CLINICAL CHEMISTRY AND LABORATORY MEDICINE

Published in Association with the European Federation of Clinical Chemistry and Laboratory Medicine

CCLM is the official journal of the Association of Clinical Biochemists in Ireland (ACBI), the Austrian Society of Laboratory Medicine and Clinical Chemistry (ÖGLMKC), the Belgian Society of Clinical Chemistry (BVKC/SBCC), the German United Society for Clinical Chemistry and Laboratory Medicine (DGKL), the Hungarian Society of Laboratory Medicine (MLDT), the Italian Society of Clinical Biochemistry and Clinical Molecular Biology (SIBioC), the Korean Society of Clinical Chemistry (KSCC), the Slovenian Association for Clinical Chemistry (SZKK), and the Turkish Biochemical Society (TBD).

EDITOR-IN-CHIEF
Mario Plebani
Padova, Italy

ASSOCIATE EDITORS
Giuseppe Lippi
Reviews Editor
Parma, Italy
Philippe Gillery
Reims, France
Steven Kazmierczak
Portland, USA
Karl J. Lackner
Mainz, Germany
Bohuslav Melichar
Olomouc, Czech Republic
John B. Whitfield
Brisbane, Australia

EFLM REPRESENTATIVE
Ana-Maria Simundic
Zagreb, Croatia

EDITORIAL BOARD
Francisco V. Alvarez
Oviedo, Spain
Hassan M.E. Azzazy
Cairo, Egypt
Rossa Wai Kwun Chiu
Hong Kong, China
Eleftherios P. Diamandis,
Toronto, Canada
Arnold von Eckardstein
Zurich, Switzerland
Emmanuel Favaloro
Westmead, Australia
Debabrata Ghosh
New Delhi, India
Andrea Griesmacher
Innsbruck, Austria
Johannes J.M.L. Hoffmann
Nuenen, Netherlands
Kiyoshi Ichihara
Ube, Japan
Berend Isermann
Magdeburg, Germany
János Kappelmayer,
Debrecen, Hungary
Jeong-Ho Kim
Seoul, Korea
Wolfgang Korte
St. Gallen, Switzerland
Christos Kroupis
Athens, Greece
Leslie Charles Lai
Kuala Lumpur, Malaysia
W.K. Christopher Lam
Taipa, Macau
Sylvain Lehmann
Montpellier, France
Janja Marc
Ljubljana, Slovenia
Tomris Ozben
Antalya, Turkey
Vladimir Palicka
Hradec Králové,
Czech Republic
Mauro Panteghini
Milan, Italy
José M. Queraltó
Barcelona, Spain
Gérard Siest,
Nancy, France
Grazyna Sypniewska
Bydgoszcz, Poland
Gregory J. Tsongalis
Lebanon, USA
Kannan Vaidyathan
Tiruvalla, India
Pierre Wallemacq
Brussels, Belgium
Shengkai Yan
Beijing, China
Ian S. Young
Belfast, UK

MANAGING EDITOR
Heike Jahnke
Berlin, Germany
Contents

Editorial

Giuseppe Lippi, Gianfranco Cervellin and Mario Plebani
The ten commandments of laboratory testing for emergency physicians — 183
Refers to articles on pp 201, 205, 259

Review

Evangelos Marinakis, Georgios Bagkos, Christina Piperi, Paraskevi Roussou and Evanthia Diamanti-Kandarakis
Critical role of RAGE in lung physiology and tumorigenesis: a potential target of therapeutic intervention? — 189

Opinion Papers

Karl J. Lackner
Do we really need high-sensitive troponin immunoassays in the emergency department? Definitely, yes! — 201

Giuseppe Lippi and Gianfranco Cervellin
Do we really need high-sensitivity troponin immunoassays in the emergency department? Maybe not — 205

General Clinical Chemistry and Laboratory Medicine

Giorgia Antonelli, Carlo Artusi, Mariela Marinova, Laura Brugnolo, Martina Zaninotto, Carla Scaroni, Rosalba Gatti, Franco Mantero and Mario Plebani
Cortisol and cortisone ratio in urine: LC-MS/MS method validation and preliminary clinical application — 213

Lars Ødum, Anita Sylvest Andersen and Thomas Vauvert F. Hviid
Urinary neutrophil gelatinase-associated lipocalin (NGAL) excretion increases in normal pregnancy but not in preeclampsia — 221

Riccardo Addobbati, Lorella Pascolo, Nicola Di Toro, Giulia B. Sebastiani, Stefano Martellosi and Tarcisio Not
Influence of urine volume on the assessment of intestinal permeability in affected children by multiple sugar probes — 227

Cindy Soendersoe Knudsen, Lene Heickendorff and Ebba Nexo
Measurement of amino terminal propeptide of type III procollagen (PIIINP) employing the ADVIA Centaur platform. Validation, reference interval and comparison to UniQ RIA — 237

Cancer Diagnostics

Shiyang Wu, Zhiming Liu, Suyan Liu, Li Lin, Weiwei Yang and Jiasen Xu
Enrichment and enumeration of circulating tumor cells by efficient depletion of leukocyte fractions — 243

Jeffrey F.W. Keuren, Johannes J.M.L. Hoffmann and Mathie P.G. Leers
Immunological screening for tumor cells in serous body fluids has added value with the CELL-DYN Sapphire — 253

Cardiovascular Diseases

Laurens-Jan C. Jellema, Barbra E. Backus, A. Jacob Six, Richard Braam, Bjorn Groenemeijer, Hester J. van der Zaag-Loonen, Rene Tio and Jeroen D.E. van Suijlen
The value of clinical and laboratory diagnostics for chest pain patients at the emergency department — 259

Gian Luca Salvagno, Federico Schena, Matteo Gelati, Elisa Danese, Gianfranco Cervellin, Gian Cesare Guidi and Giuseppe Lippi
The concentration of high-sensitivity troponin I, galectin-3 and NT-proBNP substantially increase after a 60-km ultramarathon — 267

Tanja Savukoski, Tuomo Ilva, Juha Lund, Pekka Porela, Noora Ristiniemi, Saara Wittfooth and Kim Pettersson
Autoantibody prevalence with an improved immunoassay for detecting cardiac troponin-specific autoantibodies — 273

Gábor Szabó, Attila Molvarec, Bálint Nagy and János Rigó Jr.
Increased B-type natriuretic peptide levels in early-onset versus late-onset preeclampsia — 281
Fumi Murata-Mori, Naomi Hayashida, Takao Ando, Toshiyuki Ikeoka, Mio Nakazato, Harutaka Sekita, Norio Abiru, Hironori Yamasaki, Takahiro Maeda, Atsushi Kawakami and Noboru Takamura
Association of the GCKR rs780094 polymorphism with metabolic traits including carotid intima-media thickness in Japanese community-dwelling men, but not in women — 289

Infectious Diseases
Priyanka Verma, Santwana Bhatnagar, Pradeep Kumar, Vinita Chattree, M.M. Parida, S.L. Hoti, Shakir Ali and D.N. Rao
Analysis of antibody response (IgM, IgG, IgG3) to Chikungunya virus using a panel of peptides derived from envelope protein for serodiagnosis — 297

Online Only: Letters to the Editor
Giuseppe Lippi and Loris Borghi
A short story on how the H-index may change the fate of scientists and scientific publishing — e1

Mira Barak and Ram Jaschek
A new and effective way for preventing pre-analytical laboratory errors — e5

Dirk Roggenbuck, Rico Hiemann, Peter Schierack, Dirk Reinhold and Karsten Conrad
Digital immunofluorescence enables automated detection of antinuclear antibody endpoint titers avoiding serial dilution — e9

Maaike J. G. Godefroid, Alexander von Meyer, Hans Parsch, Thomas Streichert, Alain G. Verstraete and Veronique Stove
Multicenter method evaluation of the ARK™ Methotrexate Immunoassay — e13

Annarita Frezzotti, Morena Galeazzi, Claudio Paladini and Massimo Tocchini
Haemoglobinopathies in nonendemic areas in recent years — e17

Maria Franzini, Silvia Masotti, Concetta Prontera, Claudio Passino and Aldo Clerico
Clinical implications of a recent adjustment to the high-sensitivity cardiac troponin T assay: some results — e21

William A. Parsonage, Jillian R. Tate, Jaimi H. Greenslade, Christopher J. Hammett, Jacobus P.J. Ungerer, Carel J. Pretorius, Anthony F.T. Brown and Louise Cullen
Effect of recalibration of the hs-TnT assay on diagnostic performance — e25