



2022 Scientific Research Grant Topics

Call for Proposals

Background

Formed in 1999, the World Anti-Doping Agency (WADA) is an international independent agency composed and funded by the Sport Movement and Governments of the world. As the global regulatory body, WADA's primary role is to develop, harmonize and coordinate anti-doping rules and policies across all sports and countries. Our key activities include: ensuring and monitoring effective implementation of the World Anti-Doping Code and its related International Standards; scientific and social science research; education; intelligence and investigations; and, building antidoping capacity with anti-doping organizations worldwide.

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 Advisory Groups: [Prohibited List](#), [Therapeutic Use Exemptions \(TUEs\)](#), [Laboratory](#) and [Gene and Cell Doping](#). The HMRC Committee is also involved in the selection of [WADA-funded Scientific Research Grant Projects](#).

Since 2001, WADA has committed USD 86.5 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 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.

Applicants are encouraged to consult with anti-doping laboratories (e.g., [WADA-accredited laboratories](#)) or [anti-doping organizations](#) during development of the research plan to help ensure practical applicability of the research.

2022 Scientific Research Grant Topics

For 2022, the HMRC has identified relevant areas of research in the field of anti-doping; in particular, those related to the [2022 List of Prohibited Substances and Methods](#).

Proposals received by **1 March 2022 (23:55 GMT)** will be reviewed by external independent reviewers and WADA's Scientific Project Review Working Group. 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, and including methods to distinguish recombinant proteins from protein products of low-frequency genetic variants;
- Improved window (retrospectivity) of detection for prohibited substances/methods (e.g. detection of new long-term metabolites including administration studies, improved methodologies of detection, multi-analytes);
- Thresholds or limits of prohibited substances or their metabolites 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;
- Evaluation of the long-term cellular and physiological effects of use of prohibited substances (e.g., muscle memory of doping)
- Detection of autologous blood transfusion, including proteomic biomarker discovery or validation of candidate biomarkers or molecular signatures;
- The Athlete Biological Passport (e.g. new biomarkers of doping or confounding factors relevant to the hematological, steroidal or endocrine [growth hormone] modules); and
- Selected Certified Reference Material synthesis (please consult WADA for materials needed).

For 2022, 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 or their metabolites 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 on 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, 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 detection of gene doping, including new methods to detect emerging gene transfer, gene silencing, and gene editing technologies evaluated in samples from human or animal studies;
- Validation of molecular and metabolic signatures to detect use of prohibited substances and methods; and
- Detection of prohibited cell therapies (*e.g.*, genetically modified cells) in muscle(s), connective tissues or other tissues and organs relevant in sport.

Call for Proposals for 2022 Scientific Research Grants

Scientists interested in submitting proposals for the above-noted topics are invited to submit their applications by **1 March 2022 (23:55 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. A detailed budget;

4. * 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
 5. * 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.

The signature section of the application form should be signed by all investigators and submitted using the [WADA Grants](#) platform. Electronic signatures are acceptable.

Responses to proposals can be expected by mid-October 2022.

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