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Research Insider

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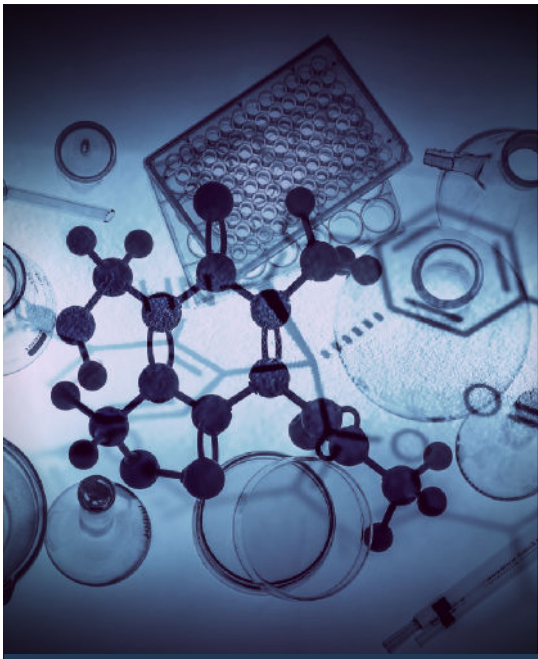

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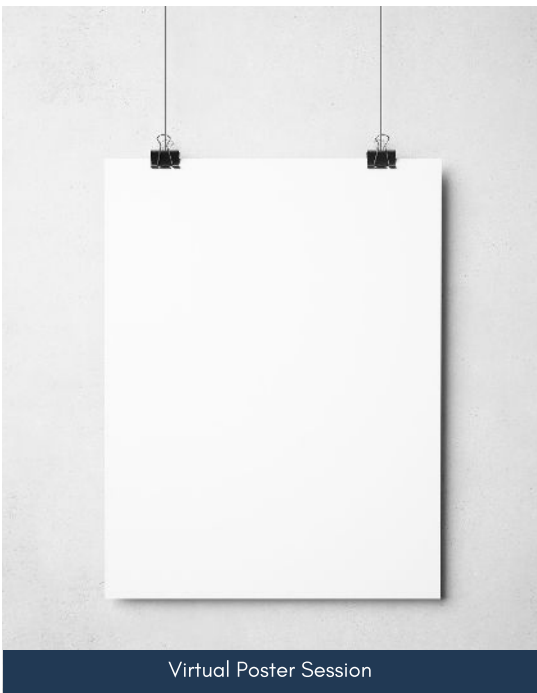

Virtual Poster Session

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TRANSITION

AT THE PARTNERSHIP FOR CLEAN COMPETITION

To All PCC Stakeholders:

Michael Pearlmutter informed the Board of Governors in April of his resignation as Executive Director of the Partnership for Clean Competition to pursue another opportunity with a philanthropic organization. We thank Michael for the seven years he committed to furthering anti-doping research and wish him well in his future endeavors.

Michael's last day was May 14th, and he has worked with all of us at the PCC to ensure a smooth transition.

During our period of transition, the Board of Governors wants all researchers, grant recipients, and supporters to be aware that the PCC and its founding partners remain committed to protecting the integrity of sport, and the PCC will continue to function without interruption.

We have begun the process of finding a new Executive Director, and will take this opportunity to ensure that the PCC continues to be set up for long-term success. In the meantime, the PCC's Board of Governors, Scientific Advisory Board, and Communications Director will continue the PCC's mission of funding anti-doping research and development globally until a new Executive Director is in place.

Sincerely,
PCC Board of Governors
Jon Coyles, MLB
Kevin Manara, NFL
Chris McCleary, USOPC
Ed Merrens, MD, USADA

Michael Pearlmutter left a letter for the anti-doping community before he departed.

You can read that letter here.

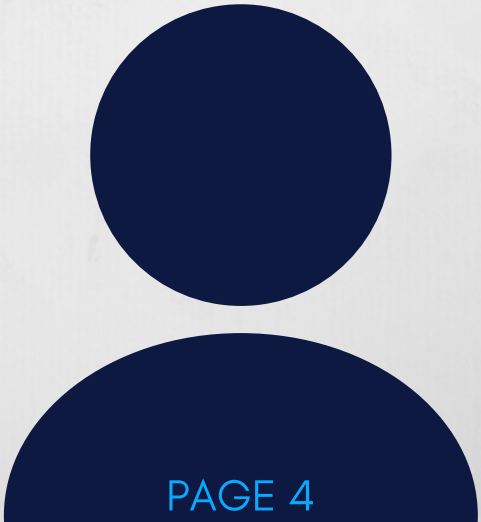
SEARCH: EXECUTIVE DIRECTOR

We're looking for our next Executive Director.

Apply now.

The Executive Director of the Partnership for Clean Competition is responsible for developing, directing and driving organizational strategy and overseeing all daily operations of the organization, including, without limitation, managing the organization's budget, fundraising and business development, grant administration, and scientific outreach, coordination and communication among and with the Board of Governors and Scientific Advisory Board.

cleancompetition.org/director



UPCOMING GRANT DEADLINE

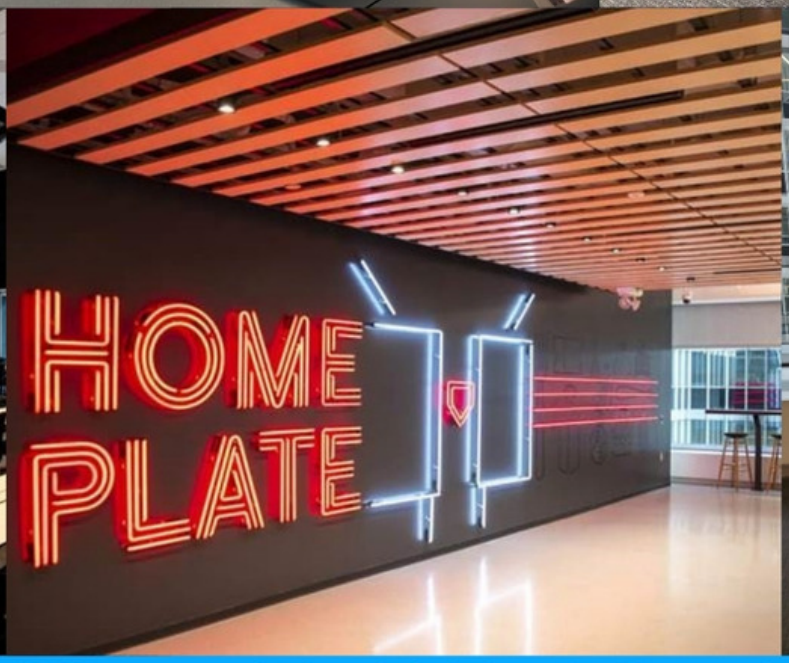
Pre-Applications Due: **July 1st**

Full Applications Due: **August 1st**

Fill out a short pre-application to get approval for a full grant or fellowship application. There are no maximum or minimum amounts for grant applications, though the average funding amount is roughly $200,000. To date, more than 100 projects have been funded in more than 19 countries worldwide. Approximately 30% of applicants are awarded PCC funding.

APPLICATION CENTER

#PCC2022



NYC MLB HQ

April 6-8, 2022

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The Partnership for Clean Competition hosted its first Virtual Poster Session this year, culminating in a digital reveal of the winners of six categories of anti-doping research.

Each of the winners will receive $250 and passes for the #PCC2022 conference in New York City next April.

We want to thank everyone who participated, from those creating virtual posters to those judging them. We heard time and time again from those judges about the extraordinary quality of the submissions.

You can watch the winners for yourself here:

VIRTUAL POSTER SESSION

SUMMARIES FROM THE WINNERS

Alternative Specimens

Sara Amalie Solheim - Anti Doping Denmark

"No pain, just gain: Painless, easy, and fast Dried Blood Spot collection from fingertip and upper arm in doping control"

The existing techniques for doping control and analysis are continuously improving, as are new methods. Dried blood spot (DBS) testing, where a dried blood drop is analyzed for doping substances, is among possible collection methods that can make it easier and less intimidating for athletes to provide a doping control sample. Instead of providing a urine sample, a drop of blood from the finger or the upper arm is collected. This blood drop is subsequently analyzed for doping substances at the laboratory. Currently several DBS collection devices exist, allowing collection of capillary blood from different anatomical sites. Knowledge about athletes', doping control officers' (DCO) and laboratory staff's preferred DBS sampling site/device, along with the agreement between DBS concentrations from different sampling sites (e.g., fingertip vs. upper arm), would guide the drafting of regulatory documents for collection of DBS in an anti-doping context. In this project, eleven DCOs collected manual fingerprick DBS (HemaSpot HF) and automated upper-arm DBS (Tasso-M20) from 108 athletes. Following sampling, the collection process was evaluated by the athletes and DCOs. Furthermore, upon reception of the samples, the laboratory staff compared the quality and usability of the samples from the two devices. From the samples, the concentration of endogenous testosterone was determined. The existing techniques for doping control and analysis are continuously improving, as are new methods. Dried blood spot (DBS) testing, where a dried blood drop is analyzed for doping substances, is among possible collection methods that can make it easier and less intimidating for athletes to provide a doping control sample. Instead of providing a urine sample, a drop of blood from the finger or the upper arm is collected. This blood drop is subsequently analyzed for doping substances at the laboratory. Currently several DBS collection devices exist, allowing collection of capillary blood from different anatomical sites. Knowledge about athletes', doping control officers' (DCO) and laboratory staff's preferred DBS sampling site/device, along with the agreement between DBS concentrations from different sampling sites (e.g., fingertip vs. upper arm), would guide the drafting of regulatory documents for collection of DBS in an anti-doping context. In this project, eleven DCOs collected manual fingerprick DBS (HemaSpot HF) and automated upper-arm DBS (Tasso-M20) from 108 athletes. Following sampling, the collection process was evaluated by the athletes and DCOs. Furthermore, upon reception of the samples, the laboratory staff compared the quality and usability of the samples from the two devices. From the samples, the concentration of endogenous testosterone was determined.

Metabolism and Pharmacokinetics

Luisa Seyerlein - Institute of Biochemistry/Center for Preventive Doping Research, German Sport University Cologne

"Are contaminated eggs a potential source of minute amounts of clomiphene in doping control samples?"

Clomiphene is banned by WADA in sports. Due to its anti-estrogenic effect, it is used therapeutically to induce ovulation in women with infertility. This effect has also been observed in chickens. When hens were treated with clomiphene, an increased egg production rate was observed. Therefore, the following question arose, "can traces of clomiphene be found in the eggs of hens treated with the drug, and if so, could consumption of these eggs result in a positive doping test?"

This was examined by treating hens with clomiphene. The eggs laid were either analyzed directly or consumed by study volunteers. Traces of clomiphene were detected in both the eggs and the urine of the volunteers. Therefore, in a next step a method to differentiate the two intake pathways of clomiphene was successfully developed.

VIRTUAL POSTER SESSION

SUMMARIES FROM THE WINNERS

New/Improved Test Methods

Siham Memdouh – Department of Analytical, Environmental and Forensic Sciences - Anti-doping Analysis

"Detecting Growth Hormone Releasing Hormone Synthetic Analogues."

Drugs called tesamorelin, sermorelin, CJC-1295 and CJC-1295 with drug affinity complex are prohibited in sport because they stimulate the secretion of growth hormone. These drugs are particularly difficult to detect because of their size and small concentration in blood and urine.

Since most of these drugs are not licensed for human consumption, we decided to use a laboratory-based approach to see how the body would chemically modify these substances. This involved performing in vitro experiments using the human material (enzymes) that convert (metabolise) parent drugs into metabolites. Fortunately, these enzyme systems can be purchased and provide an invaluable tool for dealing with non-licensed drugs. Using this approach, we identified a number of metabolites and synthesised them chemically in our laboratory. This enabled us to develop specific and sensitive analytical methods to detect them in human urine.

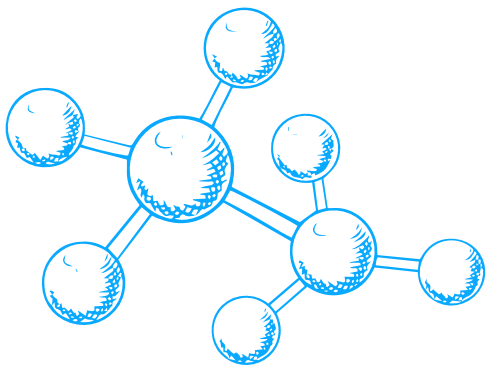
In summary, we believe that we have developed a useful new tool to be able to prove the administration of these prohibited drugs.

Pilot Studies

Liesl Janssens - Laboratory of Toxicology - Ghent University

"Sensing HIF activation: promising activity-based bioassays to screen for performance-enhancing HIF stabilizers"

A new detection method was developed to detect HIF stabilizers (currently emerging in doping), based on their effect in living cells. This new class of erythropoiesis-stimulating agents exerts its effects by stabilizing the transcription factor that is (partly) responsible for the expression of EPO. Athletes can fraudulently increase their endogenous EPO levels by taking these small molecule therapeutics (intended for anemic patients). We developed a new assay format that can detect the presence of any HIF stabilizer, regardless of its structure or origin, solely based on its activity. Also future HIF stabilizing molecules will be picked up by this assay. The new assay format performed better than the current state-of-the-art and may show promise to screen for a broad panel of molecules at once.



VIRTUAL POSTER SESSION

SUMMARIES FROM THE WINNERS

Passport Strategies

Federico Ponzetto - Department of Medical Sciences, University of Turin

"Monitoring novel markers of blood steroid profile by single-run LC-MS analysis"

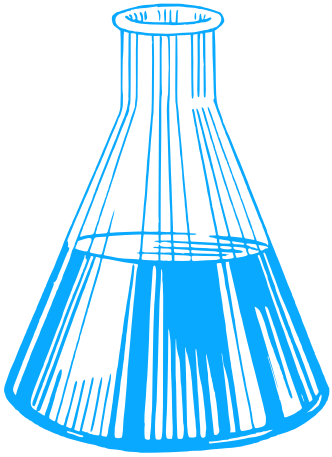
The measurement of endogenous steroids in blood currently represents one of the areas of growing interest in the anti-doping community regarding the detection of doping with endogenous anabolic androgenic steroids. However, there is no approved or harmonized anti-doping analytical method yet for dosing various testosterone doping markers that have recently been highlighted at research level. In the present study a novel analytical method for the quantification of endogenous steroid hormones together with their phase 2 metabolites was developed. Instrumental parameters were finely tuned to detect with the best possible selectivity and sensitivity all the proposed novel markers of the blood steroid profile. The developed method was employed for obtaining in a small population of healthy individuals reference values of all detected steroidal compounds. The encouraging results obtained will represent a starting point for further studies aiming at characterizing the effects of circadian rhythm and physical exercise on blood steroid profile.

Social Science

Bertrand Stoffel - McGill Institute for Health and Social Policy

"Drug Use in Sports: An Issue of Doping Context"

Drug policy in sports, commonly referred to as anti-doping policy, is a controversial and multifaceted topic. In a unique regulatory collaboration between the sport movement and public authorities, anti-doping policy prohibits the use of drugs that are deemed to be performance-enhancing, as well as recreational drugs. Traditionally, the system has relied on creating awareness for health-related dangers, as well as a test and sanction system to deter athletes from using prohibited drugs. Recent research suggests that testing is not sufficient to achieve compliance with the rules, and that a more comprehensive approach is needed, engaging the development of a moral community of athletes.



ANTI-DOPING
AND THE OLYMPIC/PARALYMPIC MOVEMENT

A Webinar Series

Kangeun Lee
Senior Manager, Education, WADA
June 16

June 23
Travis Tygart
Chief Executive Officer, USADA

Dr. Costas Georgakopoulos
Director, Anti-Doping Lab Qatar
June 30

July 7
Callum Skinner
Olympic Gold Medalist

Register

*All Webinars
11am Eastern

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