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Evidence in Anti-Doping at the Intersection of Science and Law

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Foreword
by Antonio Rigozzi

I am pleased to provide a short foreword to Marjolaine Viret's "Evidence in Anti-Doping at the Intersection of Science and Law". At the time I was a member of Ms. Viret's Ph.D. Jury at the University of Fribourg, which awarded her a summa cum laude and I feel totally comfortable in reproducing my contemporaneous comments on her present work.

I have known Ms. Viret for many years, initially as a litigator in the Court of Arbitration for Sport and now as a researcher at the Université de Neuchâtel in the context of a Swiss National Science Foundation project devoted to a legal analysis of the World Anti-Doping Code. In my opinion, Ms. Viret is one of the most meticulous lawyers I have had the opportunity to come across. I was confirmed in this appreciation when reading this book.

The book title—"Evidence in Anti-Doping at the Intersection of Science and Law"—perfectly defines the subject of her analysis: the legal evidentiary regime, confronted with the challenges of the intrinsically scientific nature of the field of anti-doping.

The topic is innovative: if, intuitively, there is an agreement about the importance of scientific evidence in the field, an extensive analysis of related legal issues was so far missing. An important gap is now filled.

The content of the book is striking by its scope: all aspects of the fight against doping in which scientific issues may become relevant are analysed. Given the number of such aspects, the book thereby practically constitutes a manual on anti-doping law.

The fundamental hypothesis that runs through the book is the existence of a gap between the traditional regulatory approaches in anti-doping on the one hand, and the scientific foundations that are—supposedly—supporting these regulations on the other hand. As demonstrated by Ms. Viret, it is clear that there is indeed such a gap between the scientific and legal communities in the domain.

The first part of the book ("Part I") sets the pillars for the analysis by presenting the "constraints", both legal and scientific, with which the fight against doping must deal. The central part ("Part II") underlines this gap in connection with the various aspects of the World Anti-Doping Code. The gap is systematically

analysed in a very scientific manner at all stages of the process, from drafting an anti-doping rule to imposing a sanction. The analysis is of almost "surgical" precision, with clear and pragmatic conclusions. Based on these conclusions, Ms. Viret outlines in the last part ("Part III") the axes that could form the framework for an improvement of the system.

Even though these axes involve various aspects of anti-doping—from the necessity to reflect on the organisation of doping control, to the concern of providing the judiciary with more sophisticated tools for the evaluation of scientific evidence—they all highlight the indispensable character of a dialogue between scientific and legal participants in the fight against doping. Thus, the proposed axes are to a great extent inspired by approaches advocated within the scientific anti-doping community and endeavour to derive legal implications therefrom.

Ms. Viret's approach is a thoroughly pragmatic one, whether regarding the "assumptions", notably those that define the legitimacy of the current anti-doping system, or the definition of concepts, in particular the concept of "soundness" of the system. Indeed, the term "soundness" presented in the introduction represents a criterion that deliberately departs from traditional legal analysis and underlines the fact that the law cannot be detached from the (scientific) reality that it is supposed to regulate. Thus, a "valid" legal regulation in a scientific domain ("science-based law") is ultimately defined through its capacity to produce a result that appears equally meaningful to both lawyers and scientists.

This pragmatism, however, is not the result of intellectual laziness, or of a concern to avoid delicate questions: it is rooted in Ms. Viret's intimate knowledge of the domain, both from a theoretical and from a practical viewpoint. This is identifiable throughout the entirety of the book. The introduction is remarkable in its lucidity. Ms. Viret's experience in the field allows her to set the stage of her analysis in a very clear manner, and the method of analysis becomes manifest without long methodological developments that often prove sterile. The book is supported by encyclopaedic bibliography and references. The author draws her sources from almost all areas of law. Emphasis is placed on Swiss law, a choice that is explained and justified in the book, but references to foreign laws are frequent. Though the analysis is not "comparative" in the mechanical sense of the word, literature and jurisprudence are used intelligently, where they bring original and innovative elements so as to enrich an analysis under Swiss law.

The most striking feature of the book lies in the manner in which Ms. Viret is able to exploit her familiarity with scientific issues: it is without doubt that Ms. Viret is at ease in domains in which lawyers normally feel out of their comfort zone. The fundamental insight of the analysis is that lawyers' acquired beliefs need to be relativised: the "judicial truth" is not the truth; even less so in doping matters. The book leads the reader through all areas that are at the roots of these discrepancies. In addition to the imperfections inherent in analytical or other scientific expertise, elements of "regulatory policy" intervene in the solutions chosen for the evidentiary regime in anti-doping, which can result in iniquitous outcomes.

Ms. Viret is not afraid to bring these to light, in particular for certain provisions of the revised 2015 World Anti-Doping Code, and suggests adjustments that appear mandated.

In sum, the book represents a valuable contribution to legal studies in a field that was so far not—or not extensively—explored. As a practitioner, I can only hope that attorneys and arbitrators will benefit from the lessons that one can and should draw from the author's findings, in order to improve the "soundness" of the fight against doping.

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Foreword
by Martial Saugy and Sylvain Giraud

The reading of this book gave us great satisfaction and some headaches. We are anti-doping scientists and while parts of this book may seem straightforward for lawyers, they can be tricky for us. We also came across a few chapters about scientific topics we found very familiar, but that most lawyers may find difficult to grasp. This balance between anti-doping science and law is at the core of this book. More precisely, it is a clear presentation of the link between scientific results and legal understanding of these results. In our opinion, this link opens a path that could help arbitrators, especially within the Court of Arbitration for Sport, to get a satisfactory confidence in reaching rightful decisions.

The view underlying current anti-doping regimes is a simple one: when scientists can detect and identify a banned substance in a sample, the athlete who gave the sample is assumed guilty. With this approach, lawyers must guarantee that the rights of the athletes are respected through the testing process described in Internationals Standards established by the World Anti-Doping Agency. They do not need to include "science" in their reasoning as the analytical results are assumed to be "true". This truth is based on laboratories being accredited and strictly following International Standards, but interpretation of the results is not always as straightforward.

Indeed, while the view described above was correct between the 1970s and the 1990s, doping has evolved from the use of synthetic substances, like stimulants or anabolic steroids, to the use of small quantities of substances naturally found within any human body, like EPO or testosterone. This shift leads to more complex results from the laboratories and panels of arbitrators have been confronted with scientific evidence that they did not fully understand. They were therefore asked to rely mainly on experts to define the causality link between the events that started with the athlete and the doping product, and ended with the laboratory's final report.

The last part of this book presents the most recent tool that has been implemented in the anti-doping field: the Athlete Biological Passport. But it does so in such a way that it gives the opportunity for scientists to think about future approaches that could be used in the fight against doping. In particular, we

recognize that we should keep in mind the requirements for lawyers to understand what our scientific evidence really means.

During our daily work, we are not only asked to produce top-level scientific results. We are also asked to produce readable reports and it is assumed that we are using the best tools within the right rules. In a way, we are limited to generating results that fit in the current rules and lawyers' views.

As an example, this book presents the legal consequences of the Athlete Biological Passport, but we are already searching for the next step. In our opinion, this passport is getting "rusty" and only useable for a small part of the anti-doping issues. As add-on examples, information about steroid concentrations, performances, competitions results or occupational behavior could be included. But then, there would be so much data and complexity that the help of an "investigating" community would be mandatory. The role of investigators would be to search through all data surrounding the athlete life to detect clues or evidences of doping offences.

While this investigation ability is described in the 2015 World Anti-Doping Code and International Standards, this book indicates that, if the science behind these new investigation tools has been established for decades, the legal community is still struggling with basic scientific concepts. But this work brings hope that when lawyers understand the science behind results, the arbitrators are able to reach comfortable satisfaction without always being dependent on "fights" between experts' opinions during hearings.

As a further illustration, the revised 2015 World Anti-Doping Code defines a new concept for which current anti-doping scientific results are not adequate: the "intentional" violation of an anti-doping rule. Article 10.2.3 of the 2015 Code explains that "intentional is meant to identify those athletes who cheat." So, for some substances, the Court of Arbitration for Sport will have to form an opinion to distinguish between "silly mistakes" and the intention to cheat. For this opinion to be informed and satisfying, more information than current analytical reports can provide will be needed.

The scientific community could provide input about the delay between the intake of the substance and the relevant sample collection, the speed of the athlete's metabolism or the impact of the intake on the performances. Investigators could obtain data about suggestion of doping behavior, deleterious environment that would motivate cheating, social pressure, suspicious visits made to drug suppliers or forensic results interpretation. The legal community could bring the knowledge of the law, experience drawn from commercial arbitration and past cases, legal argumentation and processes from inquisitorial or adversarial systems used in civil courts.

For all these inputs to be merged in an efficient system, we need to get together and to reach a consensus. We wish for this book to be the first foundation stone of new and more efficient ways to make a decision in cases related to the fight against doping.

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Director of the laboratory

Sylvain Giraud, Ph.D.
Certifying Scientist,
Quality Manager of the laboratory

Preface

Writing this book has been a challenging but enriching enterprise which led me to explore the frontiers between science and law in the field of anti-doping. The goal was to address evidentiary issues under the 2015 World Anti-Doping Code in a manner that would be useful to legal practitioners and scientists in anti-doping alike, so as to make both communities aware of the needs for interaction and promote the dialogue between them. An enterprise of this kind requires by nature to confront different perspectives, and a number of people in various disciplines contributed to the accomplishment of this goal. I hereby wish to express my gratitude to them.

My thanks, first of all, to those who offered the academic environment to breed and complete a project of this scope. Professor Franz Werro, at the University of Fribourg and Georgetown University, for introducing me—as a student and later as a doctoral researcher—to the intricacies of comparative legal approaches, and for his in-depth knowledge of both civil and common law cultures. Professor Antonio Rigozzi, at the University of Neuchâtel, fuelled my thoughts with both his experience in sports arbitration and his exceptional practitioner skills.

This book draws to a significant extent from my attorney activities, especially as counsel in doping disputes before the Court of Arbitration for Sport. The law firm Lenz & Staehelin, Geneva, encouraged and sheltered my work during a significant part of the preparation for this book. My special thanks to attorney-at-law Benoît Chappuis, my *maître de stage* in litigation, as well as attorney-at-law Xavier Favre-Bulle, to whom I owe my experience as a practitioner in sports arbitration. Attorney-at-law Eugène Ibig helped me benefit from his experience in international arbitration and his legal thoroughness. My thanks also to attorney-at-law Dominique Leroux for her enlightened and practical views on the aspects of my work dealing with innovative tools in anti-doping.

My gratitude also to the scientific anti-doping community, to whom much of this work is devoted. Most importantly, to the Lausanne Laboratory for Doping Analyses (LAD) and its director, Professor Martial Saugy, for giving me access to their expertise and knowledge. Particular tribute must also be paid to

Dr. Sylvain Giraud, Quality Manager at the LAD, for his essential help in securing the scientific solidity of my work, nurtured by hours of demanding but fruitful exchanges in trying to build bridges between scientific and legal perspectives.

Warm thanks to Dr. David McArdle, Stirling University, chief scientific editor of the International Sports Law Series at T.M.C. Asser Instituut in The Hague, who reviewed the final manuscript with exceptional care, as well as Nettie Dekker for her efficient formal editing work. Furthermore, this work could never have been completed without Christopher Coulson, who cast both the sharp mind of an editor and the critical eye of an English native on my "sports law" prose.

Finally, to my parents. The scientists, the roots of it all. For teaching me from an early age not to be afraid of a test tube. For bringing to me the value of knowledge, the importance of integrity and the virtues of questioning.

It is sadly not possible to thank all those to whom I owe a debt, but those who remain unnamed will know how they assisted in laying the foundations for this work or otherwise helped shape my life during this period. Many thanks, all of you.

To the Schrödinger cat, for making nothing final and everything possible.

Geneva, June 2015 Marjolaine Viret

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Part III Rethinking Scientific Evidence in Anti-Doping

Note on Terminology and Citations

The World Anti-Doping Code and related documents published by the World Anti-Doping Agency have become the standard reference in both legal and scientific anti-doping circles. For the sake of clarity and transparency, this book uses the terminology of the World Anti-Doping Code and related documents. Capitalised words in this book thus refer to defined terms in the World Anti-Doping Code (World Anti-Doping Code, Appendix 1 "Definitions") or in the definition section of the relevant WADA International Standard, Technical Document or Guideline.

All WADA documents referenced are available in their current version on the WADA official website: www.wada-ama.org. Unless otherwise specified, the terms are used according to their definition in these documents, in their version effective on 1st January 2015.

Awards by the Court of Arbitration for Sport have been published under various forms, including the CAS Digest volumes up to the 2003 awards, publication of the "original" award on the CAS or other websites, or subsequent inclusion of the award in the CAS database along with a summary. The numbering of the paragraphs in the CAS awards may vary depending on the form of publication referred to. In this book, the numbering used is the one corresponding to the form of publication and the version of the award available at the time of writing the relevant passage. Awards have been taken into consideration up to May 2015.

Abbreviations

ABP	Athlete Biological Passport
ADO	Anti-Doping Organisation
AFLD	Agence française de lutte antidopage (French NADO)
ASOIF	Association of Summer Olympic International Federations
BB/FF	Bundesblatt/Feuille fédérale
BGE/ATF	Official publication of the Swiss Supreme Court decisions
BGH	Bundesgerichtshof (German Supreme Court)
CAS	Court of Arbitration for Sport
CC	Civil Code
cpre	compare
ECHR	European Convention on Human Rights
EPO	Erythropoietin
ESAs	Erythropoiesis stimulating agents
FEI	Fédération équestre internationale
GC/LC-MS	Gas-chromatography/Liquid-chromatography – Mass spectrometry
hCG	human Chorionic Gonadotrophin
hGH	human Growth Hormone
i.a.	*inter alia*
IAAF	International Association of Athletics Federations
ILAC	International Laboratory Accreditation Cooperation
IOC	International Olympic Committee
IPC	International Paralympic Committee
IRMS	Isotope Ratio Mass Spectrometry
ISL	WADA International Standard for Laboratories
ISO	International Organisation for Standardisation
ISPPPI	WADA International Standard for the Protection of Privacy and Personal Information
IST	WADA International Standard for Testing (until 2015)
ISTI	WADA International Standard for Testing and Investigations (since 2015)
ISTUE	WADA International Standard for Therapeutic Use Exemptions

ITF	International Tennis Federation
LESp	Loi sur l'encouragement du sport
NADA	Nationale Anti-Doping Agentur (German NADO)
NADO	National Anti-Doping Organisation
NOC	National Olympic Committee
OESp	Ordonnance sur l'encouragement du sport
OMAC	Olympic Movement Anti-Doping Code
p.	page(s)
para	paragraph(s)
PPV	Positive Predictive Value
rhEPO	recombinant human EPO
rhGH	recombinant human Growth Hormone
RS	Recueil systématique (Systematische Sammlung)
RTP	Registered Testing Pool
SPILA	Swiss Private International Law Act
T/E	Testosterone/Epitestosterone
TD	Technical Document
TUE	Therapeutic Use Exemption
UCI	Union Cycliste Internationale
WADA	World Anti-Doping Agency
WADC	World Anti-Doping Code