



## 2021 Scientific Research Grant Topics

### Call for Proposals

#### Background

Established in 1999, the World Anti-Doping Agency (WADA) is an international, independent agency composed and funded equally by the sport movement and governments of the world. Our key activities include scientific research, education, development of anti-doping capacity, investigations, and monitoring compliance with the World Anti-Doping Code (Code) — the document harmonizing anti-doping policies across all sports and all countries. WADA's mission is to lead a collaborative worldwide movement for doping-free sport.

Science is key to driving advances in anti-doping. Innovative research helps the anti-doping community identify new trends in doping, new drugs, new delivery mechanisms and new methods of detection.

WADA's [Health, Medical and Research Committee](#) (HMRC), which is one of the Agency's Standing Committees, monitors scientific developments in sport with the aim of safeguarding doping-free sport practice. With this aim, it oversees the following WADA Expert Groups: [Prohibited List](#), [Therapeutic Use Exemptions \(TUEs\)](#), [Laboratory](#) and [Gene and Cell Doping](#). The HRMC is also involved in the selection of [WADA-funded Scientific Research Grant Projects](#).

Since 2001, WADA has committed close to US\$ 83 million to helping researchers around the world develop breakthroughs in anti-doping science. The Agency's scientific research grants are critical because they increase the volume of research dedicated to developing new and improved detection methods for performance-enhancing substances and methods as well as attract high level researchers to this cause.

#### WADA-funded Scientific Research Grant Projects.

On a yearly basis, WADA promotes and funds [Scientific Research Grant Projects](#) on development or optimization of analytical tools for the detection of doping substances or methods, growth of the Athlete Biological Passport; as well as the pharmacology of prohibited substances and of drug combinations. **With this objective, WADA gives high priority to projects with direct and imminent applicability** (including human studies if applicable) in the fight against doping in sport; and therefore, **rarely funds basic research projects**. More specifically, applicants are encouraged to propose translational research beyond the discovery stage, and the proposed projects should aim to attain concrete deliverables by the end of the funding period.

## 2021 Scientific Research Grant Topics

For 2021, the HMRC has identified relevant areas of research in the field of anti-doping; in particular, those related to the [2021 List of Prohibited Substances and Methods](#). Proposals received by **1 March 2021 (24:00 GMT)** will be reviewed by external independent reviewers and an additional panel of experts. The final ranking and recommendation will be established by the HMRC.

It should be noted that higher priority will be granted to proposals addressing:

- Detection/improvement of detection of peptide and protein hormones and other growth factors, preferably by, but not limited to, chromatography-mass spectrometric methods;
- Improved window (retrospectivity) of detection for prohibited substances/methods (e.g. detection of new long-term metabolites including administration studies, improved methodologies of detection, multianalytes);
- Thresholds or limits to distinguish permitted (e.g. out-of-competition or route) from prohibited use (e.g. beta-2-agonists, stimulants, glucocorticoids), natural sources vs intended use or presence in food residues;
- Detection of autologous blood transfusion (including by proteomics or validation of biomarkers or molecular signatures);
- The Athlete Biological Passport (e.g. new biomarkers of doping or confounding factors relevant to the hematological, steroidal or endocrine modules); and
- Selected Certified Reference Material synthesis (please consult WADA for materials needed).

For 2021, proposals will be classified as follows:

**A. Detection of doping substances/methods: methodologies in analytical chemistry;** and, in particular research addressing:

- The detection of doping substances and methods using chromatography-mass spectrometric methods or new methods in analytical chemistry.

**B. Detection of doping substances/methods: affinity-binding and biochemical methodologies;** and, in particular research addressing:

- The detection of doping substances and methods using immunoassays, other assays based on affinity-binding reagents or other biochemical methods; and
- Multiplexing of validated affinity binding-based assays and other biochemical approaches.

**C. Pharmacological studies of doping substances/methods;** and, in particular research addressing:

- Establishment and/or refinement of threshold/reporting levels of prohibited substances in urine/blood that may be produced endogenously, or present in foodstuff or as food contaminants, or associated with doping effects above a certain dose or depending on route of administration;
- Pharmacokinetics/pharmacodynamics/metabolism of prohibited substances and methods including impact of sex, genetics, and environmental factors affecting excretion, detection or biological action;
- Doping potential and strategies for detection of drugs, drug interactions (cocktail formulations) or drug micro-dosing; and

- Long-term metabolites or markers of doping substances.

**D. The Athlete Biological Passport (ABP);** and, in particular research addressing:

- Discovery and validation of new discriminant markers for the haematological and steroidal modules of the ABP, including metabolomic and proteomic approaches to discovery of new markers;
- Evaluation of confounding factors and validation of new biomarkers that increase the specificity of the current modules; and
- Expansion of the ABP approach to other target analytes (*e.g.* peptide hormones as part of the endocrine module), analytical methods for detecting ABP markers (*e.g.* sampling of capillary blood as dried blood spots), and other approaches for analysis of biological data (*e.g.* a screening tool to identify samples that are not consistent with other samples from the same athlete).

**E. Detection of doping substances/methods: molecular biology, “omics” and miscellaneous methodologies;** and, in particular research addressing:

- The *in vivo* detection of gene doping, including new methods to detect emerging gene transfer, gene silencing, and gene editing technologies;
- Validation of molecular and metabolic signatures *in vivo* to detect use of prohibited substances and methods; and
- Detection of doping with normal (*e.g.* stem cells) or genetically modified cells in muscle(s), connective tissues or other tissues and organs relevant in sport.

**Call for Proposals for 2021 Scientific Research Grants**

Scientists interested in submitting proposals for the above-noted topics are invited to submit their applications by **1 March 2021 (24:00 GMT)** using the [WADA Grants](#) platform.

We would kindly ask that all applications be submitted in English (along with English translations of related documentation appended as relevant) and include the following enclosures:

1. A project description (max. 5 pages) including objectives, methodology, experimental design, timelines, preliminary results and relevant bibliographic references;
  2. Information about the researchers (curriculum vitae), their home institution, and resources;
  3. \* For research involving human subjects and/or human samples (including existing material): a copy of local ethics committee approval, participant information letter and consent form; and
  4. \* For research involving animals, a copy of animal care committee approval.
- \* If these documents are pending at the time of submission, they will be required once the grant is approved for funding.

In parallel, the full original application form should be printed, signed by all investigators and sent to:

**Ms. Hai-Yen Huynh**  
Executive Assistant  
Science & Medicine Department  
World Anti-Doping Agency  
800, Place Victoria (Suite 1700)  
PO Box 120  
Montreal (Quebec) H4Z 1B7  
CANADA

Responses to proposals can be expected by mid-October 2021.

WADA thanks all scientists in advance for their valuable submissions, in line with the above topics, aimed at helping advance anti-doping research in the protection of clean sport.

Sincerely,

Prof. Lars Engebretsen  
Chair  
Health Medical and Research Committee

Mr. Olivier Niggli  
Director General