

## 2024 Scientific Research Grants

### Call for Proposals

#### Background

The World Anti-Doping Agency (WADA) was established in 1999 as an international independent agency to lead a collaborative worldwide movement for doping-free sport. WADA's governance and funding is based on equal partnership between the Sport Movement and Governments of the world. WADA's primary role is to develop, harmonize and coordinate anti-doping rules and policies across all sports and countries. Our key activities include scientific and social science research; education; intelligence and investigations; development of anti-doping capacity; and monitoring of compliance with the World Anti-Doping Code.

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 <u>Health, Medical and Research Committee</u> (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: <u>Prohibited List, Therapeutic Use Exemption (TUE)</u>, <u>Laboratory</u> and <u>Gene and Cell Doping</u>. The HMRC Committee is also responsible for the selection of <u>WADA-funded Scientific Research Grant Projects</u>.

Since 2001, WADA has committed more than USD 90 million to helping researchers around the world develop breakthroughs in anti-doping science. The Agency's scientific research grants are critical because they facilitate research dedicated to developing new and improved detection methods for prohibited performance-enhancing substances and methods as well as attract high level researchers to this cause.

#### WADA-funded Scientific Research Grant Projects

WADA promotes and funds <u>Scientific Research Projects</u> on development or optimization of analytical tools for the detection of doping substances or methods, growth of the Athlete Biological Passport, the pharmacology of prohibited substances and of drug combinations, evaluation of doping potential and anti-doping testing programs. **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., <u>WADA-accredited laboratories</u>) or <u>anti-doping organizations</u> during development of the research plan to help ensure practical applicability of the research.

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### 2024 Scientific Research Grant Topics

For 2024, the HMRC has identified relevant areas of research in the field of anti-doping; in particular, those related to the 2024 List of Prohibited Substances and Methods.

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

- Detection/improvement of detection/quantification of peptide and protein hormones and growth factors, preferably by, but not limited to, chromatography-mass spectrometric methods;
- Improved window (retrospectivity) of detection of prohibited substances/methods (e.g., detection of new long-term metabolites including administration studies, improved methodologies of detection, analyte multiplexing);
- Pharmacokinetic studies to establish thresholds or minimum reporting levels of prohibited substances or their metabolites (e.g., beta-2 agonists, stimulants) to distinguish permitted (e.g., out-of-competition or route) from prohibited use, natural sources vs. intended use or presence in food residues;
- Detection of autologous blood transfusion, including 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 [markers of growth hormone] modules); and
- Selected Certified Reference Material synthesis (please consult WADA for materials needed).

For 2024, 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 affinitybinding 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/dried blood spots 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 or time 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:

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- Discovery and validation of new discriminant markers for the Hematological, Steroidal and Endocrine modules of the ABP, including transcriptomic, 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.* additional peptide hormones as part of the endocrine module), analytical methods for detecting ABP markers, alternative sample matrices, and other approaches for analysis of biological data.

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

- The detection of gene doping, including new sensitive and multiplexed 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;
- Detection of prohibited cell therapies (e.g., genetically modified cells) in muscle(s), connective tissues or other tissues and organs relevant in sport.

#### F. Scientific innovations\* to improve anti-doping programs; and, in particular, research addressing:

- Optimization of resources (efficacy and cost) in planning testing programs, specific analyses and sample retention:
- Improvements to the athletes' experience of sample collection; and
- Evaluation of the likelihood of positive test scenarios in results management.
- \* Projects primarily focused on social science research are not eligible.

#### Call for Proposals for 2024 Scientific Research Grants

As advertised in October 2023, WADA is moving to <u>a new year-round grant application system</u>, based on Expression of Interest (EOI) submission as a first step, followed by an invitation to submit a full application for selected research teams. Two cycles of EOI collection and review will take place during this inaugural year, to correspond to WADA's Executive Committee (ExCo) meetings scheduled for 2024.

For EOIs submission, using the <u>WADA Grants</u> platform, research teams are required to include a short description of the following items:

- 1. A brief project summary, which includes: background, aims, experimental design [analytical method, type and origin of samples and variables to be studied], deliverables and anticipated outcomes (500 words max.);
- Preliminary results (if available, 200 words max.);
- 3. Description of benefits to anti-doping (200 words max.);
- Research team expertise (200 words max.);
- 5. Project duration and budget.

Please refer to **Table 1** for deadlines for the first and second cycles of 2024. EOIs and full applications will be reviewed by external independent reviewers as well as WADA's Science and Medicine experts. The final ranking and recommendations will be established by the HMRC prior to the ExCo's approval.

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From 2025, three cycles will be held annually, and important deadlines will be communicated in June 2024.

Table 1. Deadlines for 2024 Research Grant Cycles 1 and 2

Cycle	Granting Year	EOI submitted by	EOI Decision	Full Application submission	Decision notice expected by
#1	2024	29-February-2024	late April-2024	31-May-2024	October-2024
#2	2024	30-June-2024	late August-2024	30-September-2024	January-2025

When an applicant is invited to submit a full application, the following enclosures will be requested:

- 1. A project description (maximum five pages) including objectives, methodology, experimental design, timelines, preliminary results and relevant bibliographical references;
- 2. Information about the researchers (curriculum vitae), their home institution and resources;
- A detailed budget:
- 4. \*For research involving human subjects and/or human samples (including existing material), a copy of the local ethics committee approval, participant information letter and consent form.
- 5. \*For research involving animals: a copy of animal care committee approval.

\*If these documents are pending at the time of submission, WADA may approve the proposal for funding contingent upon ethics review; however, these documents will be required once the grant is approved.

EOIs and full applications must be submitted in English. All other relevant documents should be translated if originals are in a language other than English.

Applicants are encouraged to contact WADA (science@wada-ama.org) for assistance with composition of the research team and access to biological samples, as well as other technical aspects.

The signature section of the application form should be signed by all investigators and submitted using the <u>WADA Grants</u> platform. Electronic signatures are acceptable.

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

Prof. Olivier Rabin

Senior Director

Science and Medicine

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