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Book Review

Drug Testing: Issues and Options
Edited by Robert H. Coombs and Louis Jolyon West
Published 1991, Oxford University Press/OUP USA, Oxford
245 pages
ISBN 019 505414 8 £30.00

Drug testing is now a feature of almost all aspects of American life. Miltary personnel, athletes, job applicants, employees and even presidential candidates are constrained to urinate in a bottle to demonstrate a drug-free lifestyle. Diagnostic companies and commercial laboratories have reaped rich rewards and this is now a $1 billion industry. Who could ever have imagined a black market in 'clean' urine? One entrepreneur, glorying in the title 'The Urine King', sells freeze-dried urine at $24.95 per vial and throws in a booklet entitled 'Success in Urine Testing'. The American legal profession, never slow to board a gravy train, has exploited this phenomenon to the full. Victory in litigation proceedings where an employee contests a 'positive' result can yield compensation pay-outs in the 'mega-buck' range.

This book recounts how this extraordinary situation evolved during the 1980s and highlights some of the political, ethical and legal issues which followed in its wake. The first chapter provides the back-cloth for the rest of the contributions in describing the history of drug testing from the crude attempts at blood alcohol analyses on inebriated drivers during the Prohibition era through to the mass-screening programmes for opiates, cocaine, amphetamines, cannabis etc. of the present day. Chapter 2 is concerned with the politics of drug testing, particularly as played out under the Reagan and Bush administrations. Reagan's 'War on Drugs' policy advocated stiff sanctions on drug abusers which included withholding the opportunity for employment. This created a rapid expansion of drug abuse testing in the private sector and raised many civil rights issues, some of which are still not resolved. The third chapter is a rather pedestrian account of the pharmacology and phenomenology (sic) of abused drugs penned by a psychiatrist.

Chapter 4 contains an excellent review of drug-testing procedures and deals particularly with immunoassays and chromatographic techniques. The author emphasises the care needed in sample collection and documentation (chain of custody), describes the essential features of a reliable drug testing laboratory and demonstrates the complexity of interpreting analytical findings.

The next chapter is provided by the redoubtable Admiral Paul Mulloy, who in 1981 was given the responsibility of eliminating drug abuse in the US Navy. A staggering 47 per cent of US Navy personnel was reported to have used marijhana in 1980 and abuse of other illicit drugs was known to be rife, though not quantified. With typical military zeal, the Admiral planned and executed a campaign which brought the problem under control within 5 years.

Drug testing was an integral part of the Navy programme which was subsequently adopted in modified form to combat drug abuse in federal and private sector employees.

The remaining chapters deal specifically with drug testing in athletics and private industry, legal and ethical aspects of testing and finally the role of the tests in treatment and rehabilitation programmes.

This is not a scientific publication in the sense of being replete with pharmacological and analytical data. It is aimed at a wider audience of lawyers, educationalists, business managers and other professional groups who may be involved with substance abuse. Moreover, it deals essentially with the American scene where laws and ethical practices can differ widely from those of European countries.

Nevertheless, it makes fascinating reading and with the recent spread of drug testing into European industries, is highly topical.

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Book Review

Fundamentals of Protein Biotechnology
Edited by Stanley Stein
Published 1990 Marcel Dekker, New York
328 pages
ISBN 0 8247 8346 8 $99.75 (USA and Canada) $119.50 (others)

The book is aimed as a general introduction to the fundamental principles of proteins, which it does admirably in an easily readable style with good illustrations. The title is somewhat misleading since "biotechnology" considerations are confined principally to Chapter 11. The reader gains an insight, without great depth, into most of the properties of proteins, including structure and structural analysis (Chapters 2, 9), bio- and chemical synthesis (3, 10), isolation, purification and characterization (4, 6) and biological properties (5). The principles of recombinant technology are discussed in Chapter 11 and the purification of two proteins, interferon and calcitonin, produced by these techniques are briefly exposed in Chapters 7 and 8, respectively. The book concludes with a description of the structure, production, purification and uses of monoclonal antibodies (Chapter 12).

There is inevitably some duplication (e.g. immunoglobulin structures in Chapters 5 and 12) when the chapters are written by different authors. Errors are few and confined to structures (e.g. p. 209, 214). It is well referenced and indexed. This is a text which will serve as a contemporary introduction to the field for chemists and biologists, though an expensive one.

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