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IN VITRO HUMAN INTESTINAL CELLS: PERTINENCE FOR GENOTOXICITY TESTING OF FOOD CONTAMINANTS -- USE OF CACO-2 CELLS IN GENOTOXICITY TESTS -- Comet Assay -- Others -- CYTOKINESIS-BLOCK MICRONUCLEUS ASSAY -- On Undifferentiated Cells -- On Differentiated Cells: Development and Application -- IMPROVEMENT OF THIS CELL MODEL TO PREDICT TOXICITY AND MECHANISTIC ENDPOINTS -- Co-Cultures CACO-2/TK6 -- Metabolism Regulation -- CONCLUSIONS -- ACKNOWLEDGMENT -- REFERENCES -- Chapter 9 CACO-2 CELLS FOR STUDYING INTESTINAL ABSORPTION MECHANISMS: COMPARISON AND CORRELATIONS WITH RAT MODEL -- ABSTRACT -- INTRODUCTION: IN VITRO MODELS OF INTESTINAL PERMEATION -- ABSORPTION IN THE GASTROINTESTINAL TRACT: ROUTES OF PERMEATION ACROSS INTESTINAL CELLS. -- IN VITRO MODELS OF THE INTESTINAL BARRIER: CELL MODELS -- CACO-2 -- Other Cell Lines -- HT29 Cells -- CACO-2 CELLS FOR PREDICTING ORAL FRACTION ABSORBED: COMPARISON WITH HUMAN, RAT AND PAMPA MODELS -- CACO-2 CELLS FOR THE STUDY OF DRUG ABSORPTION MECHANISMS:

MODELING APPROACHES FOR PARAMETER ESTIMATION -- Apparent Permeability Estimation (Sink versus Non Sink Conditions) -- Mathematical Modeling of CACO-2 Data for Parameter Estimation -- P versus C -- Amounts versus Time -- CORRELATION BETWEEN CACO-2 CELLS DATA AND IN SITU RAT DATA FOR THE STUDY OF P-GP MEDIATED SECRETION -- CONCLUSIONS -- REFERENCES -- Chapter 10 NANOCARRIER ABSORPTION STUDIES WITH CACO-2 CELLS -- ABSTRACT -- INTRODUCTION -- I. METHOD -- a. Absorption Study -- b. Mechanistic Studies -- II. RESULTS -- a. Absorption Study -- b. Mechanistics Study -- III. DISADVANTAGE/ LIMIT OF CACO-2 TO STUDY DRUG TRANSPORT / OTHER METHOD -- a. Parallel Artificial Membrane Permeation Assay (PAMPA) -- b. Alternative Cell Culture Models -- c. In Vivo or Ex Vivo Studies -- CONCLUSION -- ACKNOWLEDGMENT -- BIBLIOGRAPHY.
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Sommario/riassunto

Presents topical research in the study of CACO-2 cells and their uses. This book discusses topics that include the application of CACO-2 cell models as a supportive in vitro tool during drug discovery and formulation; co-culture systems with CACO-2 cells to evaluate the bioactivity of plant extracts; and, more.

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Nota di contenuto	Fuzzy Sets and Systems -- Conversational Agents -- Smart Logistics -- Smart Participation -- Voting Advice -- Privacy Calculus -- Real-World Geometry -- Responsible Actions.
Sommario/riassunto	In a world shaped by interconnected systems and global challenges, this third and final volume of the trilogy explores how digital technologies can foster ethical engagement at the societal level. Grounded in design science and fuzzy logic, it investigates how scalable, sustainable frameworks can support democratic participation, environmental responsibility, and public trust. The book offers a vision for how information systems can mediate complex societal interactions while preserving human values. Volume III addresses the societal dimension of the honorable merchant, applying ethical principles to broader systems involving politics, the public, and the environment.

Drawing from interdisciplinary applications in business informatics, computer science, and engineering, it explores fuzzy approaches to conversational agents, smart logistics, participatory governance, voting advice systems, privacy calculus, and spatial modeling. A concluding framework for responsible action emphasizes ethical engagement in technologically mediated societal interactions. This textbook trilogy is primarily intended for students of computer science, business information systems, and innovation management who aspire to make a meaningful impact. It will also appeal to managers who value balanced perspectives and data-driven analysis. .