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- Double-spaced text, 1 inch margin, twelve-point font size in Arial, Helvetica or Times New Roman
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Proteomics: Advances in Protein Analysis for the Clinical Laboratory

Clinical Chemistry is pleased to announce a special upcoming theme issue on Proteomics edited by Drs. Leigh Anderson, Steven Carr, and Glen Hortin entitled, Proteomics: Advances in Protein Analysis for the Clinical Laboratory. Clinical Chemistry, published by the American Association for Clinical Chemistry, is the most widely cited forum for peer-reviewed, original research in the fields of Clinical Chemistry and Laboratory Medicine.

The purpose of this issue is to highlight recent technological advances and potential new clinical applications of diagnostic evaluation of proteins. Advances in mass spectrometry and analytical separations of proteins offer new capabilities in the qualitative and quantitative analysis of proteins and the discovery of new markers for disease. Microarrays and nanotechnology offer opportunities for multiplex analysis and enhanced detection sensitivity.

Clinical Chemistry invites authors to submit original articles related to proteomics to be considered for publication in this special issue. Manuscripts are most likely to be favorably received if they address clinical use or late-stage validation of new technologies or markers. Studies generally should identify the components under analysis and provide information expected for any test applied to clinical use regarding preanalytical factors, calibration, precision, limits of detection and linearity, reference intervals, methods for quality assurance, and interpretation of results as described in Instructions for Authors and in Clinical Chemistry 2005;51:3-5.

Potential topics of interest include:

- Preanalytical variables in protein analysis
- Clinical application of mass spectrometric analyses of proteins and peptides
- Multiplex immunoassay and immunomics
- Clinical validation of new protein or peptide markers for disease
- Quality control of multivariate assays
- Standardization and calibration of proteomic analyses

Be a part of this exciting issue!

Submissions must be received through our online submission system at http://submit.clinchem.org no later than August 1, 2009. Your cover letter should express your interest in submitting your paper for consideration for the proteomics theme issue. Journal guidelines for submission apply as described at the submission website in Information for Authors.
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Emerging Biomarkers of Bone Turnover: Gaining Ground in Osteoporosis Management (PID 5237)

Wednesday, May 13, 2009  3:00 - 4:30 PM EASTERN U.S. TIME

The key to preventing fractures in osteoporosis patients is to identify those who would benefit from therapy and then closely monitor their treatment. This is where today’s biomarkers of bone turnover can make a difference. Studies have shown that these tests offer important information about the clinical efficacy of anti-resorptive treatments and fracture outcome before changes to bone mineral density can be detected.

New developments and emerging markers are also elevating the role biochemical assays play in osteoporosis management. Attend this important audioconference and know:

- Potential new roles for emerging biomarkers of bone turnover
- Advantages new biomarkers such as P1NP, CTX and TRAP-5b bring to the management of osteoporosis therapy
- The technical aspects involved in using new bone turnover assays
- What your lab can do to address preanalytical variability in bone turnover biomarkers
- Options for performing proficiency testing on today’s bone turnover biomarkers

The Experts:

Michael Kleerekoper, MD, FACE, Moderator, Professor of Medicine, Wayne State University, Endocrinologist, St. Joseph Mercy Hospital, Ann Arbor, MI

Stuart Silverman, MD, FACP, FACR, Rheumatologist and Clinical Professor of Medicine, UCLA, Medical Director, Osteoporosis Clinical Research Center, and Medical Director, OMC Clinical Research Center, Los Angeles, CA

Serge Cremers, PhD, Assistant Professor of Medical Sciences, Director, Bone Marker Laboratory, Medicine-Endocrinology and Assistant Director Special Chemistry Laboratory, Pathology, Columbia University, New York, NY

Target Audience: Laboratory administrators, directors, and managers; pathologists; endocrinologists and IVD industry professionals involved in the research, development or performance of biochemical markers of bone turnover.

This program is approved by AACC for 1.5 Category 1 ACCENT credit hours.

Learn about the latest developments in bone turnover biomarkers! Register today!

This event is supported in part by an educational grant from Roche Diagnostics.

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- Emerging opportunities for laboratories in therapy, home monitoring and more
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Amy Herr  
*UC Berkeley*

Whole-Blood Analysis of Populational Platelet Rolling Behavior  
Antonio J. Ricco  
*The Biomedical Diagnostics Institute*

CD-Based, Multiplexed SPR Platform  
João Garcia da Fonseca  
*BIOSURF*

Molecular Imaging for Oncology  
Martin Pomper  
*Johns Hopkins*

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Harmuth Kolb  
*Siemens Molecular Imaging Biomarker Research*

Targeted Ultrasound Contrast Agents for Molecular Imaging  
Joshua Rychak  
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**Keynote Presentation**

A Human Protein Atlas for Biomarker Discovery

**Mathias Uhlen**  
*Royal Institute of Technology, Stockholm, Sweden*

An internationally recognized researcher and winner of the 2006 HUPO Distinguished Achievement Award, Dr. Uhlen has founded several innovative diagnostic companies. He is currently working on the Human Protein Atlas program, with the aim of systematically mapping the human proteome. His presentation will focus on the impact of the atlas on diagnostics.

**Four Sessions**

- POC Devices
- Next Generation DNA Sequencing
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In addition to the invited speakers, the conference will feature oral presentations of selected abstracts, a poster session, networking breaks, and a reception.

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Candidates must be a physician with board certification in clinical pathology and a current medical license or a PhD clinical chemist. He/she must also have a minimum of five years staff experience in clinical chemistry practice and science as well as laboratory management experience. Candidates should demonstrate experience in research protocols and have a record of innovative research productivity. Salary and appointment mechanism will be commensurate with clinical chemistry and managerial experience as well as scientific accomplishments.

Applications must be received by May 4, 2009. Reply with a letter of interest, CV and the names of six references to Dr. Henry Masur, Chair, Clinical Chemistry Search Committee, c/o Ms. Kathy Hilburn, CC, NIH, Bldg 10, Room 2C306, 10 Center Dr., MSC 1508, Bethesda, MD 20892 or hilburnk@mail.nih.gov

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Carol A. Holland and Daniel H. Farkas

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Director of Clinical Chemistry

The Department of Pathology at the Dartmouth-Hitchcock Medical Center is seeking a full-time doctoral level (M.D. or Ph.D.) individual to join a progressive and growing program overseeing the integration of clinical chemistry, molecular pathology, clinical research and development and a core translational research laboratory. The preferred candidate will have 5-10 years of experience directing a clinical laboratory. Candidates must be board certified/eligible in clinical chemistry with strong analytical and consultative skills, demonstrate competency in molecular diagnostics and be able to develop strong collaborations with other faculty. Research and clinical experience complementing DHMC program initiatives is desirable. The candidate must also demonstrate an ability to inspire students, residents and fellows through invigorating teaching methods. The laboratory performs in excess of 1.5 million tests annually for a 400-bed teaching hospital and a 550-physician practice as well as act as a regional reference laboratory. Faculty rank will be commensurate with experience and academic track record.

Prabhjot Kaur, M.D.
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Molecular Pathology Essentials: Diagnosis and Targeted Therapy

October 1-2, 2009
Scandic Copenhagen Hotel
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This course will feature presentations on the essential knowledge and current practice of clinical molecular pathology, with an emphasis on diagnosis and targeted therapy.

Those who “must attend” this program include laboratory medicine doctors, clinical chemists, clinical pathologists, anatomic pathologists, geneticists, industry professionals, and others who seek a better understanding of molecular testing methods and their clinical applications.

The Scandic Copenhagen Hotel is conveniently located to several of Copenhagen’s main attractions, including Tivoli Gardens, the old port of Nyhavn, and the Little Mermaid statue. The Copenhagen Airport is just 10.0 kilometers (approx. 6 miles) from the hotel.

Program Schedule*
Thursday, October 1:
- Genetic Principles
- Genetic Testing
- Genetics of complex diseases
- Pharmacogenetics
- Laboratory management and regulatory issues

Friday, October 2:
- Molecular pathology of cancers
- Lymphoid and myeloid neoplasms
- Markers for targeted therapy
- Circulating tumor cells and nucleic acids
- Future trends in molecular diagnostics

*Program is subject to change

This program is being presented by:
The American Association for Clinical Chemistry (AACC)
The Association for Clinical Biochemistry (ACB)
The Association for Molecular Pathology (AMP)
The Danish Society for Clinical Biochemistry (DSKB)

For additional information or to register, visit www.aacc.org/events/meetings/ or call the AACC Customer Service Department at 1-800-892-1400 or 202-857-0717
The third edition of this information packed meeting is where you will find everything you need to know to keep your lab automation projects on the road to success.

The previous conferences, which took place in Singapore, attracted more than 200 people from over 25 different countries. Attend and know why.

Leading experts will share key challenges and pitfalls of automation and present practical solutions that you can apply to your projects. Areas covered include system selection, implementation, optimization, pre-analytical concerns, improved specimen id, open systems and much more.

Best of all, you will have access to all of the leading automation vendors in one place. Through industry workshops you will hear from fellow laboratorians how they were able to successfully improve laboratory operations by implementing automation technologies.

Attend this information rich conference and make the most of your education investment.

This program is offered under the auspices of the IFCC.

Sponsored by
American Association for Clinical Chemistry (AACC), Asian and Pacific Federation of Clinical Chemistry (APFCB) and the Malaysian Association of Clinical Biochemistry (MACB).

Supported by
Beckman Coulter, Siemens Healthcare Solutions and Sysmex Asia Pacific Pte Ltd.

If you would like to be a supporter and offer workshops or other activities during the conference, or if you would like more information about this opportunity, please contact Jean Rhame at jrhame@aacc.org
Incredibly, we have seen the first wave of retirement of the “baby boomer” generation of clinical chemists and laboratory scientists, with more to follow. This has created renewed employment opportunities in academia and clinical laboratories for our graduate students and postdoctoral fellows. *Self-Assessment in Clinical Laboratory Science II* was written as a supplement to *Self-Assessment in Clinical Laboratory Science, Third Edition*, to assist the next generation in passing certification examinations such as those offered in clinical chemistry, toxicology chemistry, and molecular diagnostics by the American Board of Clinical Chemistry.

Although it has been eight years since the publication of the third edition of *Self-Assessment in Clinical Laboratory Science*, the content remains relevant. This new volume includes entirely new questions, written by 47 authors who are experts in their respective fields, and as with previous editions of *Self-Assessment in Clinical Laboratory Science*, the scope of topics has expanded to include new sections and subsections on coagulation, infectious disease serology, molecular virology, evidence-based medicine, analysis of body fluids, fertility and pregnancy, allergy, and hemoglobinopathies.

Whether you are a student or practicing clinical scientist, this book will assist you in determining the gaps in knowledge that you may have, so that you can better study for certification examinations and remain current in this rapidly changing field.
Leveraging Autoverification for Greater Lab Efficiency

Wednesday, April 22, 2009  2:00 - 3:30 PM EASTERN U.S. TIME

During this time of economic uncertainty, clinical labs can’t afford to ignore resource-saving technology that’s already built in to their analyzers and laboratory information systems. One of these technologies—autoverification—is still used sparingly in some labs, while others are now autoverifying about 80% of their test results.

What can your lab do to increase the percentage of test results it autoverifies and reduce the number of staff hours needed for the manual verification of results? Attend this important audioconference and learn how to build an autoverification strategy that saves you time and money—without having to purchase new software or instrumentation.

You will know how to:

- Add new layers to your autoverification program, learning from real-world examples of the rules and delta checks experts use
- Create time-saving and useful multi-component algorithms
- Optimize the capabilities of systems with and without middleware
- Manage QC frequency using autovalidation
- Verify autoverification ranges for CAP and other accrediting organizations
- Test and maintain your autoverification rules

The Experts:
Jay B. Jones, PhD, (Moderator), Director of Chemistry & Regional Labs, Geisinger Health System, Danville, PA

William Neeley, MD, Medical Director of Laboratories, Detroit Medical Center, Detroit, MI

Susan Dawson, MS, Clinical Lab Manager, Swedish Covenant Hospital, Chicago, IL

Target Audience: Laboratory administrators, directors, and managers; information systems professionals involved in the reporting of laboratory test results or who work with lab information systems.

This program is approved by AACC for 1.5 Category 1 ACCENT credit hours.

Learn how autoverification can make your lab more efficient!

Register today!

This event is supported in part by an educational grant from Siemens Healthcare Diagnostics.

TO REGISTER

Go to www.aacc.org and under “Upcoming Events,” select this audioconference. Then, click “Register” to register online or print a registration form. (PID 5294)
The application of pharmacogenomic principles to medication use is beginning to radically change the way drugs are selected and monitored. Those who wish to evaluate their knowledge in the basics of the subject and in applications such as drug selection and drug avoidance will therefore find *Referenced Review Questions in Pharmacogenomics* an invaluable guide to this rapidly evolving field.

The book features three sections:

- Questions
- Answers and Explanation
- References (provided as a basis for the answers and to encourage the reader to review the references and expand his/her knowledge or area of expertise)

The Questions section is further subdivided into the following topics: The Basics; Cytochrome P450s and Other Enzymes; Receptors; N-Acetyl Transferases; Asthma and Other Pulmonary Diseases; Neurology; Antimicrobials and Infectious Disease; Immunology; Oncology; Analgesics, Sedatives, Hypnotics, and Anesthetics; Psychiatry; Antiinflammatory Drugs; Oral Hypoglycemics; Glucose-6-phosphate Dehydrogenase; Anticoagulants; Inflammatory Bowel Disease and Other Gastrointestinal Drugs; Bone and Mineral Metabolism; and Cardiovascular Drugs. A large portion of the specific information on individual drugs is derived from the pharmaceutical industry, which performs the majority of the pharmacogenomics testing as part of pre-market approval.

Because the emerging concept of personalized medicine is placing significant demands on physicians and on pharmacists in particular, they—as well as academic and practicing clinical chemists and pathologists who have an interest in pharmacogenomics—will find *Referenced Review Questions in Pharmacogenomics* especially useful. Technologists and other healthcare professionals who have an interest in molecular medicine and who would like to broaden their professional horizons will also find this text enlightening.
Applying Evidence-Based Laboratory Medicine: A Step-by-Step Guide

Christopher P. Price, Joanne Lozar Glenn, and Robert H. Christenson

Published 2009,
270 pages, softcover,
ISBN 9781594250897,
Product #5175

Price only $70; AACC Member $58

This workbook offers a step-by-step guide to applying the principles of evidence-based laboratory medicine (EBLM) in routine practice.

The term “evidence-based” is increasingly becoming part of the language in the practice of clinical medicine, and in laboratory medicine. In laboratory medicine, it is also becoming clear that the “evidence” differs somewhat from that on which the specialty was founded. The foundation of laboratory medicine is an understanding of the molecular mechanisms that describe the pathology of disease, but in applying this knowledge to patient care, the emphasis moves from understanding disease mechanisms to improving health outcomes.

By applying EBLM to daily practice, laboratory professionals can
• Ensure appropriate use of tests at the requesting, decision-making, and application phases.
• Make the business case for implementing new diagnostic tools and strategies that meet clinical needs.
• Become full members of the clinical team and take an important role in implementing change.

The key is understanding the question being asked—and then applying the EBLM A5 Cycle: Ask, Acquire, Appraise, Apply, Assess.

This workbook walks readers through this process by providing a wide range of case studies that illustrate applications of EBLM in routine laboratory practice. Readers are then encouraged to record their own examples, consider how they might be addressed using the principles of EBLM, formulate research questions, and then follow those questions to their evidence-based solutions.

Throughout the text, sidebars and exercises offer additional helpful information and highlight key concepts. Whether used alone or with colleagues, this workbook provides the knowledge and practice that will give readers confidence that they are indeed learning how to apply the best available scientific evidence to diagnostic challenges, and in the process, playing a central role in patient care.

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Handbook of Workplace Drug Testing, 2nd Edition

Edited by Jeri Ropero-Miller and Bruce Goldberger

Published 2008, 506 pages, softcover, ISBN 9781594250903, Product #5176
Price only $89; AACC Member $71

The Second Edition of Handbook of Workplace Drug Testing builds on the knowledge included in the first edition and offers considerable updates and enhancements. It remains a valuable resource for understanding the complexity of the science, law, and interpretation of workplace drug testing. The information that has been compiled in the second edition was obtained through extensive laboratory study and literature surveys. As leaders in their fields, the authors provide a historical perspective of workplace drug testing and an understanding of analytical procedures and theory, drug class overviews, adulteration and specimen validity testing, alternative matrices, quality assurance and quality control, result interpretation for medical review officers, and laboratory accreditation.

This book is a “must have” for all workplace drug testing laboratories and practitioners in forensic toxicology, clinical toxicology, and clinical chemistry. A complete subject index is included for easy referencing of topics.

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**Referenced Review Questions in Molecular Medicine**

Robert M. White, Sr., PhD, David W. Brown, PhD, and Steven A. Williams, PhD

2005, 235 PAGES, SOFTCOVER
ISBN 1594250332
PRICE $49, AACC MEMBER $39, PRODUCT #3265

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**Referenced Review Questions in Molecular Medicine** is divided into three sections:

- Questions
- Answers and brief rationale (as derived from the references)
- References (provided as a basis for the answers and to encourage the reader to review the references and expand his/her knowledge or area of expertise)

This book is intended for those who practice in the area of molecular medicine/molecular diagnostics and who wish to evaluate their knowledge in the basics of the subject and applications such as cancer, microbiology, and genetic disease. The book is also intended for academic and practicing clinical chemists, pathologists, practicing physicians with an interest in molecular medicine, technologists, and other laboratorians who have an interest in molecular medicine.
Handbook of Diagnostic Endocrinology
2nd Edition

Edited by William E. Winter, Lori J. Sokoll, and Ishwarlal Jialal
Published 2008,
447 pages, softcover,
ISBN 9781594250866,
Product #5105
Price only $89; AACC Member $71

The clinical laboratory plays a critical role in the diagnosis and management of endocrine and related metabolic disorders, which are leading causes of morbidity and mortality in children and adults. This eagerly awaited second edition of the Handbook of Diagnostic Endocrinology provides a ready reference for the evaluation, diagnosis, and monitoring of such disorders.

The book is written specifically for clinical chemists, chemical pathologists, endocrinologists, and senior medical technologists to aid them in the investigation of endocrine and metabolic disorders. In addition to covering the most common disorders such as diabetes, thyroid dysfunction, dyslipidemia, and metabolic bone disease, the book also addresses the less common conditions such as endocrine disorders of the gastrointestinal tract, disorders of the adrenal and pituitary glands, malignancy-associated endocrine disorders, and reproductive endocrinology. In this updated edition, the laboratory evaluations of AIDS endocrinopathies, endocrine hypertension, the metabolic syndrome and obesity, and short stature in children are also introduced.

Based on an understanding of normal physiology, each chapter focuses on the biochemical tests that are required, either in the basal state or following provocation or suppression, to assist in the diagnosis of the various disorders. Proper sample collection is also described, and relevant interpretations of laboratory tests are provided.

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www.aacc.org
Quick Guide to Clinical Chemistry

Janelle M. Chiasera, Robert W. Hardy, and John A. Smith

Published 2008, 92 pages, spiral binding, ISBN 9781594250729, Product #4631

Price only $20; AACC Member $16

The Quick Guide to Clinical Chemistry is a pocket-sized reference intended for physicians, nurses, physician assistants, nurse practitioners, medical technologists, pharmacists, and residents and students in those professions. This guide focuses on the selection and use of chemistry laboratory tests for diagnosing and managing emergent conditions such as poisonings, acute abdominal pain, and acute myocardial infarction.

The Guide’s small size allows it to be used in situations when quick decisions must be made regarding the ordering and interpretation of chemistry tests. The emergent clinical conditions and the associated laboratory tests are described together for quick reference.

Although this Guide reviews several clinical conditions, it is not intended to be a comprehensive guide to all clinical laboratory tests, nor is it intended to dictate what constitutes reasonable, appropriate, or best care in a given situation.

Comprehensive references for such information currently exist. Instead, it should be seen as it is clearly named, a “Quick Guide” to clinical chemistry.

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New from AACC Press!

Pain Management Testing Reference

Robert M. White, Sr., and Matthew L. Black

2007, 285 PAGES, SOFTCOVER
ISBN 9781594250767
PRICE $59 (tent.), AACC MEMBER $47 (tent.), PRODUCT #4627

The Pain Management Testing Reference is divided into six separate sections:

- A brief introduction to the practice of the distinct field of pain management
- The testing associated with the practice of pain management and the rationale behind a pain management profile
- Individual descriptions of each drug involved in pain management testing, including antidepressants, drugs for mild to moderate pain, and drugs for migraine
- Appendices that include pain management forms, abbreviations, and a glossary of terms
- References
- Index

The Pain Management Testing Reference is intended for those who engage in the clinical practice of pain management (e.g., physicians and nurses) and laboratorians who are involved in the support of pain management clinics, primarily through urine drug testing. The book also will be useful for clinical chemists, pathologists, technologists, and practicing physicians who wish to develop their services in the area of pain management or expand their knowledge of an increasing, new field of medicine.
Therapeutic Drug Monitoring Data: A Concise Guide is an easy-to-read source of information on intended use, pharmacokinetics, therapeutic range, and toxic concentrations, as well as bioavailability, disposition, metabolism, and excretion of commonly monitored therapeutic drugs. The Guide, useful as an educational aid and for clinical scientists involved in therapeutic drug monitoring, also includes chapters on:

- New candidates for therapeutic drug monitoring such as protease inhibitors and new immunosuppressants
- Basic issues of therapeutic drug monitoring such as pharmacokinetics, specimen handling, and common sources of interferences in immunoassays
- Drug-herb interactions

References are provided for those needing more detailed information.
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