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Panteghini, M., Young, I. S., & Gillery, P. (2010). IFCC Scientific Division. *Clinical Chemistry and Laboratory Medicine*, 48(11), 1529-1530. <https://doi.org/10.1515/CCLM.2010.320>

Published in:
Clinical Chemistry and Laboratory Medicine

Document Version:
Publisher's PDF, also known as Version of record

Queen's University Belfast - Research Portal:
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Editorial

IFCC Scientific Division

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The aims of the Scientific Division (SD) of the IFCC are to advance the science of Laboratory Medicine by identifying technical innovations and diagnostic strategies of relevance to Clinical Chemistry and Laboratory Medicine, and to assist in the transfer of these to the profession. In particular, the SD promotes the standardization of laboratory tests and the comparability of patient results through the development of reference measurement systems, or harmonization activities when this is not possible at present. An additional role is to establish standards for scientific and technical aspects of good laboratory practice. The overall purpose of these activities is to benefit clinical care and improve patient outcomes.

Usually, the SD initiates and manages projects through its Committees (Cs) and Working Groups (WGs). Work is often conducted in cooperation with relevant National and International organisations. Each of the C/WG functions has clear terms of reference together with an agreed schedule of activity. Particularly, SD Cs are theme orientated, carrying out a range of projects in an area of particular importance to the Laboratory Medicine community. WGs are task orientated, focusing on a single goal or on a set of closely related goals, which can usually be achieved in a limited timescale. The SD currently coordinates the activities of six Cs and 13 WGs (Table 1).

Recently, the SD has been asked by the Editor-in-Chief of CCLM to promote a more interactive and cooperative relationship between its Cs/WGs and the journal. The cooperation could significantly contribute to close the gap between

scientific knowledge and recent developments promoted by the activities of the SD and the information available to laboratory professionals. The final idea was to arrange a CCLM Special Issue dedicated to a number of contributions on selected topics in the field of the C/WG activities. Documents, state-of-the-art reviews, and experimental contributions dealing with recent developments of activities from SD Cs or SD WGs have been prepared, and are being published in this issue of CCLM.

The Committee on Molecular Diagnostics (C-MD) has focused its contribution on issues related to nucleic acid reference materials by reviewing and clarifying definitions, attributes and applications for the use of reference materials in the specific context of molecular diagnostics. This is the second of a series of opinion papers dealing with reference methods and materials in molecular diagnostics, the first being published on this journal in 2009 (1). The Committee on Reference Intervals and Decision Limits (C-RIDL) has prepared two manuscripts. The first document presents a critical overview of basic and more advanced statistical techniques used in derivation of reference intervals. The second, prepared in cooperation with the Committee on Reference Systems of Enzymes (C-RSE), is making use of enzyme reference measurement systems developed by C-RSE (2) to establish common reference intervals for a variety of enzymes, including GGT, AST and ALT. If the prerequisite of using analytical systems that provide results traceable to IFCC reference measurement systems is fulfilled, at least for the two aminotransferases, the proposed reference intervals can be adopted worldwide by replacing those currently in use. The Committee on Nomenclature, Properties and Units (C-NPU) publishes the draft of international vocabulary for nominal properties and examinations which define 75 concepts on nominal properties, i.e., properties that can be compared for identity with other properties of the same kind-of-property, but have no magnitude, inspired by the International Vocabulary of Metrology (VIM) (3). The Committee on Plasma Proteins (C-PP), which in the recent years has carried out outstanding work on the development of new reference materials for protein analysis in cooperation with the Institute of Reference Materials and Measurements (IRMM), summarizes the efforts made to achieve worldwide comparability of plasma protein results.

While the tasks of all of the SD WGs are important, the work of five in particular are highlighted here. The WG on Standardization of Thyroid Function Tests (WG-STFT) has been particularly active, with proposals for standardization of free thyroid hormones at an advanced stage and with attention turning to thyroid stimulating hormone (TSH) (4–6). The activities of the WG on Standardization of HbA₂

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Previously published online October 20, 2010

Table 1 Synopsis of Committees and Working Groups currently active in the IFCC Scientific Division. 2010 Chairs are listed.

Committee/Working Group	Chair
Committee on Nomenclature, Properties and Units (C-NPU)	F. Pontet (FR)
Committee on Molecular Diagnostics (C-MD)	M. Pazzagli (IT)
Committee on Plasma Proteins (C-PP)	G. Merlini (IT)
Committee on Reference Systems of Enzymes (C-RSE)	F. Ceriotti (IT)
Committee on Traceability in Laboratory Medicine (C-TLM)	A. Kessler (DE)
Committee on Reference Intervals and Decision Limits (C-RIDL)	K. Ichihara (JP)
Working Group on Standardization of Thyroid Function Tests (WG-STFT)	L. Thienpont (BE)
Working Group on Standardization of Hemoglobin A ₂ (WG-HbA ₂)	R. Paleari (IT)
Working Group on Standardization of Carbohydrate-Deficient Transferrin (WG-CDT)	A. Helander (SE)
Working Group on Standardization of Cystatin C (WG-SCC)	A. Grubb (SE)
Working Group on Standardization of Glomerular Filtration Rate Assessment (WG-GFRA)	N. Greenberg (US)
Working Group on Standardization of Albumin Assay in Urine (WG-SAU)	G. Miller (US)
Working Group on Standardization of Pregnancy-Associated Plasma Protein A (WG-PAPPA)	K. Pettersson (FI)
Working Group on Growth Hormone (WG-GH)	M. Bidlingmaier (DE)
Working Group on Standardization of Insulin Assays (WG-SIA)	M. Steffes (US)
Working Group on Standardization of Troponin I (WG-TNI)	J. Tate (AU)
Working Group on Allowable Errors for Traceable Results (WG-AETR)	R. Bais (AU)
Working Group on Harmonization of Autoantibody Tests (WG-HAT)	J. Sheldon (UK)
Working Group on Quality Specifications for Glucose POCT (WG-GPOCT)	R. Tirimacco (AU)

(WG-HbA₂) are important for the diagnosis of thalassaemia. A candidate secondary reference material is in development in cooperation with IRMM that hopefully will result in improvement in inter-method variability for this important biomarker. Variability in cardiac troponin I (cTnI) assays is a considerable clinical problem, and the WG on Standardization of Troponin I (WG-TNI) is exploring ways to improve this situation (7). This WG has worked with the National Institute of Standards and Technology (NIST), National Physical Laboratory (NPL) and IRMM to identify antibodies against the stable region of the cTnI molecule, which may provide a suitable combination for the development of a higher metrological order procedure in an ELISA format. Finally, carbohydrate-deficient transferrin (CDT) and cystatin C are further markers for which specific SD WGs (WG-CDT and WG-SCC) are pursuing standardization through the creation of specific reference measurement systems.

We believe that the papers published in this CCLM issue are a good example of the work of the SD, which stretches across the full spectrum of clinical chemistry and seeks to address the issues of greatest importance to the profession, laboratory users and patients.

Acknowledgements

We would like to thank all members and consultants of the IFCC SD. Current composition of the SD Executive is as follows: Mauro Panteghini (Chair), Ian Young (Vice-Chair), Gary Myers (Secretary), Philippe Gillery (Member), Naotaka Hamasaki (Member), Lothar Siekmann (Member), Joseph Passarelli (Corporate Representative), Mathias Müller (Consultant), David Bunk (Consultant), and Heinz Schimmel (Consultant). We also thank Dr. Ferruccio Ceriotti, Dr. Rolf Hinzmann, and Prof. Howard Morris for their kind assistance in reviewing some of the submitted articles.

Conflict of interest statement

Authors' conflict of interest disclosure: The authors stated that there are no conflicts of interest regarding the publication of this article.

Research funding: None declared.

Employment or leadership: None declared.

Honorarium: None declared.

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