



REAL FEDERACIÓN ESPAÑOLA DE FÚTBOL

Temporada 2019/2020

CIRCULAR Nº 36

LISTA DE PROHIBICIONES DE LA AGENCIA MUNDIAL ANTIDOPAJE 2020

Circular nº 1695 de la FIFA

Por medio de la presente, la RFEF desea comunicar a todos sus afiliados el contenido de la Circular FIFA nº 1695 de 31 de octubre de 2019, referente a la Lista de Prohibiciones para el año 2020 publicada por la Agencia Mundial Antidopaje (AMA) y aprobada por el Comité Ejecutivo de ésta en fecha 23 de septiembre de 2019.

En la citada Lista de Prohibiciones, cuya entrada en vigor se producirá a partir del 1 de enero de 2020, además de especificarse las sustancias y métodos prohibidos tanto dentro como fuera de las competiciones, se resumen las principales novedades introducidas en la nueva edición, así como una explicación general de las mismas.

Se adjunta el texto íntegro de la Circular de la FIFA y de la Lista de Prohibiciones 2020 de la AMA, a fin de que sean debidamente conocidas y atendidas por los afiliados a la RFEF.

En caso de necesitar cualquier otro tipo de información complementaria al respecto pueden contactar directamente con la FIFA a través del correo electrónico habilitado a tal fin (antidoping@fifa.org).

Todo lo anterior se comunica para el general conocimiento y a los efectos oportunos.

En Las Rozas de Madrid, a 31 de octubre de 2019.


Andreu Camps Povill
Secretario General

A LA ATENCIÓN DE LAS FEDERACIONES MIEMBRO DE LA FIFA

Circular n.º 1695

Zúrich, 31 de octubre de 2019
DSGa/kim-ian

Lista de Prohibiciones de la AMA 2020

Señoras y señores:


Les remitimos adjunta la Lista de Prohibiciones de la Agencia Mundial Antidopaje (AMA) 2020 (en adelante, «la lista») junto con el resumen de las principales modificaciones y notas explicativas, así como el programa de seguimiento de 2020 (en inglés).

La lista, aprobada por el Comité Ejecutivo de la AMA el 23 de septiembre de 2019, entrará en vigor el 1 de enero de 2020. En ella se especifican las sustancias y los métodos prohibidos dentro y fuera de las competiciones, así como las sustancias prohibidas en ciertos deportes.

Les rogamos compartan esta información en todas sus plataformas. Es de vital importancia que todos los deportistas y las personas de su entorno se tomen el tiempo de consultar la lista y, en caso de duda sobre alguna sustancia o método el particular, se dirijan a sus organizaciones antidopaje.

Si tuvieran alguna pregunta en relación con esta cuestión, pónganse en contacto con nosotros en la siguiente dirección: antidoping@fifa.org.

Atentamente,
FIFA



Alasdair Bell
Secretario general adjunto (Administración)

Adj.: - Lista de Prohibiciones de la AMA 2020
- Resumen de las principales modificaciones y notas explicativas de la AMA 2020
- Programa de seguimiento de la AMA 2020

c. c.: - Consejo de la FIFA
- Confederaciones
- Comisión de Medicina de la FIFA
- AMA

THE WORLD ANTI-DOPING CODE
INTERNATIONAL
STANDARD



PROHIBITED LIST

JANUARY 2020



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 2020

SUBSTANCES & METHODS PROHIBITED AT ALL TIMES

(IN- AND OUT-OF-COMPETITION)

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.

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, substances approved only for veterinary use) is prohibited at all times.

S1 ANABOLIC AGENTS

Anabolic agents are prohibited.

1. ANABOLIC ANDROGENIC STEROIDS (AAS)

when administered exogenously, including but not limited to:

1-Androstenediol (5 α -androst-1-ene-3 β ,17 β -diol);
1-Androstenedione (5 α -androst-1-ene-3,17-dione);
1-Androsterone (3 α -hydroxy-5 α -androst-1-ene-17-one);
1-Epiandrosterone (3 β -hydroxy-5 α -androst-1-ene-17-one);
1-Testosterone (17 β -hydroxy-5 α -androst-1-en-3-one);
4-Androstenediol (androst-4-ene-3 β ,17 β -diol);
4-Hydroxytestosterone (4,17 β -dihydroxyandrost-4-en-3-one);
5-Androstenedione (androst-5-ene-3,17-dione);
7 α -hydroxy-DHEA;
7 β -hydroxy-DHEA;
7-Keto-DHEA;
19-Norandrostenediol (estr-4-ene-3,17-diol);
19-Norandrostenedione (estr-4-ene-3,17-dione);
Androstanolone (5 α -dihydrotestosterone, 17 β -hydroxy-5 α -androstan-3-one);
Androstenediol (androst-5-ene-3 β ,17 β -diol);
Androstenedione (androst-4-ene-3,17-dione);
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-17 α -ol);
Dehydrochlormethyltestosterone (4-chloro-17 β -hydroxy-17 α -methylandrosta-1,4-dien-3-one);
Desoxymethyltestosterone (17 α -methyl-5 α -androst-2-en-17 β -ol and 17 α -methyl-5 α -androst-3-en-17 β -ol);
Drostanolone;
Epiandrosterone (3 β -hydroxy-5 α -androstan-17-one);
Epi-dihydrotestosterone (17 β -hydroxy-5 β -androstan-3-one);
Epitestosterone;
Ethylestrenol (19-norpregna-4-en-17 α -ol);
Fluoxymesterone;
Formebolone;
Furazabol (17 α -methyl [1,2,5]oxadiazolo[3',4':2,3]-5 α -androstan-17 β -ol);
Gestrinone;
Mestanolone;
Mesterolone;
Metandienone (17 β -hydroxy-17 α -methylandrosta-1,4-dien-3-one);
Metenolone;
Methandriol;
Methasterone (17 β -hydroxy-2 α ,17 α -dimethyl-5 α -androstan-3-one);
Methyl-1-testosterone (17 β -hydroxy-17 α -methyl-5 α -androst-1-en-3-one);
Methylclostebol;
Methyldienolone (17 β -hydroxy-17 α -methylestra-4,9-dien-3-one);
Methylnortestosterone (17 β -hydroxy-17 α -methylestr-4-en-3-one);
Methyltestosterone;
Metribolone (methyltrienolone, 17 β -hydroxy-17 α -methylestra-4,9,11-trien-3-one);
Mibolerone;
Nandrolone (19-nortestosterone);
Norboletone;

Norclostebol (4-chloro-17 β -ol-estr-4-en-3-one);
 Norethandrolone;
Oxabolone;
 Oxandrolone;
 Oxymesterone;
 Oxymetholone;
Prasterone (dehydroepiandrosterone, DHEA,
 3 β -hydroxyandrost-5-en-17-one);
 Prostanazol (17 β -[[tetrahydropyran-2-yl]oxy]-1'H-
 pyrazolo[3,4:2,3]-5 α -androstane);
Quinbolone;
Stanozolol;
 Stenbolone;
Testosterone;
 Tetrahydrogestrinone (17-hydroxy-18 α -homo-19-nor-17 α -
 pregna-4,9,11-trien-3-one);
 Trenbolone (17 β -hydroxyestr-4,9,11-trien-3-one);

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

.....
2. OTHER ANABOLIC AGENTS

Including, but not limited to:

Clenbuterol, selective androgen receptor modulators
 [SARMs, e.g. andarine, LGD-4033 (ligandrol), enobosarm
 (ostarine) and RAD140], tibolone, zeranol and zilpaterol.

**S2 PEPTIDE HORMONES, GROWTH FACTORS,
 RELATED SUBSTANCES, AND MIMETICS**

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

**1. Erythropoietins (EPO) and agents affecting erythropoiesis,
 including, but not limited to:**

- 1.1 Erythropoietin-Receptor Agonists, e.g.**
 Darbepoetins (dEPO);
 Erythropoietins (EPO);
 EPO based constructs [e.g. EPO-Fc, methoxy polyeth-
 ylene glycol-epoetin beta (CERA)];
 EPO-mimetic agents and their constructs
 [e.g. CNTO-530, peginesatide].

- 1.2 Hypoxia-inducible factor (HIF) activating agents, e.g.**
 Cobalt;
 Daprodustat (GSK1278863);
 Molidustat (BAY 85-3934);
 Roxadustat (FG-4592);
 Vadadustat (AKB-6548);
 Xenon.

- 1.3 GATA inhibitors, e.g.**
 K-11706.

- 1.4 TGF-beta (TGF- β) signalling inhibitors, e.g.**
 Luspatercept;
 Sotatercept.

- 1.5 Innate repair receptor agonists, e.g.**
 Asialo EPO;
 Carbamylated EPO (CEPO).

2. Peptide Hormones and their Releasing Factors.

2.1 Chorionic Gonadotrophin (CG) and Luteinizing Hormone (LH) and their releasing factors in males, e.g. Buserelin, deslorelin, gonadorelin, goserelin, leuprorelin, nafarelin and triptorelin;

2.2 Corticotrophins and their releasing factors, e.g. Corticorelin;

2.3 Growth Hormone (GH), its fragments and releasing factors, including, but not limited to:
Growth Hormone fragments, e.g. AOD-9604 and hGH 176-191;
Growth Hormone Releasing Hormone (GHRH) and its analogues, e.g. CJC-1293, CJC-1295, sermorelin and tesamorelin;
Growth Hormone Secretagogues (GHS), e.g. Lenomorelin (ghrelin) and its mimetics, e.g. Anamorelin, ipamorelin, macimorelin and tabimorelin;
GH-Releasing Peptides (GHRPs), e.g. Alexamorelin, GHRP-1, GHRP-2 (pralmorelin), GHRP-3, GHRP-4, GHRP-5, GHRP-6, and examorelin (hexarelin).

3. Growth Factors and Growth Factor Modulators, including, but not limited to:

- F**ibroblast Growth Factors (FGFs);
- H**epatocyte Growth Factor (HGF);
- I**nsulin-like Growth Factor-1 (IGF-1) and its analogues;
- M**echano Growth Factors (MGFs);
- P**latelet-Derived Growth Factor (PDGF);
- T**hymosin- β 4 and its derivatives e.g. TB-500;
- V**ascular-Endothelial Growth Factor (VEGF);

and other growth factors or growth factor modulators affecting muscle, tendon or ligament protein synthesis/ degradation, vascularisation, energy utilization, regenerative capacity or fibre type switching.

S3 BETA-2 AGONISTS

All selective and non-selective beta-2 agonists, including all optical isomers, are prohibited.

Including, but not limited to:

- F**enoterol;
- F**ormoterol;
- H**igenamine;
- I**ndacaterol;
- O**lodaterol;
- P**rocaterol;
- R**eproterol;
- S**albutamol;
- S**almeterol;
- T**erbutaline;
- T**retoquinol (trimetoquinol);
- T**ulobuterol;
- V**ilanterol.

Except:

- Inhaled salbutamol: maximum 1600 micrograms over 24 hours in divided doses not to exceed 800 micrograms over 12 hours starting from any dose;
- Inhaled formoterol: maximum delivered dose of 54 micrograms over 24 hours;
- Inhaled salmeterol: maximum 200 micrograms over 24 hours.

The presence in urine of salbutamol in excess of 1000 ng/mL or formoterol in excess of 40 ng/mL is not consistent with therapeutic use of the substance and will be considered as an *Adverse Analytical Finding (AAF)* unless the *Athlete* proves, through a controlled pharmacokinetic study, that the abnormal result was the consequence of a therapeutic dose (by inhalation) up to the maximum dose indicated above.

S4 HORMONE AND METABOLIC MODULATORS

The following hormone and metabolic modulators are prohibited:

1. Aromatase inhibitors including, but not limited to:
 - 2-Androst-enol** (5 α -androst-2-en-17-ol);
 - 2-Androst-enone** (5 α -androst-2-en-17-one);
 - 3-Androst-enol** (5 α -androst-3-en-17-ol);
 - 3-Androst-enone** (5 α -androst-3-en-17-one);
 - 4-Androst-ene-3,6,17-trione** (6-oxo);
 - Aminoglutethimide**;
 - Anastrozole**;
 - Androsta-1,4,6-triene-3,17-dione** (androstatrienedione);
 - Androsta-3,5-diene-7,17-dione** (arimistane);
 - Exemestane**;
 - Formestane**;
 - Letrozole**;
 - Testolactone**.
2. Selective estrogen receptor modulators (SERMs) including, but not limited to:
 - Bazedoxifene**;
 - Ospemifene**;
 - Raloxifene**;
 - Tamoxifen**;
 - Toremifene**.
3. Other anti-estrogenic substances including, but not limited to:
 - Clomifene**;
 - Cyclofenil**;
 - Fulvestrant**.
4. Agents preventing activin receptor IIB activation including, but not limited, to:
 - Activin A-neutralizing antibodies**;
 - Activin receptor IIB competitors** such as:
 - Decoy activin receptors (e.g. ACE-031);
 - Anti-activin receptor IIB antibodies (e.g. Bimagrumab);
 - Myostatin inhibitors** such as:
 - Agents reducing or ablating myostatin expression;
 - Myostatin-binding proteins (e.g. Follistatin, myostatin propeptide);
 - Myostatin-neutralizing antibodies (e.g. Domagrozumab,

landogrozumab, stamulumab).

5. Metabolic modulators:

- 5.1 Activators of the AMP-activated protein kinase (AMPK), e.g. AICAR, SR9009; and Peroxisome Proliferator Activated Receptor δ (PPAR δ) agonists, e.g. 2-(2-methyl-4-((4-methyl-2-(4-(trifluoromethyl)phenyl)thiazol-5-yl)methylthio)phenoxy) acetic acid (GW1516, GW501516);
- 5.2 Insulins and insulin-mimetics;
- 5.3 Meldonium;
- 5.4 Trimetazidine.

S5 DIURETICS AND MASKING AGENTS

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

Including, but not limited to:

- Desmopressin; probenecid; plasma expanders, e.g. intravenous administration of albumin, dextran, hydroxyethyl starch and mannitol.
- Acetazolamide; amiloride; bumetanide; canrenone; chlortalidone; etacrynic acid; furosemide; indapamide; metolazone; spironolactone; thiazides, e.g. Bendroflumethiazide, chlorothiazide and hydrochlorothiazide; triamterene and vaptans, e.g. Tolvaptan.

Except:

- Drospirenone; pamabrom; and ophthalmic use of carbonic anhydrase inhibitors (e.g. Dorzolamide, brinzolamide);
- Local administration of felypressin in dental anaesthesia.

The detection in an *Athlete's Sample* at all times or *In-Competition*, as applicable, of any quantity of the following substances subject to threshold limits: formoterol, salbutamol, cathine, ephedrine, methylephedrine and pseudoephedrine, in conjunction with a diuretic or masking agent, will be considered as an *Adverse Analytical Finding (AAF)* unless the *Athlete* has an approved *Therapeutic Use Exemption (TUE)* for that substance in addition to the one granted for the diuretic or masking agent.

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 haemoglobin products, e.g. Haemoglobin-based blood substitutes and microencapsulated haemoglobin products, excluding supplemental oxygen by inhalation.
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*, to alter the integrity and validity of *Samples* collected during *Doping Control*.
Including, but not limited to:
Sample substitution and/or adulteration, e.g. Addition of proteases to *Sample*.
2. Intravenous infusions and/or injections of more than a total of 100 mL per 12 hour period except for those legitimately received in the course of hospital treatments, surgical procedures or clinical diagnostic investigations.

M3 GENE AND CELL DOPING

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

1. The use of nucleic acids or nucleic acid analogues that may alter genome sequences and/or alter gene expression by any mechanism. This includes but is not limited to gene editing, gene silencing and gene transfer technologies.
2. The use of normal or genetically modified cells.

SUBSTANCES & METHODS PROHIBITED *IN-COMPETITION*

IN ADDITION TO THE CLASSES S0 TO S5 AND M1 TO M3 DEFINED ABOVE, THE FOLLOWING CLASSES ARE PROHIBITED *IN-COMPETITION*:

PROHIBITED SUBSTANCES

S6 STIMULANTS

All stimulants, including all optical isomers, e.g. *d*- and *l*- where relevant, are prohibited.

Stimulants include:

a: Non-Specified Stimulants:

Adrafinil;
Amfepramone;
Amfetamine;
Amfetaminil;
Amiphenazole;
Benfluorex;
Benzylpiperazine;
Bromantan;
Clobenzorex;
Cocaine;
Cropropamide;
Crotetamide;
Fencamine;
Fenetylline;
Fenfluramine;
Fenproporex;
Fonturacetam [4-phenylpiracetam (carphedon)];
Furfenorex;
Lisdexamfetamine;
Mefenorex;
Mephentermine;
Mesocarb;
Metamfetamine(*d*-);
p-methylamfetamine;
Modafinil;
Norfenfluramine;
Phendimetrazine;
Phentermine;
Prenylamine;
Prolintane.

A stimulant not expressly listed in this section is a *Specified Substance*.

b: Specified Stimulants:

Including, but not limited to:

3-Methylhexan-2-amine (1,2-dimethylpentylamine);
4-Methylhexan-2-amine (methylhexaneamine);
4-Methylpentan-2-amine (1,3-dimethylbutylamine);
5-Methylhexan-2-amine (1,4-dimethylpentylamine);
Benzfetamine;
Cathine**;
Cathinone and its analogues, e.g. mephedrone, methedrone, and α - pyrrolidinovalerophenone;
Dimetamfetamine (dimethylamphetamine);
Ephedrine***;
Epinephrine**** (adrenaline);
Etamivan;
Etilamfetamine;
Etilefrine;
Famprofazone;
Fenbutrazate;
Fencamfamin;
Heptaminol;
Hydroxyamfetamine (parahydroxyamphetamine);
Isometheptene;
Levmetamfetamine;
Meclofenoxate;
Methylenedioxymethamphetamine;
Methylephedrine***;
Methylphenidate;
Nikethamide;
Norfenefrine;
Octodrine (1,5-dimethylhexylamine);
Octopamine;
Oxilofrine (methysynephrine);
Pemoline;
Pentetrazol;
Phenethylamine and its derivatives;
Phenmetrazine;
Phenpromethamine;
Propylhexedrine;
Pseudoephedrine****;

Selegiline;
Sibutramine;
Strychnine;
Tenamfetamine (methylenedioxyamphetamine);
Tuaminoheptane;

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

Except:

- Clonidine;
- Imidazole derivatives for dermatological, nasal or ophthalmic use and those stimulants included in the 2020 Monitoring Program*.

- * Bupropion, caffeine, nicotine, phenylephrine, phenylpropanolamine, pipradrol, and synephrine: These substances are included in the 2020 Monitoring Program, and are not considered *Prohibited Substances*.
- ** Cathine: Prohibited when its concentration in urine is greater than 5 micrograms per milliliter.
- *** Ephedrine and methylephedrine: Prohibited when the concentration of either in urine is greater than 10 micrograms per milliliter.
- **** Epinephrine (adrenaline): Not prohibited in local administration, e.g. nasal, ophthalmologic, or co-administration with local anaesthetic agents.
- ***** Pseudoephedrine: Prohibited when its concentration in urine is greater than 150 micrograms per milliliter.

S7 NARCOTICS

The following narcotics, including all optical isomers, e.g. *d-* and *l-* where relevant, are prohibited:

Buprenorphine;
Dextromoramide;
Diamorphine (heroin);
Fentanyl and its derivatives;
Hydromorphone;
Methadone;
Morphine;
Nicomorphine;
Oxycodone;
Oxymorphone;
Pentazocine;
Pethidine.

S8 CANNABINOIDS

All natural and synthetic cannabinoids are prohibited, e.g.

- In cannabis (hashish, marijuana) and cannabis products
- Natural and synthetic tetrahydrocannabinols (THCs)
- Synthetic cannabinoids that mimic the effects of THC

Except:

- Cannabidiol.

S9 GLUCOCORTICOIDS

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

Including but not limited to:

Betamethasone;
Budesonide;
Cortisone;
Deflazacort;
Dexamethasone;
Fluticasone;
Hydrocortisone;
Methylprednisolone;
Prednisolone;
Prednisone;
Triamcinolone.

SUBSTANCES PROHIBITED IN PARTICULAR SPORTS

P1 BETA-BLOCKERS

Beta-blockers are prohibited *In-Competition* only, in the following sports, and also prohibited *Out-of-Competition* where indicated.

- Archery (WA)*
- Automobile (FIA)
- Billiards (all disciplines) (WCBS)
- Darts (WDF)
- Golf (IGF)
- Shooting (ISSF, IPC)*
- Skiing/Snowboarding (FIS) in ski jumping, freestyle aerials/halfpipe and snowboard halfpipe/big air
- Underwater sports (CMAS) in constant-weight apnoea with or without fins, dynamic apnoea with and without fins, free immersion apnoea, Jump Blue apnoea, spearfishing, static apnoea, target shooting, and variable weight apnoea.

*Also prohibited *Out-of-Competition*

Including, but not limited to:

A cebutolol;	L abetalol;
A lprenolol;	M etipranolol;
A tenolol;	M etoprolol;
B etaxolol;	N adolol;
B isoprolol;	O xprenolol;
B unolol;	P indolol;
C arteolol;	P ropranolol;
C arvedilol;	S otalol;
C eliprolol;	T imolol.
E smolol;	

www.wada-ama.org



THE 2020 MONITORING PROGRAM*

The following substances are placed on the 2020 Monitoring Program:

- 1. Anabolic agents:** *In- and Out-of-Competition:* ecdysterone
- 2. Beta-2-agonists:** *In- and Out-of-Competition:* any combination of beta-2-agonists
- 3. 2-ethylsulfanyl-1H-benzimidazole (bemitil):** *In- and Out-of-Competition*
- 4. Stimulants:** *In-Competition only:* bupropion, caffeine, nicotine, phenylephrine, phenylpropanolamine, pipradrol and synephrine
- 5. Narcotics:** *In-Competition only:* codeine, hydrocodone and tramadol
- 6. Glucocorticoids:** *In-Competition* (by routes of administration other than oral, intravenous, intramuscular or rectal) and *Out-of-Competition* (all routes of administration)

*The World Anti-Doping Code (Article 4.5) states: "WADA, in consultation with Signatories and governments, shall establish a monitoring program regarding substances which are not on the Prohibited List, but which WADA wishes to monitor in order to detect patterns of misuse in sport."

SUMMARY OF MAJOR MODIFICATIONS AND EXPLANATORY NOTES

2020 PROHIBITED LIST

Substances and methods prohibited at all times (In- and Out-of-Competition)

Prohibited Substances

S1 ANABOLIC AGENTS

1 Anabolic Androgenic Steroids (AAS)

- The sub-division of anabolic androgenic steroids (AAS) into 'a. exogenous' and 'b. endogenous' was removed and all AAS were joined into one class. The prohibited substances in S1 have not changed but two additional examples (methylclostebol and 1-epiandrosterone) were included. This change was made to reflect the fact that all anabolic agents when administered exogenously are prohibited and harmonizes the presentation of S1 with other classes of the List which do not distinguish endogenous from exogenous. The determination of the substances' origin (i.e. whether they are of endogenous or exogenous nature) is, as before, regulated in the corresponding technical document TD2019IRMS or any other applicable technical document (e.g. TD2019NA) or Technical Letter.

2 Other Anabolic Agents

- LGD-4033 is now also listed by another commonly used name, ligandrol.

S2 PEPTIDE HORMONES, GROWTH FACTORS, RELATED SUBSTANCES, AND MIMETICS

- After re-evaluation, argon was removed from the Prohibited List because it is considered to no longer meet the criteria for inclusion.
- TGF- β inhibitors: The word "signalling" was added to better reflect the predominant mechanism of action of the listed substances. It now reads "TGF- β signalling inhibitors".

S4 HORMONE AND METABOLIC MODULATORS

- Bazedoxifene and ospemifene were added as additional examples of selective estrogen receptor modulators.

Prohibited Methods

M2 CHEMICAL AND PHYSICAL MANIPULATION

- The wording was changed to clarify that the context of protease prohibition refers only to the tampering of samples. Topical and systemic therapeutic use of proteases are not prohibited.

M3 GENE AND CELL DOPING

- Classes M3.1 and M3.2 were combined, since the effects of gene doping on gene expression can be produced by technologies other than gene editing.
- "Transcriptional, post-transcriptional or epigenetic regulation of gene expression" were changed to "gene expression by any mechanism" to encompass a wide range of mechanisms without exhaustively listing all steps at which gene expression may be altered.
- "Gene silencing" and "gene transfer" were added as further examples of gene doping methods.
- "Polymers of" was removed to reflect standard scientific terminology for nucleic acids.
- Regarding stem cells, reiterating the statement in the Prohibited List Q & A, non-transformed stem cells, used alone (with no growth factors or other hormones added) for healing injuries are not prohibited, as long as they return the function of the affected area to normal and do not enhance it.

Substances and Methods Prohibited In-Competition

S6 STIMULANTS

- Octodrine (1,5-dimethylhexylamine) was added as an example of Specified Stimulants. This substance was recently found in some dietary supplements.
- It is clarified that administration of imidazole derivatives is not prohibited when used by dermatological, nasal and ophthalmological routes.

S7 NARCOTICS

- For clarity it was stated that all optical isomers are prohibited. This clarifies the prohibited status of optical isomers such as levomethadone.

S8 CANNABINOIDS

- The wording of S8 Cannabinoids was updated for greater clarity. The substances that are prohibited were not changed. All natural and synthetic cannabinoids are prohibited including any preparation from cannabis or any synthetic cannabinoid. Natural Δ^9 -tetrahydrocannabinol (THC) and synthetic THC (e.g. dronabinol) are prohibited. All synthetic cannabinoids that mimic the effects of THC are prohibited.
- Cannabidiol (CBD) is not prohibited. However, athletes should be aware that some CBD products extracted from cannabis plants may also contain THC that could result in a positive test for a prohibited cannabinoid.

Monitoring Program

- Ecdysterone was included in the Monitoring Program to assess patterns and prevalence of misuse. While other ecdysteroids exist, most data (especially concerning effects on athletic performance) and stakeholder comments centre around ecdysterone, and consequently it was added to the Monitoring Program of 2020.

* For further information on previous modifications and clarifications please consult the Prohibited List Q & A at www.wada-ama.org/en/questions-answers/prohibited-list-qa