WORLD ANTI-DOPING AGENCY

The World Anti-Doping Code

THE 2012 PROHIBITED LIST

INTERNATIONAL STANDARD

The official text of the *Prohibited List* shall be maintained by *WADA* and shall be published in English and French. In the event of any conflict between the English and French versions, the English version shall prevail.

This List shall come into effect on 1 January 2012

The 2012 Prohibited List
24 August 2011

THE 2012 PROHIBITED LIST
WORLD ANTI-DOPING CODE

Valid 1 January 2012

In accordance with Article 4.2.2 of the World Anti-Doping Code, all *Prohibited Substances* shall be considered as "Specified Substances" except Substances in classes S1, S2, S4.4, S4.5, S6.a, and *Prohibited Methods* M1, M2 and M3.

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

PROHIBITED SUBSTANCES

S0. NON-APPROVED SUBSTANCES

Any pharmacological 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 therapeutic use (e.g drugs under pre-clinical or clinical development or discontinued, designer drugs, veterinary medicines) is prohibited at all times.

S1. ANABOLIC AGENTS

Anabolic agents are prohibited.

1. Anabolic Androgenic Steroids (AAS)

a. 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** (17α-ethynyl-17β-hydroxyandrost-4-eno[2,3-d]isoxazole); **dehydrochlormethyltestosterone** (4-chloro-17β-hydroxy-17α-methylandrosta-

1,4-dien-3-one); **desoxymethyltestosterone** (17α-methyl-5α-androst-2-en-17β-ol); **drostanolone; ethylestrenol** (19-nor-17α-pregn-4-en-17-ol); **fluoxymesterone; formebolone; furazabol** (17β-hydroxy-17α-methyl-5α-androstano[2,3-c]-furazan); **gestrinone; 4-hydroxytestosterone** (4,17β-dihydroxyandrost-4-en-3-one); **mestanolone; mesterolone; metenolone; methandienone** (17β-hydroxy-17α-methylandrosta-1,4-dien-3-one); **methandriol; methasterone** (2α, 17α-dimethyl-5α-androstane-3-one-17β-ol); **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-hydroxy-5α-androstano[3,2-c] pyrazole); **quinbolone; stanozolol; stenbolone; 1-testosterone** (17β-hydroxy-5α-androst-1-en-3-one); **tetrahydrogestrinone** (18a-homo-pregna-4,9,11-trien-17β-ol-3-one); **trenbolone;** and other substances with a similar chemical structure or similar biological effect(s).

b. Endogenous** AAS 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); **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; 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); **epi-dihydrotestosterone; epitestosterone; 3α-hydroxy-5α-androstan-17-one; 3β-hydroxy-5α-androstan-17-one; 7α-hydroxy-DHEA ; 7β-hydroxy-DHEA ; 7-keto-DHEA; 19-norandrosterone; 19-noretiocholanolone.**

2. Other Anabolic Agents, including but not limited to:

Clenbuterol, selective androgen receptor modulators (SARMs), tibolone, zeranol, zilpaterol.

For purposes of this section:
* *"exogenous" refers to a substance which is not ordinarily capable of being produced by the body naturally.*

** *"endogenous" refers to a substance which is capable of being produced by the body naturally.*

S2. PEPTIDE HORMONES, GROWTH FACTORS AND RELATED SUBSTANCES

The following substances and their releasing factors are prohibited:

1. **Erythropoiesis-Stimulating Agents** [e.g. **erythropoietin (EPO), darbepoetin (dEPO), hypoxia-inducible factor (HIF) stabilizers, methoxy polyethylene glycol-epoetin beta (CERA), peginesatide (Hematide)];**

2. **Chorionic Gonadotrophin (CG) and Luteinizing Hormone (LH)** in males;

3. **Insulins;**

4. **Corticotrophins;**

5. **Growth Hormone (GH), Insulin-like Growth Factor-1 (IGF-1), Fibroblast Growth Factors (FGFs), Hepatocyte Growth Factor (HGF), Mechano Growth Factors (MGFs), Platelet-Derived Growth Factor (PDGF), Vascular-Endothelial Growth Factor (VEGF)** as well as any other growth factor affecting muscle, tendon or ligament protein synthesis/degradation, vascularisation, energy utilization, regenerative capacity or fibre type switching;

and other substances with similar chemical structure or similar biological effect(s).

S3. BETA-2 AGONISTS

All beta-2 agonists (including both optical isomers where relevant) are prohibited except salbutamol (maximum 1600 micrograms over 24 hours), formoterol (maximum 36 micrograms over 24 hours) and salmeterol when taken by inhalation in accordance with the manufacturers' recommended therapeutic regime.

The presence in urine of salbutamol in excess of 1000 ng/mL or formoterol in excess of 30 ng/mL is presumed not to be an intended therapeutic use of the substance and will be considered as an *Adverse Analytical Finding* unless the *Athlete* proves, through a controlled pharmacokinetic study, that the abnormal result was the consequence of the use of the therapeutic inhaled dose up to the maximum indicated 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: Peroxisome Proliferator Activated Receptor δ (PPARδ) agonists (e.g. GW 1516), PPARδ-AMP-activated protein kinase (AMPK) axis agonists (e.g. AICAR)**

S5. DIURETICS AND OTHER MASKING AGENTS

Masking agents are prohibited. They include:
Diuretics, desmopressin, plasma expanders (e.g. **glycerol**; intravenous administration of **albumin, dextran, hydroxyethyl starch** and **mannitol), probenecid;** and other substances with similar biological effect(s). Local application of felypressin in dental anaesthesia is not prohibited.

Diuretics include:
Acetazolamide, amiloride, bumetanide, canrenone, chlorthalidone, etacrynic acid, furosemide, indapamide, metolazone, spironolactone, thiazides (e.g. **bendroflumethiazide, chlorothiazide, hydrochlorothiazide), triamterene**; and other substances with a similar chemical structure or similar biological effect(s) (except drospirenone, pamabrom and topical dorzolamide and brinzolamide, which are not prohibited).

The use *In-* and *Out-of-Competition,* as applicable, of any quantity of a substance subject to threshold limits (i.e. formoterol, salbutamol, morphine, cathine, ephedrine, methylephedrine and pseudoephedrine) in conjunction with a diuretic or other masking agent requires the deliverance of a specific Therapeutic Use Exemption for that substance in addition to the one granted for the diuretic or other masking agent.

PROHIBITED METHODS

M1. ENHANCEMENT OF OXYGEN TRANSFER

The following are prohibited:

1. Blood doping, including the use of autologous, homologous or heterologous blood or red blood cell products of any origin.

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

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* is prohibited. These include but are not limited to urine substitution and/or adulteration (e.g. proteases).

2. Intravenous infusions and/or injections of more than 50 mL per 6 hour period are prohibited except for those legitimately received in the course of hospital admissions or clinical investigations.

3. Sequential withdrawal, manipulation and reintroduction of any quantity of whole blood into the circulatory system.

M3. GENE DOPING

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

1. The transfer of nucleic acids or nucleic acid sequences;

2. The use of normal or genetically modified cells.

SUBSTANCES AND METHODS PROHIBITED IN-COMPETITION

In addition to the categories S0 to S5 and M1 to M3 defined above, the following categories are prohibited *In-Competition*:

PROHIBITED SUBSTANCES

S6. STIMULANTS

All stimulants (including both optical isomers where relevant) are prohibited, except imidazole derivatives for topical use and those stimulants included in the 2012 Monitoring Program*.

Stimulants include:

a: Non-Specified Stimulants:

Adrafinil; amfepramone; amiphenazole; amphetamine; amphetaminil; benfluorex; benzphetamine; benzylpiperazine; bromantan; clobenzorex; cocaine; cropropamide; crotetamide; dimethylamphetamine; etilamphetamine; famprofazone; fencamine; fenetylline; fenfluramine; fenproporex; furfenorex; mefenorex; mephentermine; mesocarb; methamphetamine(*d*-); p-methylamphetamine; methylenedioxyamphetamine; methylenedioxymethamphetamine; modafinil; norfenfluramine; phendimetrazine; phenmetrazine; phentermine; 4-phenylpiracetam (carphedon); prenylamine; prolintane.
A stimulant not expressly listed in this section is a Specified Substance.

b: Specified Stimulants (examples):

Adrenaline; cathine***; ephedrine****; etamivan; etilefrine; fenbutrazate; fencamfamin; heptaminol; isometheptene; levmetamfetamine; meclofenoxate; methylephedrine****; methylhexaneamine (dimethylpentylamine); methylphenidate; nikethamide; norfenefrine; octopamine; oxilofrine; parahydroxyamphetamine; pemoline; pentetrazol; phenpromethamine; propylhexedrine; pseudoephedrine*****; selegiline; sibutramine; strychnine; tuaminoheptane;** and other substances with a similar chemical structure or similar biological effect(s).

* The following substances included in the 2012 Monitoring Program (bupropion, caffeine, nicotine, phenylephrine, phenylpropanolamine, pipradol, synephrine) are not considered as *Prohibited Substances*.

** Local administration (e.g. nasal, ophthalmologic) of **Adrenaline** or co-administration with local anaesthetic agents is not prohibited.

*** **Cathine** is prohibited when its concentration in urine is greater than 5 micrograms per milliliter.

**** Each of **ephedrine** and **methylephedrine** is prohibited when its concentration in urine is greater than 10 micrograms per milliliter.

***** **Pseudoephedrine** is prohibited when its concentration in urine is greater than 150 micrograms per milliliter.

S7. NARCOTICS

The following are prohibited:

Buprenorphine, dextromoramide, diamorphine (heroin), fentanyl and its derivatives, hydromorphone, methadone, morphine, oxycodone, oxymorphone, pentazocine, pethidine.

S8. CANNABINOIDS

Natural (e.g. cannabis, hashish, marijuana) or synthetic delta 9-tetrahydrocannabinol (THC) and cannabimimetics [e.g. "Spice" (containing JWH018, JWH073), HU-210] are prohibited.

S9. GLUCOCORTICOSTEROIDS

All glucocorticosteroids are prohibited when administered by oral, intravenous, intramuscular or rectal routes.

SUBSTANCES PROHIBITED IN PARTICULAR SPORTS

P1. ALCOHOL

Alcohol (ethanol) is prohibited *In-Competition* only, in the following sports. Detection will be conducted by analysis of breath and/or blood. The doping violation threshold (haematological values) is 0.10 g/L.

- Aeronautic (FAI)
- Archery (FITA)
- Automobile (FIA)
- Karate (WKF)
- Motorcycling (FIM)
- Powerboating (UIM)

P2. BETA-BLOCKERS

Unless otherwise specified, beta-blockers are prohibited *In-Competition* only, in the following sports.

- Aeronautic (FAI)
- Archery (FITA) (also prohibited *Out-of-Competition*)
- Automobile (FIA)
- Billiards (all disciplines) (WCBS)
- Boules (CMSB)
- Bridge (FMB)
- Darts (WDF)
- Golf (IGF)
- Ninepin and Tenpin Bowling (FIQ)
- Powerboating (UIM)
- Shooting (ISSF, IPC) (also prohibited *Out-of-Competition*)
- Skiing/Snowboarding (FIS) in ski jumping, freestyle aerials/halfpipe and snowboard halfpipe/big air

Beta-blockers include, but are not limited to, the following:

Acebutolol, alprenolol, atenolol, betaxolol, bisoprolol, bunolol, carteolol, carvedilol, celiprolol, esmolol, labetalol, levobunolol, metipranolol, metoprolol, nadolol, oxprenolol, pindolol, propranolol, sotalol, timolol.

Fédération Internationale de Natation

CORNEL MARCULESCU
EXECUTIVE DIRECTOR

MEMORANDUM

TO: **All FINA MEMBER FEDERATIONS**

FROM: **FINA, Lausanne**

DATE: **September 30, 2011**

RE: **2012 Prohibited List**

Dear Madam or Sir,

The 2012 List of Prohibited Substances and Methods is now available. This List will take effect on **January 1, 2012.**

Noteworthy changes compared to the 2011 List include:

Formoterol added as an exception to beta-2 agonists
One of the most significant changes is the removal of formoterol from Section 3 'Beta-2 Agonists' of the List when taken by inhalation at therapeutic dosages. Taking into account recent research results and requests by members of the sports community, inhaled formoterol at therapeutic doses is no longer prohibited.

The List prohibits the administration of all beta-2 agonists except salbutamol (maximum 1600 micrograms over 24 hours), salmeterol when taken by inhalation, and now formoterol (maximum 36 micrograms taken over 24 hours).

The issue of beta-2 agonists will continue to be a focus of WADA's research activity in order to ensure that the administration of large doses or by systemic routes of these substances is prevented and prohibited, but that the appropriate care and treatment of asthmatic athletes is facilitated.

Nicotine placed on monitoring program
In order to detect potential patterns of abuse, nicotine has been placed on WADA's 2012 Monitoring Program. It is not WADA's intention to target smokers, rather to monitor the effects nicotine can have on performance when taken in oral tobacco products such as snus.

Nicotine is one of several stimulants added to the Monitoring Program, along with the narcotics hydrocone and tramadol. Out-of-competition use of glucocorticosteroids has also been included.

We remain at your disposal for any questions you may have.

Sincerely,

Cornel Marculescu
Executive Director

CM/jl