

Wigmore, James G. *Wigmore on Alcohol. Courtroom Alcohol Toxicology for the Medicolegal Professional.*

Toronto: Irwin Law Inc., 2011. 561 p. Includes List of Tables, Index. ISBN 978-1-55221-229-5. (soft-cover) \$100.

The *Criminal Code* of Canada¹ drinking and driving provisions, and the prosecutions upon which they are based, have become a staple of daily dockets in courtrooms throughout this country. However, when the legislation was enacted more than 40 years ago, there were only a handful of subsections in the *Code* that addressed related procedural issues, such as the manner in which blood alcohol concentration breath samples were to be tested and analyzed. Conversely, the current legislation contains dozens of paragraphs and subparagraphs on these matters. Indeed, the approved breath analysis instruments order and approved screening devices order, that is now in force, set out 25 machines that may be used by law enforcement personnel to test for, and measure, the presence of alcohol in a person's body.

While there is no shortage of texts, newsletters and articles that deal with drinking and driving charges, and particularly evidentiary issues that may arise in a typical prosecution, scientific and reference resources in the area are not as common. Thus, a book which provides a forensic alcohol toxicology database consisting of more than 700 human studies, many of which touch on the scientific analysis of alcohol as it relates to blood alcohol concentration issues, is a particularly timely and welcome addition to the literature. The author, James Wigmore, a former forensic alcohol toxicologist for over 30 years at the Centre of Forensic Sciences in Toronto, Ontario, and frequent lecturer and author on blood alcohol concentration issues in Canada and the United States, is well-qualified to provide such a publication.

Among the chapters devoted in *Wigmore on Alcohol* that bear directly on drinking and driving issues are those on absorption, distribution, and elimination of alcohol (chapter 1); blood alcohol (chapter 2); breath alcohol (chapter 3); alcohol in urine, saliva, sweat and breast milk and biomarkers of alcohol consumption (chapter 4); and effect of alcohol on driving ability (chapter 5). Three other chapters address different alcohol-related behavior issues. These are the effect of alcohol on other behaviours (chapter 6), such as aggression and violence, blackouts and memory, falls, hangovers and hypothermia, to give a few examples; postmortem alcohol (chapter 7); and other alcohols and related compounds (chapter 8). There is also a section containing abbreviations and explanations, chemical symbols and formulas, abstracted studies, author index, journal index, publication year index and subject index.

The methodology employed by the author is to include a wide range of forensic alcohol toxicology issues from over 200 scientific journals; the corresponding abstracts are written in non-scientific language so as to condense and simplify the information contained in the publication. The materials that are selected are stated to include the most relevant studies that reflect scientific consensus; the book does not contain historical studies or articles or papers that are based mainly on theoretical or academic models or discussions. The focus is thus on practical experimental studies.

¹ R.S.C. 1985, c.C-46.

Wigmore on Evidence is designed for use by both the “court-going scientist” who is preparing to testify, or may face topics that arise in court for which the expert was not expecting to be questioned, as well as “nonscientific medicolegal professionals” such as criminal and civil lawyers, as well as other practitioners and decision-makers. As the author notes, there is a broad range of legal issues to which alcohol consumption relates, such as the severity of head injuries in alcohol-intoxicated victims due to slower and less appropriate reaction times, or the effect of mouth alcohol on tested arrested drivers at the roadside without a deprivation period.

The author’s stated goal is to assist legal professionals in determining the scientific merits of their case, and preventing unnecessary speculation in court. It is also intended to assist in the examination of the expert witness, particularly when he/she strays beyond the field of his/her expertise, and may lack the requisite knowledge of the scientific literature of forensic alcohol toxicology.

Testifying in court can certainly be challenging for scientists, as expert witnesses, and legal practitioners, who put forth a theory of the case and frame questions based upon the law. The language used by each does not always correspond; clinical trials and courtroom trials are very different. However, the well-known phrase, “The first thing we do, let’s kill all the lawyers,” was uttered neither by a disgruntled toxicologist after giving evidence in court, nor Douglas Lucas, the author’s distinguished mentor and director of the Center of Forensic Sciences, upon being challenged to explain how a blood alcohol concentration of up to 20 milligrams could equate to a zero reading, given the absorption and elimination rate of alcohol in a person’s body. For this, Shakespeare must be given credit. However, *Wigmore on Alcohol* will go a long way to leveling the playing field as it relates to understanding alcohol toxicology, and help all those who participate in the legal arena better appreciate, and wish to acquire further elucidation, of the complexities and nuances of the study of forensic alcohol.

There is also much of interest in the book to the casual observer, or one who simply has an interest in the area of alcohol toxicology. Some of the more unique studies noted in the first chapter on absorption, distribution and elimination of alcohol include scientific analysis of the evaluation of blood ethanol profiles after consumption of alcohol together with a large meal; alcohol concentration and carbonation of drinks; the influence of temperature on alcohol absorption rates in humans; the “purell defence” which examines whether the use of alcohol –containing hand sanitizers can cause an elevated breath or blood alcohol concentration (one of the author’s own works); and testing the validity of the “Danish urban myth” that alcohol can be absorbed through one’s feet. One can easily become, well, absorbed, in the material, and pass many hours taking in its contents.

In short, *Wigmore on Alcohol* is a wonderful research tool that will prove a valuable resource in both legal and scientific libraries.

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