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Book Reviews: Technical Books Section

(Page 14 a - Review by John M. Butler, USA)

...FEATURED BOOK : MAIN PAGE HELPFUL INFORMATION ON SPECIFIC DNA TYPING ASSAYS ...Overall the book provides helpful information on specific DNA typing assays and a nice overview of SNP methodologies. However, most of these protocols are still in a research phase and will probably not be widely adopted or routinely used in forensic DNA laboratories. This book though will likely be a useful addition to the library of anyone trying to keep abreast of new DNA typing technologies.... [Main page] Reviews | [1] [2]...

Forensic DNA Typing Protocols (Methods in Molecular Biology Series, Vol. 297), 1st Edition, *edited by* Angel Carracedo, Hardback, acid-free Paper, 9.3" x 6.3" x 0.9".
Springer, [imprint - Humana], 233 Spring Street, New York, NY 10013, USA ; Publication Date: December 2004. x + 280 pages, ISBN-10: 1588292649, ISBN-13: 978-1588292643, ISBN 1-58829-264-9, E-ISBN 1-59259-867-6, ISSN 1064-3745. DOI (Digital Object Identifier): 10.1226/1588292649. Price $99.50.

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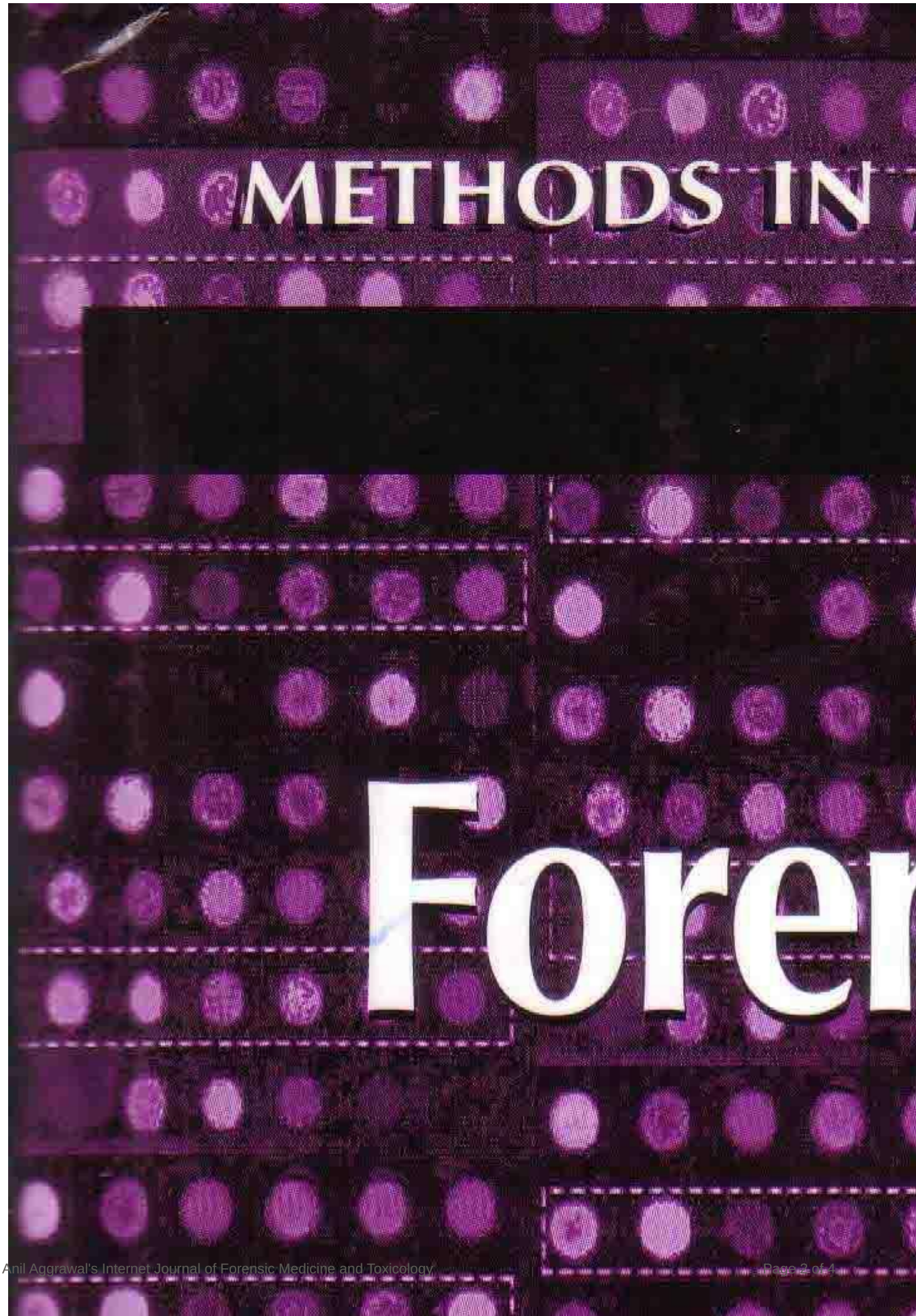
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Since their introduction 20 years ago, forensic DNA typing methods have progressed rapidly enabling more sensitive detection and rapid analysis. Forensic DNA Typing Protocols offers a view into newer technologies and techniques, many of which are not yet routinely used in forensic DNA laboratories. Most of this book focuses on single nucleotide polymorphism (SNP) typing methods rather than short tandem repeat (STR) markers that are the staple of today s DNA testing.

In total there are 19 different chapters, each written by specialists covering their areas of expertise. The book appropriately begins with a brief review of DNA typing technologies. DNA extraction and quantitation methods involving real-time PCR are presented in Chapter 2. Chapter 3 contains a real-time PCR assay for determining the number of amelogenin gene copies in forensic specimens. Mammalian species determination utilizing the cytochrome b mitochondrial DNA gene is the subject of Chapter 4. A strategy for constructing STR multiplex assays is described in Chapter 5 with examples from a cat STR 12plex and a human Y-chromosome STR 20plex. Chapter 6 covers Y-chromosome STR typing.

Most of the remainder of the book deals with SNPs. Chapter 7 discusses online databases for finding SNPs that may be of forensic interest. Chapter 8 reviews SNP typing methodologies. Specific SNP typing protocols are provided for Y-chromosome SNPs using real-time PCR on the Roche LightCycler (Chapter 9), microarray SNP typing (Chapter 10), Nanogen electronic hybridization microarrays (Chapter 11), primer extension assays for Y-SNPs with time of flight mass spectrometry (Chapter 12), pyrosequencing for mtDNA SNPs (Chapter 13), and SNaPshot primer extension assays for mtDNA coding region SNPs (Chapter 14), Y-SNPs (Chapters 15 and 16), and pharmacogenetic assays involving CYP2D6 and CYP2C19 (Chapter 17). The final two chapters describe methods for studying ancient DNA samples with bone and tooth extraction protocols.

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Overall the book provides helpful information on specific DNA typing assays and a nice overview of SNP methodologies. However, most of these protocols are still in a research phase and will probably not be widely adopted or routinely used in forensic DNA laboratories. This book though will likely be a useful addition to the library of anyone trying to keep abreast of new DNA typing technologies.

-John M. Butler

John M. Butler is a renowned Forensic DNA typing expert from USA. He has been associated with this journal since long. His interview conductd by this journal can be accessed by clicking here.



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