facscanto ii user guide

#Facscanto II #Facscanto II User Guide #Facscanto 2 Guide #Facscanto Manual #User Manual

This comprehensive user guide provides all the information you need to get the most out of your Facscanto II device. Learn about its features, setup, troubleshooting, and best practices for optimal performance. Whether you're a new user or looking to deepen your understanding, this guide is your go-to resource for mastering the Facscanto II.

Flow Cytometry Today

This book covers all the technical aspects of flow cytometry needed to set-up the instrument, solve problems encountered in daily work, or necessary for exam preparation. It provides the reader with an in-depth look at the device and its applications. Each component and its function is described in an easy-to-understand manner, giving the reader a sound basic knowledge of this instrument. The practical examples given, simplify and enhance the learning process. This book is a unique resource of knowledge for biomedical engineers and biotechnologists, flow cytometry operators, laboratory technicians and biomedical researchers, both biologists as well as medical doctors, and can also be a helpful tool for companies and manufacturers.

Handbook of Vascular Biology Techniques

A wide range of research methods for the study of vascular development, from basic laboratory protocols to advanced technologies used in clinical practice, are covered in this work. A range of methodologies such as molecular imaging platforms and signalling analysis, along with tumour models are collated here. Four sections explore in vitro techniques, in vivo and ex vivo manipulations, imaging and histological analysis and other novel techniques in vascular biology. Readers will discover basic methodologies used for analysis of endothelial cell growth in vitro, including co-culture models of vessel formation. Authors also explore isolation and purification of cells and methods for analysis of data and visualization of localized vasculature with modern imaging platforms. Both animal models and human disease are covered in this work. Each chapter contains helpful sections on trouble shooting, additional notes and links, supporting the reader to carry out protocols. This book will appeal to students, researchers and medical professionals working in all vascular-linked fields such as cardio- and cerebrovascular, cancer and dementia.

Prognostic Gene Signatures in Skin Cancer

The Mononuclear Phagocyte System (MPS) of vertebrates is composed of monocytes, macrophages and dendritic cells. Together, they form part of the first line of immune defense against a variety of pathogens (bacteria, fungi, parasites and viruses), and thus play an important role in maintaining organism homeostasis. The mode of transmission, type of replication and mechanism of disease-causing differ significantly for each pathogen, eliciting a unique immune response in the host. Within this context, the MPS acts as both the sentinel and tailor of the immune system. As sentinels, MPS cells are found in blood and within tissues throughout the body to patrol against pathogenic insult. The strategy to detect 'microbial non-self' relies on MPS to recognize conserved microbial products known as 'pathogen-associated molecular pattern' (PAMPs). PAMPs recognition represents a checkpoint in the response to pathogens and relies on conserved 'pattern recognition receptors' (PRRs). Upon PRR engagement, MPS mount a cell-autonomous attack that includes the internalization and compartmentalization of intracellular pathogens into toxic compartments that promote destruction. In parallel, MPS cells launch an inflammatory response composed of a cellular arm and soluble factors to control extracellular pathogens. In cases when innate immunity fails to eliminate the invading microbe, MPS serves as a tailor to generate adaptive immunity for pathogen eradication and generation of "memory" cells, thus ensuring enhanced protection against re-infection. Indeed, MPS cell functions comprise the capture, process, migration and delivery of antigenic information to lymphoid organs, where type-1 immunity is tailored against intracellular microbes and type-2 immunity against extracellular pathogens. However, this potent adaptive immunity is also a double-edge sword that can cause aberrant inflammatory disorders, like autoimmunity or chronic inflammation. For this reason, MPS also tailors tolerance immunity against unwanted inflammation. Successful clearance of the microbe results in its destruction and proper collection of debris, resolution of inflammation and tissue healing for which MPS is essential. Reciprocally, as part of the evolutionary process taking place in all organisms, microbes evolved strategies to circumvent the actions bestowed by MPS cells. Multiple pathogens modulate the differentiation, maturation and activation programs of the MPS, as an efficient strategy to avoid a dedicated immune response. Among the most common evasion strategies are the subversion of phagocytosis, inhibition of PRR-mediated immunity, resistance to intracellular killing by reactive oxygen and nitrogen species, restriction of phagosome maturation, modulation of cellular metabolism and nutrient acquisition, regulation of cell death and autophagy, and modulation of pro-inflammatory responses and hijacking of tolerance mechanisms, among others. The tenet of this eBook is that a better understanding of MPS in infection will yield insights for development of therapeutics to enhance antimicrobial processes or dampen detrimental inflammation for the host's benefit. We believe that contributions to this topic will serve as a platform for discussion and debate about relevant issues and themes in this field. Our aim is to bring expert junior and senior scientists to address recent progress, highlight critical knowledge gaps, foment scientific exchange, and establish conceptual frameworks for future MPS investigation in the context of infectious disease.

Revisiting the Life Cycle of Parasitic Protozoa

Immunotherapy has revolutionized the treatment of malignancies. Targeting of immune checkpoints cytotoxic T-lymphocyte-associated protein 4, programmed cell death protein 1 (PD-1) and its ligand (PD-L1) has led to improving survival in a subset of patients. Despite their remarkable success, clinical benefit remains limited to only a subset of patients. A significant limitation behind these current treatment modalities is an irregularity in clinical response, which is especially pronounced among checkpoint inhibition. Currently, relevant predictors of cancer immunotherapy response include microsatellite instability-high/deficient mismatch repair (MSI-H/dMMR), expression of PD-L1, tumor mutation burden (TMB), immune genomic characteristics, and tumor infiltrating lymphocytes (TILs). However, none of them have sufficient evidence to be a stratification factor. Moreover, as the combined strategies for effective cancer immunotherapy had been developed in multiple tumors, such as Immunotherapy combined with chemotherapy, radiotherapy, targeted therapy and anti-angiogenesis therapy. Therefore, the development of novel biomarkers endowed with high sensitivity, specificity and accuracy able to identify which patients may truly benefit from the treatment with cancer immunotherapy would allow to refine the therapeutic selection and to better tailor the treatment strategy.

Integrated Role of Nutrition and Digestive Physiology for Animal Health

Building on a solid foundation of knowledge and skills, this classic text from trusted author Mary Louise Turgeon clearly explains everything from basic immunologic mechanisms and serologic concepts to the theory behind procedures performed in the lab. This go-to resource prepares you for everything from mastering automated techniques to understanding immunoassay instrumentation and disorders

of infectious and immunologic origin. Packed with learning objectives, review questions, step-by-step procedures, and case studies, this text is the key to your success in today's modern laboratory environment. Procedural protocols help you transition from immunology theory to practical aspects of the clinical lab. Case studies allow you to apply your knowledge to real-world situations and strengthen your critical thinking skills. Updated illustrations, photographs, and summary tables visually clarify key concepts and information. Full-color presentation clearly showcases diagrams and micrographs, giving you a sense of what you will encounter in the lab. Learning objectives and key terms at the beginning of each chapter provide measurable outcomes and a framework for organizing your study efforts. Review questions at the end of each chapter provide you with review and self-assessment opportunities. NEW! Highlights of Immunology chapter presents a clear, accessible, and easy-to-understand introduction to immunology that will help you grasp the complex concepts you need to understand to practice in the clinical lab. NEW! Stronger focus on molecular laboratory techniques. NEW! Ten chapters include COVID-19 related topics, including Primer on Vaccines chapter covering newer vaccine production methods focusing on DNA and RNA nucleic acids and viral vectors, and covering eight different platforms in use for vaccine research and development against SARS-CoV-2 virus. NEW! All chapters include significant updates based on reviewer feedback. NEW! Key Concepts interwoven throughout each chapter highlight important facts for more focused learning.

Editors' Showcase 2022: Insights in Molecular and Cellular Reproduction

The parasitic disease leishmaniasis in its various clinical manifestations from self-resolving skin lesion to deadly systemic infection is a serious health problem in many developing countries and is considered to be a neglected tropical disease by the World Health Organization. To date, a vaccine is lacking and strategies to treat severe forms of leishmaniasis efficiently are missing. Basic research using animal models of experimental visceral or cutaneous leishmaniasis has allowed to dissect the immune response to parasitic pathogens and has contributed substantially to many important, paradigm-changing insights such as the role of cytokines in helper T-cell differentiation and the impact of myeloid cell subsets on innate and adaptive immunity. One strength of experimental leishmaniasis is that tissue-associated parasites constitute a self-renewing antigen reservoir that needs to be controlled by adaptive and innate branches of the immune response. Therefore, mechanisms involved in wound healing, chronic inflammation, host pathogen interactions and the development of long lasting memory responses can be interrogated. This research topic aims to cover a broad range of important concepts in adaptive and innate immunity to leishmaniasis and will include recent work, including vaccine development, to understand and fight this tropical disease. We welcome both reviews and original research articles that cover the latest breakthroughs in leishmaniasis research. We recognize that reproducibility is a fundamental aspect of research and thus welcome also confirmatory studies.

Regulation of Vascular Function by Circulating Blood

The analysis and sorting of large numbers of cells with a fluorescence-activated cell sorter (FACS) was first achieved some 30 years ago. Since then, this technology has been rapidly developed and is used today in many laboratories. A Springer Lab Manual Review of the First Edition: "This is a most useful volume which will be a welcome addition for personal use and also for laboratories in a wide range of disciplines. Highly recommended." CYTOBIOS

The Mononuclear Phagocyte System in Infectious Disease

We acknowledge the initiation and support of this Research Topic by the International Union of Immunological Societies (IUIS). We hereby state publicly that the IUIS has had no editorial input in articles included in this Research Topic, thus ensuring that all aspects of this Research Topic are evaluated objectively, unbiased by any specific policy or opinion of the IUIS.

Epitope Discovery and Synthetic Vaccine Design

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Novel Biomarkers for Predicting Response to Cancer Immunotherapy

Vault brings its famed journalistic, insider approach to internet industry employers. The Guide provides business profiles, hiring and workplace culture information on top employers, including Abbott Laboratories, AstraZeneca, Aventis, Bayer, Bristol-Myers Squibb, Eli Lilly, Genzyme, GlaxoSmithKline, McKesson, Merck, Pfizer, Roche, Sanofi-Syntelabo, Schering-Plough, and more. internet industry employers. The Guide provides business profiles, hiring and workplace culture information on top employers, including Abbott Laboratories, AstraZeneca, Aventis, Bayer, Bristol-Myers Squibb, Eli Lilly, Genzyme, GlaxoSmithKline, McKesson, Merck, Pfizer, Roche, Sanofi-Syntelabo, Schering-Plough, and more.

Innate immune responses to SARS-CoV-2 in infected and vaccinated individuals

Topic Editor Prof. Aimin Xu receives financial support from Servier Laboratories. The other Topic Editors declare no competing interests with regards to the Research Topic theme.

Immunology & Serology in Laboratory Medicine - E-Book

Flow cytometry continually amazes scientists with its ever-expanding utility. Advances in flow cytometry have opened new directions in theoretical science, clinical diagnosis, and medical practice. The new edition of Flow Cytometry: First Principles provides a thorough update of this now classic text, reflecting innovations in the field while outlining the fundamental elements of instrumentation, sample preparation, and data analysis. Flow Cytometry: First Principles, Second Edition explains the basic principles of flow cytometry, surveying its primary scientific and clinical applications and highlighting state-of-the-art techniques at the frontiers of research. This edition contains extensive revisions of all chapters, including new discussions on fluorochrome and laser options for multicolor analysis, an additionalsection on apoptosis in the chapter on DNA, and new chapters onintracellular protein staining and cell sorting, including high-speed sorting and alternative sorting methods, as well as traditional technology. This essential resource: Assumes no prior knowledge of flow cytometry Progresses with an informal, engaging lecture style from simpleto more complex concepts Offers a clear introduction to new vocabulary, principles of instrumentation, and strategies for data analysis Emphasizes the theory relevant to all flow cytometry, with examples from a variety of clinical and scientific fields Flow Cytometry: First Principles, Second Edition provides scientists, clinicians, technologists, and students with the knowledge necessary for beginning the practice of flow cytometry and for understanding related literature.

Leishmaniasis: From Innate and Adaptive Immunity to Vaccine Development

Publisher's Note: Products purchased from Third Party sellers are not guaranteed by the publisher for quality, authenticity, or access to any online entitlements included with the product. The world's most highly regarded reference text on the mechanisms and clinical management of blood diseases A Doody's Core Title for 2019! Edition after edition, Williams Hematology has guided generations of clinicians, biomedical researchers, and trainees in many disciplines through the origins, pathophysiological mechanisms, and management of benign and malignant disorders of blood cells and coagulation proteins. It is acknowledged worldwide as the leading hematology resource, with editors who are internationally regarded for their research and clinical achievements and authors who are luminaries in their fields. The Ninth Edition of Williams Hematology is extensively revised to reflect the latest advancements in basic science, translational pathophysiology, and clinical practice. In addition to completely new chapters, it features a full-color presentation that includes 700 photographs, 300 of which are new to this edition, and 475 illustrations. Recognizing that blood and marrow cell morphology is at the heart of diagnostic hematology, informative color images of the relevant disease topics are conveniently integrated into each chapter, allowing easy access to illustrations of cell morphology important to diagnosis. Comprehensive in its depth and breath, this go-to textbook begins with the evaluation of the patient and progresses to the molecular and cellular underpinnings of normal and pathological hematology. Subsequent sections present disorders of the erythrocyte, granulocytes and monocytes, lymphocytes and plasma cells, malignant myeloid and lymphoid diseases, hemostasis and thrombosis, and transfusion medicine.

Revisiting the thymus: The origin of T cells

The landmark text that has guided generations of hematologists and related practitioners updated with the latest research findings and improved format and presentation Long revered for its comprehensiveness and extraordinary depth of detail, Williams Hematology provides essential coverage of

the origins, pathophysiological mechanisms, and management of benign and malignant disorders of blood and marrow cells and coagulation proteins. The text contains a wealth of basic science and translational pathophysiology for optimal, lifelong learning. Experts in research and clinical hematology, the editors are known worldwide for their contributions to the field. This new edition contains everything that has made Williams Hematology the go-to resource for decades and has been updated with new chapters and critical new research into the molecular mechanisms responsible for hematological disorders and the impact on diagnosis and treatment. And the new format enables you to access each chapter via content modules covering key topics, with summaries, infographics, and cases all linked to review questions for self-assessment. The full-color presentation integrates images of blood and tissue findings where they are cited in the text. NEW TO THIS EDITION: Updated and revised content reflecting the latest research and developments Convenient format that streamlines the learning process and improves retention Additional chapters added on: Immune Checkpoint Inhibitors Immune Cell Therapy: Chimeric Antigen Receptor T Cell Therapy Immune Cell Therapy Dendritic Cell and Natural Killer Cell Therapy The processes of cell death and survival Application of Big Data and Deep Learning in Hematology Williams Hematology Cases with multiple-choice questions including detailed explanations—perfect preparation for the boards Continuously updated online content with comprehensive drug therapy database and other resources

Flow Cytometry and Cell Sorting

Small and large telescopes are being installed all around the world. Astronomers have thus acquired better access to more modern equipment; not in the least to photometers, which are very important tools for the contemporary observer. This development of higher quality and more sensitive equipment makes it very necessary to improve the accuracy of the measurements. This guide helps the astronomer and astronomy student to improve the quality of their photometric measurements and to extract a maximum of information from their observations. The book is based on the authors' observing experience, spending numerious nights behind various instruments at many different observatories.

Application of Cytometry in Primary Immunodeficiencies

From the reviews of the 3rd Edition... "The standard reference for anyone interested in understand-ingflow cytometry technology." American Journal of Clinical Oncology "...one of the most valuable of its genre and...addressed to awide audience?written in such an attractive way, being bothinforma-tive and stimulating." Trends in Cell Biology This reference explains the science and discusses the vastbiomedical applications of quantitative analytical cytology usinglaser-activated detection and cell sorting. Now in its fourthedition, this text has been expanded to provide full coverage ofthe broad spectrum of applications in molecular biology andbiotechnology today. New to this edition are chapters on automatedanalysis of array technologies, compensation, high-speed sorting,reporter molecules, and multiplex and apoptosis assays, along withfully updated and revised references and a list of suppliers.

Recent Advances in Veterinary Immunology Concepts and Methodology

In response to the overwhelming concern for possible acute and long-term effects of ozone depletion on terrestrial and aquatic life, this volume presents a comprehensive collection of review articles from an internationally acknowledged group of experts.

Enumeration of Immunologically Defined Cell Populations by Flow Cytometry

First ed. published as: Louis I. Kahn: talks with students. 1969.

Vault Guide to the Top Pharmaceuticals and Biotech Employers

Flow cytometry forms an integral part of both basic biological research and clinical diagnosis in pathology. This straightforward new volume provides a clear, easy-to-read, and practical manual for both clinicians and non-clinicians at all levels of their careers. The chapter topics range from basic principles to more advanced subjects, such as apoptosis and cell sorting. The book charts the history, development and basic principles of flow cytometry.

Advances in Human Immune System (HIS) Mouse Models for Studying Human Hematopoiesis and Cancer Immunotherapy

The purpose of this Special Issue “Cow’s Milk and Allergy” is to provide an overview of the association of cow’s milk with allergy. This topic has two quite different faces. On the one hand, we are all aware of the importance of cow’s milk allergy in early life. What is less known is that the consumption of raw, unprocessed milk is associated with a lower incidence of asthma and rhinitis. This Special Issue takes a closer look at all of these aspects of cow’s milk and allergy and focus on the following questions: -Mechanisms of cow’s milk allergy -Epidemiology of cow’s milk allergy -Prevention of cow’s milk allergy -Management and immunotherapy of cow’s milk allergy -Milk processing, baked milk, and cow’s milk allergy -The consumption of raw milk and inhalation allergies

Immune Regulations in Reproductive Organs and Organ Transplant

The book Recent Advances in the Biology, Therapy and Management of Melanoma brings up-to-date information regarding a number of aspects which culminate in illuminating potential targets in the fight against melanoma. This book is intended to be a reference book for both the scientific and clinical communities and brings complicated subject matter together in an easy, readable way. Undoubtedly fundamental scientific understanding has to then be translated to the clinic in order for us to make significant strides in eradicating melanoma. It is hoped that scientists, clinicians, students and residents find this book useful in their studies on melanoma and that it not only expands their perspectives and views on the field, but challenges them to forge ahead towards discovering the ultimate cure.

Flow Cytometry

Flow cytometry has evolved since the 1940s into a multidisciplinary field incorporating aspects of laser technology, fluid dynamics, electronics, optics, computer science, physics, chemistry, biology, and mathematics. Innovations in instrumentation, development of small lasers, discovery of new fluorochromes/fluorescent proteins, and implementation of novel methodologies have all contributed to the recent rapid expansion of flow cytometry applications. In this thoroughly revised and updated second edition of Flow Cytometry Protocols, time-proven as well as cutting-edge methods are clearly and comprehensively presented by leading experimentalists. In addition to being a valuable reference manual for experienced flow cytometrists, the editors expect this authoritative up-to-date collection to prove useful to investigators in all areas of the biological and biomedical sciences who are new to the subject. The introductory chapter provides an eloquent synopsis of the principles and diverse uses of flow cytometry, beginning with a historical perspective and ending with a view to the future. Chapters 2–22 contain step-by-step protocols of highly practical and state-of-the-art techniques. Detailed instructions and helpful tips on experimental design, as well as selection of reagents and data analysis tools, will allow researchers to readily carry out flow cytometric investigations ranging from traditional phenotypic characterizations to emerging genomics and proteomics applications. Complementing these instructive protocols is a chapter that provides a preview of the next generation of solid-state lasers, and one that describes a rapid means to validate containment of infectious aerosols generated during high-speed sorting (Chapters 23–24).

Williams Hematology, 9E

Revised and updated, this Second Edition of a classic text describes and evaluates--in greater detail--the most recent practical applications of flow cytometry technique to basic cellular biological investigations and clinical research on human neoplasms. Ideal for the experienced researcher as well as the novice, this informative book offers state-of-the-art reviews of all aspects of flow cytometry. New articles highlight investigations of higher plants, the flow cytometry of microorganisms, and measurements of intracellular ionized calcium and membrane potential--illustrating techniques of specimen preparation, measurement and analysis for each. New chapters examine applications of flow cytometry to medical genetics, genetic toxicology, and ultrasensitive analysis of molecules in solution. The Second Edition goes beyond the traditional analysis of DNA histograms with BrdU incorporation and DNA denaturability to identify and analyze the cell cycle more precisely. New or rewritten chapters discuss the importance of flow cytometry for measurements of nucleic acids, chromatin, and DNA and cover the cytometry of sperm and the cytopathic effects of viruses.

Williams Hematology, 10th Edition

This first edition volume demystifies the complex topic of flow cytometry by providing detailed explanations and nearly 120 figures to help novice flow cytometry users learn and understand the bedrock principles necessary to perform basic flow cytometry experiments correctly. The book divides the topic

of flow cytometry into easy to understand sections and covers topics such as the physics behind flow cytometry, flow cytometry lingo, designing flow cytometry experiments and choosing appropriate fluorochromes, compensation, sample preparation and controls and ways to assess cellular function using a variety of flow cytometry assays. Written as a series of chapters whose concepts sequentially build off one another, using the list of materials contained within each section along with the readily reproducible laboratory protocols and tips on troubleshooting that are included, readers should be able to reproduce the data figures presented throughout the book on their way to mastering sound basic flow cytometry techniques. Easy to understand and comprehensive, Flow Cytometry Basics for the Non-Expert will be a valuable resource to novice flow cytometry users as well as experts in other biomedical research fields who need to familiarize themselves with a basic understanding of how to perform flow cytometry and interpret flow cytometry data. This book is written for both scientists and non-scientists in academia, government, biotechnology, and medicine.

Astronomical Photometry

This book examines a collection of state-of-the-art methods that employ monoclonal antibodies in a clinical setting. The chapters offer in-depth description for generating mouse and recombinant humanized antibodies, and a comprehensive review of how antibodies are being used in bead-based methods for measuring proteins. This field will continue to expand and provide new and innovative techniques in the laboratory and as a basis that complements targeted therapy.

Practical Flow Cytometry

Arthritis Research: Methods and Protocols, Second Edition expands upon the first edition to present new and current techniques for the research of arthritis and related conditions. A compendium of leaders in the field contribute chapters that cover practical research methods such as the intravital multiphoton microscopy technique, techniques for evaluating exhausted CD8 T cell and for studying nucleic acid sensors and their effects, methods for in vivo tetracycline-controlled transgenic mice and T cell receptor transgenic mice, protocols to detect V(D)J recombination products and microRNA, and the technique to make bleomycin-induced dermal fibrosis. Written in the successful Methods in Molecular Biology series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible protocols, and notes on troubleshooting and avoiding known pitfalls. Authoritative and easily accessible, Arthritis Research: Methods and Protocols, Second Edition will serve both professionals and novices with state-of-the-art techniques pertaining to this fascinating research field.

Clinical Cytometry

Since the publication of the first edition of the Handbook of Human Immunology in 1997, major scientific achievements have directly contributed to an increased understanding of the complexities of the human immune system in health and disease. Whether as a result of the sequencing of the entire human genome, or of technological advancements, several new components of the immune system have been revealed, along with new technologies for their measurement and evaluation. Major breakthroughs in the field include an increase in the number of recognized "clusters of differentiation" on the surface of leukocytes and associated cells, the establishment of a chemokine and chemokine receptor nomenclature system, the discovery of more than 30 lymphokines, and humanized monoclonal antibody therapy as a staple of pharmacologic armamentarium Modeling the previous edition, the text begins with an overview of the immune system, focusing on the role of cell receptors, accessory molecules, and cytokines in immune responses and immunological disorders. It then presents a practical, easy-to-read chapter on "statistics in immunological testing"—an invaluable asset for interpreting test results, validating new tests, and developing reference ranges. Simultaneously, the text emphasizes clinically relevant immunological parameters and clarifies the basic principles underlying immune system assays, and applications and interpretations of immune tests. A complete guide to molecular and cellular immunology for practicing clinicians, clinical laboratory professionals, and students, this resource combines basic explanations of laboratory tests with more than 100 tables full of references, and up-to-date information on new developments in immunogenetics.

Environmental UV Photobiology

Louis Kahn