5α-androst-1-en-3-one); tetrahydrogestrinone (17-hydroxy-18a- homo-19-nor-17α-pregna-4,9,11-trien-3-one); trenbolone (17β-hydroxyestr-4,9,11-trien-3-one); and other substances with a similar chemical structure or similar biological effect(s).

b. Endogenous** AAS or their synthetic esters when administered exogenously:

androstenediol (androst-5-ene-3β,17β-diol); androstenedione (androst-4-ene-3,17-dione); dihydrotestosterone (17β-hydroxy-5α-androstan-3-one); prasterone (dehydroepiandrosterone, DHEA, 3β-hydroxyandrost-5-en-17-one); testosterone;

and their metabolites and isomers, including but not limited to:

5α-androstane-3α,17α-diol; 5α-androstane-3α,17β-diol; 5α-androstane-3β,17α-diol; 5α-androstane-3β,17β-diol; 5β-androstane-3 α, 17β-diol,

androst-4-ene-3α,17α-diol; androst-4-ene-3α,17β-diol; androst-4-ene-3β,17α-diol; androst-5-ene-3α,17α-diol; androst-5-ene-3α,17β-diol; androst-5-ene-3β,17α-diol; 4-androstenediol (androst-4-ene-3β,17β-diol); 5-androstenedione (androst-5- ene-3,17-dione); androsterone (3 β-hydroxy-5 α – androstan-17-one); epi-dihydrotestosterone; epitestosterone; etiocholanolone; 7α-hydroxy-DHEA ; 7β-hydroxy-DHEA; 7-keto-DHEA;19-norandrosterone; 19-noretiocholanolone.

2. <u>Other Anabolic Agents, including but not limited to:</u>

Clenbuterol, selective androgen receptor modulators (SARMs e.g., andarine and ostarine), ractopamine, tibolone, zeranol, zilpaterol.

For purposes of this section:

** "exogenous" refers to a substance which is not ordinarily produced by the body naturally.*

*** "endogenous" refers to a substance which is ordinarily produced by the body naturally.*

Notwithstanding the foregoing, anabolic agents may be used out of competition provided:

- The anabolic agent has current approval for use in human, horse, or other animal by any governmental regulatory health authority in the jurisdiction where the horse is located;
- The administration is recorded and subject to inspection;
- The administration is pursuant to a valid veterinary prescription;
- The treatment plan is filed **at the time of administration** as required by the racing authority in the state in which the horse is located; and
- The horse shall remain on the Veterinarian's List for 6 months after the last administration of an anabolic agent.

Notwithstanding the preceding sections of subdivision 2, Clenbuterol is permitted provided the treatment is:

- Pursuant to a valid veterinary prescription; and
- The treatment plan is filed **at the time of administration** as required by the racing authority in the state in which the horse is located.

<u>S2. PEPTIDE HORMONES, GROWTH FACTORS AND RELATED SUBSTANCES</u>

The following substances, and other substances with similar chemical structure or similar biological effect(s), are prohibited:

1. Erythropoietin-Receptor agonists:
    1.1 Erythropoiesis-Stimulating Agents (ESAs) including, e.g.,

darbepoetin (dEPO); erythropoietins (EPO); EPO-Fc; EPO-mimetic peptides (EMP), e.g., CNTO 530 and peginesatide; and methoxypolyethylene glycol-epoetin beta (CERA); and

1.2 Non-erythropoietic EPO-Receptor agonists, e.g., ARA-290, asialo EPO and carbamylated EPO;

2. Hypoxia-inducible factor (HIF) stabilizers, e.g., cobalt (when found in excess of regulatory authority limits) and roxadustat (FG-4592); and HIF activators, (e.g., argon, xenon);

3. Chorionic Gonadotropin (CG) and Luteinizing Hormone (LH) and their releasing factors, in males;

4. Corticotrophins and their releasing factors;

   Notwithstanding the preceding section of **S2** subdivision 4, ACTH is permitted provided the treatment is:
   - Pursuant to a valid veterinary prescription; and
   - The treatment plan is filed **at the time of administration** as required by the racing authority in the state in which the horse is located.

5. Growth Hormone (GH) and its releasing factors including Growth Hormone Releasing Hormone (GHRH) and its analogues, e.g., CJC-1295, sermorelin and tesamorelin; Growth Hormone Secretagogues (GHS), e.g., ghrelin and ghrelin mimetics, e.g., anamorelin and ipamorelin; and GH-Releasing Peptides (GHRPs), e.g., alexamorelin, GHRP-6, hexarelin and pralmorelin (GHRP-2);

6. Venoms and toxins including but not limited to venoms and toxins from sources such as snails, snakes, frogs, and bees as well as their synthetic analogues such as ziconotide.

In addition, the following growth factors are prohibited

Fibroblast Growth Factors (FGFs), Hepatocyte Growth Factor (HGF), Insulin-like Growth Factor-1 (IGF-1) and its analogues, Mechano Growth Factors (MGFs), Platelet-Derived Growth Factor (PDGF), Vascular-Endothelial Growth Factor (VEGF) and any other growth factor affecting muscle, tendon or ligament protein synthesis/degradation, vascularization, energy utilization, regenerative capacity or fiber type switching.

Notwithstanding the foregoing, the platelet rich plasma (PRP) and autologous conditioned plasma (IRAP) are permitted provided such treatment is:
- Pursuant to a valid veterinary prescription; and
- Reported at the time of sampling.

S3. BETA-2 AGONISTS

All beta-2 agonists, including all optical isomers (i.e. *d*- and *l*-) where relevant,

are prohibited except clenbuterol and albuterol provided the treatment is:

- Pursuant to a valid veterinary prescription; and
- Filed with the racing authority at the time of treatment if required by S1 subd.2 above.

S4. HORMONE AND METABOLIC MODULATORS

The following are prohibited:

1. Aromatase inhibitors including, but not limited to: aminoglutethimide, anastrozole, androsta-1,4,6-triene-3,17-dione (androstatrienedione), 4-androstene-3,6,17 trione (6-oxo), exemestane, formestane, letrozole, testolactone;

2. Selective estrogen receptor modulators (SERMs) including, but not limited to: raloxifene, tamoxifen, toremifene;

3. Other anti-estrogenic substances including, but not limited to: clomiphene, cyclofenil, fulvestrant;

4. Agents modifying myostatin function(s) including, but not limited, to: myostatin inhibitors;

5. Metabolic modulators:
   5.1. Activators of the AMP-activated protein kinase (AMPK), e.g., AICAR; and Peroxisome Proliferator Activated Receptor δ (PPARδ) agonists (e.g. GW 1516);

   5.2 Insulins;

   5.3 Trimetazidine; and

   5.4 Thyroxine, and thyroid modulators/hormones including but not limited to those containing T4 (tetraiodothyronine/thyroxine), T3 (triiodothyronine), or combinations thereof.

Notwithstanding the foregoing thyroxine (T4) shall not be considered a prohibited substance provided that such treatment is:

- Pursuant to a valid veterinary prescription; and
- The administration is pursuant to prior approval of regulatory authority.

Additionally, notwithstanding the foregoing, altrenogest shall not be considered a prohibited substance in fillies and mares provided that such treatment is:

- Pursuant to a valid veterinary prescription.

S5. DIURETICS AND OTHER MASKING AGENTS

The following diuretics and masking agents are prohibited, as are other substances with similar chemical structure of similar biological effect(s):

Including but not limited to:

- desmopressin, plasma expanders (e.g. glycerol; intravenous administration of albumin, dextran, hydroxyethyl starch and mannitol), probenecid, torsemide, and other substances with similar biological effect(s).

Furosemide and trichlormethiazide are permitted out of competition provided the treatment is:

- Pursuant to a valid veterinary prescription; and
- Reported at the time of sampling if given within 24 hours of sampling.

Prohibited diuretics include:

Acetazolamide, amiloride, bumetanide, canrenone, chlorthalidone, etacrynic acid, indapamide, metolazone, spironolactone, thiazides (e.g. bendroflumethiazide, chlorothiazide, hydrochlorothiazide), torsemide, triamterene, vasopressin receptor antagonists or vaptans (e.g., tolvaptan); and other substances with a similar chemical structure or similar biological effect(s).

Notwithstanding the above, other diuretics may be administered in an emergency case provided notification of administration to the racing regulatory veterinarian within 24 hrs, and provided the treatment is:

- Pursuant to a valid veterinary prescription

If diuretics have been given within 24 hours of sample collection, the regulatory authority has the discretion to delay collection or to collect a sample and collect an additional sample at a later time.

PROHIBITED METHODS

M1. MANIPULATION OF BLOOD AND BLOOD COMPONENTS

The following are prohibited:

1. The administration or reintroduction of any quantity of autologous, allogenic (homologous) or heterologous blood or red blood cell products of any origin into the circulatory system.

2. Artificially enhancing the uptake, transport or delivery of oxygen, including, but not limited to, perfluorochemicals, efaproxiral (RSR13) and modified hemoglobin products (e.g. hemoglobin-based blood substitutes, microencapsulated hemoglobin products), excluding supplemental oxygen.

3. Any form of intravascular manipulation of the blood or blood components by physical or chemical means.

M2. CHEMICAL AND PHYSICAL MANIPULATION

The following are prohibited:

1. *Tampering*, or attempting to tamper, in order to alter the integrity and validity of *Samples* collected during *Doping Control*. These include but are not limited to urine substitution and/or adulteration (e.g. proteases).

M3. GENE DOPING

The following, with the potential to enhance sport performance, are prohibited:

1. The transfer of polymers of nucleic acids or nucleic acid analogues without prior approval from the racing authority regulatory veterinarian and notification to the state regulatory authority.

2. The use of normal or genetically modified hematopoietic cells is prohibited. Mesenchymal stem cells for treatment of musculo-skeletal disorders is not prohibited and may be used provided that such treatment is:

- Recorded and the record is subject to inspection;
- Pursuant to a valid veterinary prescription; and
- Reported at the time of sampling