

## Icam Investigation

Thoroughly updated for its Sixth Edition, this classic reference remains an unsurpassed source of definitive, practical guidance on adult patient care in the ICU. It provides encyclopedic, multidisciplinary coverage of both medical and surgical intensive care and includes a "how-to" atlas of procedures and a new section on noninvasive monitoring. Each Sixth Edition chapter, for the first time, identifies Advances in Management based on randomized controlled clinical trials. The cardiology section has been completely rewritten to reflect advances in management of acute coronary syndromes. Also included are extensive updates on management of COPD, diabetes, oncologic emergencies, and overdoses and poisonings. A companion Website will provide instant access to the complete and fully searchable online text.

Provides an overview of the structure, transcription regulation and binding characteristics of cellular adhesion molecules and their ligands in the maintenance of function, immunological reactions and inflammatory processes with organ systems. The text examines the role of adhesion molecules in biological processes such as morphogenesis, blood coagulation, tumour metastasis, bone tissue remodelling and transplant rejection.

Endometriosis: New Insights for the Healthcare Professional: 2011 Edition is a ScholarlyBrief™ that delivers timely, authoritative, comprehensive, and specialized information about Endometriosis in a concise format. The editors have built Endometriosis: New Insights for the Healthcare Professional: 2011 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Endometriosis in this eBook to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Endometriosis: New Insights for the Healthcare Professional: 2011 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at <http://www.ScholarlyEditions.com/>.

This book mainly discusses the current status of stroke transnational research and allows the reader to understand the interplay of common comorbidities in the stroke population such as diabetes and hypertension, and provides insight into stroke targets to promote cell survival, angiogenesis, neurogenesis, and most importantly, functional recovery after stroke. Throughout the world, stroke is still a leading cause of mortality and morbidity; each year approximately 15 million people worldwide suffer from stroke. Stroke is now the leading cause of death and disability in China. Large communities of stroke survivors are eagerly awaiting scientific advances in transnational stroke research that would offer neuroprotective therapeutics for acute stroke management, or rehabilitation and regenerative strategies utilizing novel stem cell-based approaches. While research is ongoing, the Editors have compiled this volume to help the further understanding of the pathophysiology of stroke and to review and identify future potential biomarkers. The book is written for students, researchers and physicians in neurosciences, neurology and neuroradiology.

This issue of Clinics in Laboratory Medicine, guest edited by Dr. Indira Guleria, will focus on New Pipeline of Immunoregulatory Molecules and Biomarkers in Transplantation. Topics include, but are not limited to, T Regulatory cells in Stem cells and Solid organ transplantation, Genetic Polymorphism in Cytokines and Costimulatory Molecules in Stem Cell and Solid Organ Transplantation, microRNAs and

Transplantation, Role of B Regulatory Cells in Transplant Tolerance, Complement Activation, Biomarkers in Stem Cell Transplantation, Biomarkers of Transplant Tolerance at the Fetomaternal Interface, Signaling molecules in Transplantation and Post-Transplantation Cancer, Donor specific HLA antibodies as Biomarkers of Transplant Rejection, Novel Targets of Immunosuppression in Transplantation, Nanotechnology and Immune therapies in Transplantation, Role of Costimulatory Pathways in Transplant Tolerance, and Microbiota and Immune system and Implications.

Most lymphocytes recirculate throughout the body, migrating from blood through organized lymphoid tissues such as lymph nodes (LN) and Peyer's patches (PP), then to lymph and back to blood (GOWANS and KNIGHT 1964). Smaller numbers of lymphocytes migrate from blood to extranodal tissues such as pancreas and then through lymphatic vessels to LN (MACKAY et al. 1990). An important feature of this migration is the ability of lymphocytes to recognize and adhere to the surface of blood vessel endothelial cells before migrating through the vessel wall into surrounding tissue (CARLOS and HARLAN 1994; IMHOF and DUNON 1995; BUTCHER and PICKER 1996). Adhesion interactions of vascular endothelium with lymphocytes under flow or shear consist of at least four steps: (1) an initial transient sticking or rolling; (2) if the lymphocytes encounter appropriate activating or chemotactic factors in the local environment, rolling may be followed by a lymphocyte activation step that then leads to; (3) strong adhesion or sticking that may be followed by; (4) lymphocyte diapedesis into tissue (BUTCHER 1991; SHIMUZU et al. 1992; SPRINGER 1994; BARGATZE et al. 1995). Specific lymphocyte and endothelial adhesion molecules (AM) are involved in each step of this "adhesion cascade" (reviewed in CARLOS and HARLAN 1994; IMHOF and DUNON 1995; BUTCHER and PICKER 1996). This allows lymphocyte migration to be controlled at several different steps, leading to a combinatorial increase in specificity and sensitivity.

This book provides an overview of, and practical guidance on, the range of human factors (HF) methods that can be used for the purposes of accident analysis and investigation in complex sociotechnical systems. Human Factors Methods and Accident Analysis begins with an overview of different accident causation models and an introduction to the concepts of accident analysis and investigation. It then presents a discussion focussing on the importance of, and difficulties associated with, collecting appropriate data for accident analysis purposes. Following this, a range of HF-based accident analysis methods are described, as well as step-by-step guidance on how to apply them. To demonstrate how the different methods are applied, and what the outputs are, the book presents a series of case study applications across a range of safety critical domains. It concludes with a chapter focussing on the data challenges faced when collecting, coding and analysing accident data, along with future directions in the area. Human Factors Methods and Accident Analysis is the first book to offer a practical guide for investigators, practitioners and researchers wishing to apply accident analysis methods. It is also unique in presenting a series of novel applications of accident analysis methods, including HF methods not previously used for these purposes (e.g. EAST, critical path analysis), as well as applications of methods in new domains.

Macrophages—Advances in Research and Application: 2013 Edition is a ScholarlyEditions™ book that delivers timely, authoritative, and comprehensive information about Histiocytes. The editors have built Macrophages—Advances in Research and Application: 2013 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Histiocytes in this book to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Macrophages—Advances in Research and Application: 2013 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™

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Investigation, control, and management (ICAM) is a practical operational tool for monitoring and managing the productivity of criminal investigators. This report describes ICAM and its current operation in the Department of Public Safety, Sunnyvale, California that the city has developed and tested the technique. The rationale and the derivation of ICAM is illustrated through the presentation of a conceptual model of the apprehension system, the series of activities which produce information leading to arrest. The system is viewed as an information processing media that acquires, stores, processes, or transmits information that contributes to the systems performance. The flow of apprehension system activities is described and system performance measures and their use are defined and demonstrated. The manuscript describes how the data to operate ICAM is produced from activity reports which are completed by police field personnel. Detailed instructions and coding forms are appended. The ICAM basic performance module, which produces several basic types of management reports, is presented and the uses of the reports are explained. Deficiencies which commonly exist in police reporting systems and which ICAM is designed to overcome are outlined. The ICAM model is demonstrated using thirty example criminal cases. The report concludes with examples which show how ICAM is used to support the typical management sequence of planning, goal setting, the development and selection of alternatives, organizing, controlling and evaluating.

In the well-established aviation system, the importance of sound human factors practice, based on good aviation psychology research, is obvious from those incidents and accidents resulting from its neglect. This carefully structured book presents an up-to-date review of the main areas in the field of Aviation Psychology. It contains current thinking mainly from Europe, but with input from Australia and North America, from specialists involved in research, training and operational practice. Spanning six parts, the book covers: Human Engineering, Occupational Demands, Selection of Aviation Personnel, Human Factors Training, Clinical Psychology, Accident Investigation and Prevention. Looking at the six parts - in human engineering, the reader learns about human-centered automation as well as human factors issues in aircraft certification. Results derived by job analysis methods are presented in the next part and serve as basic information in the design of selection and training programs. In selection, computerized testing or behaviour-oriented assessments are challenging approaches for personnel recruitment. Cost-benefit analyses in selection reveal convincing results, enabling organizations to save huge amounts of inappropriate training investment by the application of proper selection tests. The NOTECHS method is described which helps to assess CRM capabilities in training and can also be used to measure training effects in systematic validation studies. Although operational personnel in aviation are usually able to cope with stress more efficiently than other occupational groups, individual problems might develop as reactions to traumatic influences. Either a psychological evaluation or a proper treatment or both is then required as described in the 'Clinical Psychology' part of the book. The readership includes: aviation psychologists and flight surgeons, training, selection and recruitment specialists, instructor pilots, CRM facilitators, personnel managers, accident investigators, safety pilots, air traffic controllers, aircraft engineers and those dealing with human-machine interfaces.

Issues in Chemistry and General Chemical Research: 2011 Edition is a ScholarlyEditions™ eBook that delivers timely, authoritative, and comprehensive information about Chemistry and General Chemical Research. The editors have built Issues in Chemistry and General Chemical Research: 2011 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Chemistry and General Chemical Research in this eBook to be deeper than what you can access anywhere else, as well as consistently reliable,

authoritative, informed, and relevant. The content of Issues in Chemistry and General Chemical Research: 2011 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at <http://www.ScholarlyEditions.com/>.

Issues in Cancer Epidemiology and Research / 2011 Edition is a ScholarlyEditions™ eBook that delivers timely, authoritative, and comprehensive information about Cancer Epidemiology and Research. The editors have built Issues in Cancer Epidemiology and Research: 2011 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Cancer Epidemiology and Research in this eBook to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Issues in Cancer Epidemiology and Research: 2011 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at <http://www.ScholarlyEditions.com/>.

This innovative book aims to bring the science of safety into a simple and practical approach to investigating workplace incidents. As a basis, it uses the ideas of some of the great safety science thinkers of our time. These include Sidney Dekker, Todd Conklin, Erik Hollnagel, Daniel Kahneman, James Reason and Dylan Evans, alongside others and the author's own extensive industry experience. Simplicity in Safety Investigations: A Practitioner's Guide to Applying Safety Science will better equip readers to deal with incident investigations by helping them understand the science behind investigation techniques, and by exploring coaching and leadership styles that help them ask better questions both before and after workplace incidents. The first two chapters of the book focus on our mindset as we approach and undertake investigations, and the simple things we all must do before an investigation starts. The third chapter is a step-by-step guide on how to undertake both simple and more detailed workplace incident investigations. Chapter 4 is reserved for a more detailed review and set of explanations around the science and thinking behind the method and approach. This book serves as an easy-to-follow, real-world reference for supervisors, managers and safety practitioners across many industries.

Cell Adhesion Molecules: Advances in Research and Application: 2011 Edition is a ScholarlyEditions™ eBook that delivers timely, authoritative, and comprehensive information about Cell Adhesion Molecules. The editors have built Cell Adhesion Molecules: Advances in Research and Application: 2011 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Cell Adhesion Molecules in this eBook to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Cell Adhesion Molecules: Advances in Research and Application: 2011 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at <http://www.ScholarlyEditions.com/>.

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This proceedings volume contains over 300 papers on rock mechanics and engineering with contributors from all over Asia and many other parts of the world. Seven keynote papers summarize the state-of-the-art in rock engineering including topics such as underground rock caverns. The technical papers cover a wide range of rock mechanics and engineering topics: rock tunnels, caverns, mining, rock slopes and dams, rock blasting, rock burst and failure, rock properties, rock mass, rock joints, and block theory. Numerous valuable rock engineering case studies are also reported. This volume should serve as a useful reference for the engineers and researchers in rock mechanics and rock engineering. Sample Chapter(s). Chapter 1: Forensic Engineering for Underground Construction (244 KB). Contents: Tunnelling; Rock Caverns; Mining; Blasting and Dynamics; Support and Reinforcement; Rock Mass; Rock Properties; Discontinuities; Block Theory and DDA; Failure, Fracture and Burst; Dams and Slopes; Other Applications. Readership: Graduate students, academics and researchers in civil engineering and engineering mechanics.

Rheumatoid Arthritis: New Insights for the Healthcare Professional: 2011 Edition is a ScholarlyEditions™ eBook that delivers timely, authoritative, and comprehensive information about Rheumatoid Arthritis. The editors have built Rheumatoid Arthritis: New Insights for the Healthcare Professional: 2011 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Rheumatoid Arthritis in this eBook to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Rheumatoid Arthritis: New Insights for the Healthcare Professional: 2011 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at <http://www.ScholarlyEditions.com/>.

Subject of the book is Uranium and its migration in aquatic environments. The following subjects are emphasised: Uranium mining, Phosphate mining, mine closure and remediation, Uranium in groundwater and in bedrock, biogeochemistry of Uranium, environmental behavior, and modeling. Particular results from the leading edge of international research are presented.

by Elisabeth Mann Borgese Founder and Honorary President International Ocean Institute Adalberto Vallega has been, for decades, a master and great teacher of integrated coastal management and Mediterranean cooperation. This new book, of an almost encyclopaedic scope, is a most original contribution to the rapidly growing literature on the subject, of equal value to the academic community which will greatly appreciate the theoretical, historic and philosophical underpinning of the work, and to the practitioner, the planner, regulator and manager, who will find in these pages most useful "checklists" for his duties and responsibilities. Vallega perceives the need for Integrated Coastal Area Management (ICAM) in the broader context of the ongoing third industrial revolution, which he calls the trans-industrial stage, in its interaction with climate change. There have been profound changes in the economies of the industrialized countries. The development of the new High Technologies, including micro-electronics, genetic engineering, new materials, has accelerated the transition from an economic system based primarily on production to one based very largely on services. This, in turn, has facilitated "globalization" of production systems and services, including the financial system, as well as the migration of people. The ongoing global "Great People's Migration" is, generally, from the hinterland to the coasts where, already today, over 60 percent of the human population resides, exercising unprecedented pressures on the coastal and marine environment. Clearly, this justifies the current emphasis, at global, regional and national levels, on the need for coastal management.

Safety management and human factors disciplines are often regarded as subjective and nebulous. This perhaps stems from a variety of, sometimes disparate, activities in the realms of education, industry and research. Aviation is one of the safety-critical industries that has led the development of safety systems and human factors. However, in recent years, safety management and human factors are seen to be progressing well in the road, rail and the medical arena. Multimodal Safety Management and Human Factors is a wide-ranging compendium of contemporary approaches in the aviation, road, rail and medical domains. It brings together 28 chapters from both the academic and professional worlds that focus on applications, tools and strategies in safety management and human factors. It is a wellspring of the practical rather than the theoretical. Safety scientists, human factors industry practitioners, change management advocates, educators and students will find this book extremely relevant and challenging.

The Pulmonary Endothelium is a uniquely comprehensive compendium of our current knowledge of the pulmonary endothelium and is the first book dedicated specifically to the subject, offering insights into current and future approaches to management. The text provides the clinician with the most up-to-date information on one of the core physiological processes in airway disease and is an ideal point of reference for both postgraduates and professionals – specialist physicians in pulmonology and allergy and workers in biomedical and pharmaceutical research.

With chapter contributions from more than 30 metal biology experts, Cellular and Molecular Biology of Metals explains the role of key divalent metal ions involved in the molecular and cellular biology of various target cell populations. Although it primarily focuses on homeostatic metals, such as nickel, zinc, and chromium, the text also discusses a few environmentally pertinent, toxic

divalent cations, including mercury, cadmium, and arsenic. This authoritative resource reviews the physiological mechanisms underlying the handling of essential and toxic metal ions, including metal ion homeostasis, metals and enzyme activity, metals and transcriptional regulation, and metal ion transport. It also analyzes other functions designed to avoid metal-induced toxicity and mediate the metal enhancement of cellular function. The role of metal ions and their effect on mammalian cells and organs are only beginning to be truly defined. Cellular and Molecular Biology of Metals arms metals toxicologists and cellular and molecular biologists with the necessary knowledge they need to take the research effort to the next level.

To produce a comprehensive overview of macrophages and related cell types in a short review volume is an impossible task. When I selected the topics to be included, some equally important areas were omitted by necessity, and for this I apologize. My choices have been somewhat eclectic, touching subjects of personal interest (such as osteoclast biology and macrophage electrophysiology) or of current fashion (apoptosis, antigen processing, cell adhesion molecules). The book has also had to encompass areas of a more general flavor to provide balance for the general reader (such as reviews of macrophage development, heterogeneity, and function, and of the surface molecules expressed by macrophages). I thank all the authors for their prompt submissions; all have been of high quality, and my editorial tasks, thankfully, have been minimal. Michael A. Horton London, United Kingdom ix Contents Chapter J An Overview of Receptors of MPS Cells Iain Fraser and Siamon Gordon 1.

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Adverse immune reactions to biomaterials are important bottlenecks for translation of novel biomaterials for clinical use. Moreover, recent advances in highthrough-put biomaterial discovery and synthetic biology, while providing exciting new avenues, also significantly increases potential risks related to the in vivo reactions to these new materials. For example, the novel materials might have unintended biological activities due to their natural building blocks. In this perspective, biomaterial field needs i) better understanding of cell/biomaterial interactions at systems level; ii) development of new analysis and testing tools for advanced risk assessment iii) tools and technologies for modulating reactions to biomaterials and iv) advanced in vitro models for understanding and testing of reactions to biomaterials. In the following collection of articles you will find examples of such systems, together with comprehensive reviews of current developments in in vitro model systems. The collection also contains articles that elucidate the

immune reaction to biomaterials in vitro and in vitro.

Geotechnical Investigation and Improvement of Ground Conditions covers practical information on ground improvement and site investigation, considering rock properties and engineering geology and its relation to construction. The book covers geotechnical investigation for construction projects, including classic case studies with geotechnical significance. Additional sections cover soil compaction, soil stabilization, drainage and dewatering, grouting methods, the stone column method, geotextiles, fabrics and earth reinforcement, miscellaneous methods and tools for ground improvement, geotechnical investigation for construction projects, and forensic geotechnical engineering. Final sections present a series of site-specific case studies. Dedicated to ground improvement techniques and geotechnical site investigation Provides practical guidance on site-specific geotechnical investigation and the subsequent interpretation of data Presents site-specific case studies with geotechnical significance Includes site investigation of soils and rocks Gives field-oriented information and guidance

For the past 100 years the mainstay of therapy for rheumatoid arthritis (RA) has been aspirin or other drugs of the non-steroid anti-inflammatory group. In 1971 Vane proposed that both the beneficial and toxic actions of these drugs was through inhibition of prostaglandin synthesis. The recent discovery that prostaglandins responsible for pain and other symptoms at inflammatory foci are synthesized by an inducible cyclooxygenase (COX-2) that is encoded by a gene distinct from that of the constitutive enzyme (COX-1) provided a new target for therapy of RA. A drug that would selectively inhibit COX-2 would hopefully produce the symptomatic benefit provided by existing NSAIDs without the gastrointestinal and renal toxicity due to the inhibition of COX-1. Drugs selective for COX-2 are now available.

Experimental studies have shown them to be effective with minimal toxicity, and in clinical trials gastric and renal toxicities are less. Highly selective COX-2 inhibitors, perhaps designed with knowledge of the crystal structures of COX-1 and COX-2, are also available. Other experimental studies, including those in animals lacking effective genes for COX-1 or COX-2 and in experimental carcinomas, suggest there is still much to be learned of the pathophysiological functions of these enzymes. The inflammatory response is a complex reaction involving many mediators that derive from white blood cells, endothelial cells and other tissues. Preliminary data have revealed that inhibitors of the cytokines and adhesion molecules that play a crucial role in the migration of white cells to inflammatory sites may be useful in RA.

This volume serves as a valuable handbook for the development of nanomedicines made of polymer nanoparticles because it provides researchers, students, and entrepreneurs with all the material necessary to begin their own projects in this field. Readers will find protocols to prepare polymer nanoparticles using different methods, since these are based on the variety of experiences that experts encounter in the field. In addition, complex topics such as, the optimal



characterization of polymer nanoparticles is discussed, as well as practical guidelines on how to formulate polymer nanoparticles into nanomedicines, and how to modify the properties of nanoparticles to give them the different functionalities required to become an efficient nanomedicine for different clinical applications. The book also discusses the translation of technology from research to practice, considering aspects related to industrialization of preparation and aspects of regulatory and clinical development.

This book reviews research on Dan Shen, compiles data from clinical trials and biological experiments, and summarizes the latest research advances. It covers the medicinal herb, herbal pieces, and new proprietary drugs that contain it; it also covers simple and compound, traditional and contemporary formulas, and addresses a broad range of subjects, including: standardized cultivation; biodiversity; effective substances and their biological activities; quality control; and clinical trials. The book goes on to present the clinical trials on Dantonic, especially focusing on its therapeutic effects for coronary heart disease. It discusses compound prescriptions and compatibilities, from the herbal piece level to composition level, and describes approaches to research on modern Chinese medicine. Volume 1 describes the biology and chemistry of Dan Shen, while Volume 2 focuses on pharmacology and quality control. Volume 3 describes the clinical research on Dan Shen. Editor Xijun Yan is the President of Tianjin Tasly Group and a Member of the TCM Standardization Technical Committee. Gathering contributions from more than 100 authors working in the field of pharmaceutical and clinical research, the book presents and analyzes the available information from multiple aspects, reflects the current status of Dan Shen research, and offers an essential reference work for further research and development.

The aim of this book is to provide a comprehensive overview of animal testing in the four major fields of infectiology - bacteriology, virology, mycology and parasitology - as well as in the development of vaccines. New and innovative techniques are introduced and their efficacies critically discussed. In addition, the book shows ways to refine, reduce and replace animal tests in infectiological research and considers ethical aspects of their use. A valuable source of information, this publication will be of interest to research scientists, regulatory agencies, veterinarians supervising experimental animals, breeders and anyone involved in the public debate on animal testing.

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