

In this issue we report on the launch of a new website for promoting traceability in laboratory medicine; new entries published in the database; a gap analysis of the current database; the announcement of the 2017 call for materials, methods and services nominations; highlights from the 2016 Executive meetings; and future 2017 JCTLM Meetings.

1 A new portal for Traceability in Laboratory Medicine

The JCTLM has launched a new website (www.jctlm.org) to promote the importance of traceability in laboratory medicine (TLM) to high-quality healthcare. The website is targeted at non-specialists and is intended to underpin the new JCTLM strap line 'Accurate results for patient care'.

The website features regular news updates and three major sections that contain educational support material:



A file of publications on TLM and related topics, including standardization of methods for key biomarkers. Several articles may be downloaded directly from this file.



A file of freely available webinars, PowerPoint presentations and leaflets that demonstrate the importance of TLM to high quality healthcare. The webinars that are published on the IFCC e-Academy include multi-choice questions to aid understanding.



A file of lectures, symposia and workshops on TLM that have been, or will be, presented at national and international conferences. Scientific meeting organizers can apply to hold meetings under the auspices of the JCTLM from this section.

The website includes a direct link to the JCTLM database, a list of current JCTLM partners and details of how to contact the JCTLM.

Newsletter readers are encouraged to:

- Visit and browse the site
- Suggest content for inclusion on the website by contacting **jctlm @ bipm.org**
- Consider providing a link to the website from their own organization's website.

2 Latest publications and educational support

The most recent entries in the Publications and Resources sections of the new portal for TLM (www.jctlm.org) include:

- 'Metrological traceability of assays and comparability of patient test results', Armbruster DA., *Clin. Lab. Med.*, 2017, **37**, 119
- 'Traceability in laboratory medicine: a driver for accurate results for patient care. 20 questions and answers for trainees in laboratory medicine.' Graham Beastall (UK). January 2017. [Access the webinar here](#)
- 'Getting the right answer: the importance of traceability'. Plenary lecture by Graham Jones in November 2016 at the APFCB Congress in Chinese Taipei. PowerPoint presentation [available for download](#)

3 JCTLM 2017 call for nominations now open

The JCTLM invites producers of available certified reference materials, authors of reference method publications, and calibration laboratories that provide reference measurement services for laboratory medicine and clinical chemistry to submit nominations for review against JCTLM criteria and possible publication in the database.

Nominations should be made using the procedures and forms available at: [JCTLM nomination forms and procedures](#)

The closing date for submission of nominations is **30 May 2017**

4 New entries in the JCTLM database

The JCTLM nomination and review process completed in 2016 resulted in one new entry in the JCTLM Database for available higher-order certified reference materials, as well as five newly published reference measurement methods, and 15 new measurement services delivered by reference laboratories.

The new entries are listed below. Full information on the reference materials and their producers, methods, measurement services and reference laboratories can be found by searching the database at:

<http://www.bipm.org/jctlm/>

New entries for available Certified Reference Materials

Analyte Category	Analyte*	Material / Matrix
Proteins	HbA1c	buffer

*Complete information for each certified reference Material entry can be retrieved by clicking on the Analyte name. e.g. Name and Contact of the producer of the reference material, Name of the reference material, Range of certified value, and Range of expanded uncertainty value, as well as Reference(s) on commutability, certification, or inter-laboratory comparability studies if available.

New entries for Reference Measurement Methods

Analyte Category	Reference Measurement Method (JCTLM Identification Number)
Drugs	An LC-MS/MS based candidate reference method for the quantification of total gentamicin in human serum and plasma using NMR characterized calibrator material, (JCTLM C13RMP1) Lucha S et al., <i>Clinica Chimica Acta</i> , 2017, 464 , 211-217
Vitamins	A candidate reference measurement procedure for the determination of (24R),25-Dihydroxyvitamin D3 in human serum using Isotope-Dilution Liquid Chromatography-Tandem Mass Spectrometry, (JCTLM C13RMP2). Tai S et al., <i>Analytical Chemistry</i> , 2015, 87 , 7964-7970
Metabolites and Substrates	Developing a reference measurement procedure for free glycerol in human serum by two-step gas chromatography-isotope dilution mass spectrometry, (JCTLM C13RMP5) Liu Q. et al., <i>Clinical Biochemistry</i> , 2015, 48 (13-14), 897-903
Metabolites and Substrates	High accuracy analysis of glucose in human serum by isotope dilution liquid chromatography-tandem mass spectrometry, (JCTLM C13RMP4) Chen Y. et al., <i>Clinica Chimica Acta</i> , 2012, 413 (7-8), 808-813
Metabolites and Substrates	Reference Measurement Procedure for Total Glycerides by Isotope Dilution GC-MS, (JCTLM C12RMP5) Edwards S. et al., <i>Clinical Chemistry</i> , 2012, 58 (4), 768-776

Complete information for each method entry can be retrieved by clicking on the JCTLM identification number, e.g. Name of the reference method, Applicable measurement range, and expected uncertainty value, as well as Reference(s) of peer-reviewed publication for method description and validation.

New entries for Reference Measurement Laboratory Services

Analyte Category	Analyte	Location of Laboratory
Drugs	Digoxin Digitoxin	Germany
Enzymes	Alanine aminotransferase Alkaline phosphatase Alpha-amylase Aspartate aminotransferase Creatine kinase Gamma-glutamyltransferase Lactate dehydrogenase	China
Metabolites & Substrates	Glucose Creatinine	Germany China
Non Peptide Hormones	Total thyroxine (TT4) Progesterone 17Beta-estradiol	Germany
Non peptide Hormones	Estriol (non-conjugated)	China

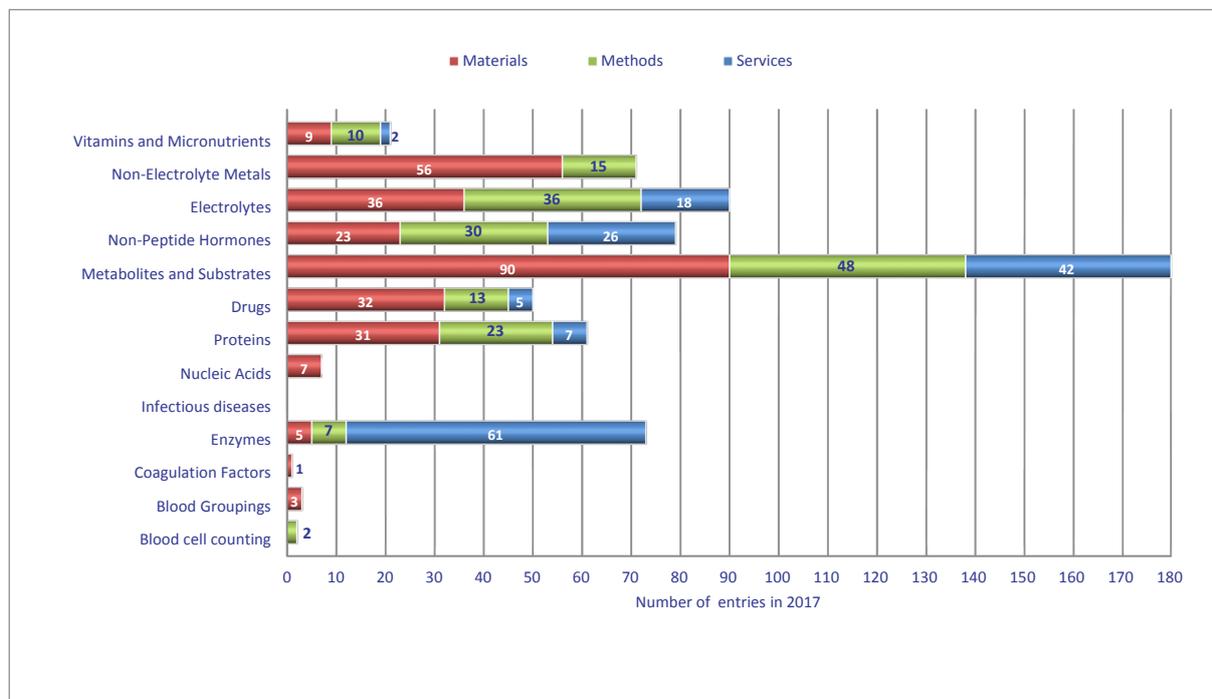
Complete information for each entry can be retrieved from the [Analyte keyword search results](#) for the reference measurement services, e.g. Contact for Reference Laboratory, Scope of the service offered and a link to the results for the inter-laboratory comparison.

5 JCTLM Database content

As of March 2017 the JCTLM Database contains:

- 293 available certified reference materials;
- 184 reference measurement methods or procedures that represent about 80 different analytes in nine categories of analytes;
- 161 reference measurement services delivered by 17 reference laboratories.

The bar chart below shows the distribution of the total number of entries published for each type of analyte as of March 2017.



6 The JCTLM database – Gap analysis March 2017

A gap analysis of the current database has been performed to assist in identifying missing components of the calibration hierarchies of clinical measurands. The current gap analysis has only considered measurands that already have at least one component of a reference measurement system listed in the JCTLM database. By listing existing gaps it is hoped to stimulate

additional nominations to the database of already existing components, and also identify components where further development work could be considered.

Download [The JCTLM Database - Gap Analysis, G. Jones, March 2017, 4 pp](#)

7 JCTLM Members' and Stakeholders' meeting December 2017

The biennial JCTLM Members and Stakeholders Meeting will be held at the BIPM on 4 and 5 December 2017. The programme will include the following sessions:

Traceability in Action

- Update from JCTLM
- Why traceability matters to patients
- Traceability in external quality assessment
- Why traceability matters to manufacturers

Traceability into the future

- Clinical challenge – biomarkers in neurodegenerative disease
- Developments in traceability in infectious diseases
- Recent advances in traceability – a global perspective

Participants will be able to display posters of their work. The full programme, together with a registration form and poster abstract form will be available shortly from www.jctlm.org and will be sent directly to recipients of this Newsletter.

8 Highlights from 2016 JCTLM Executive meetings

The 16th and 17th meetings of the Executive Committee of the JCTLM took place in Chengdu (China) on 4 June 2016 and at the BIPM on 6-7 December 2016. The Committee convened under the Chairmanship of Dr Gary Myers. Full text of the 2016 JCTLM Executive Meeting reports can be downloaded from the BIPM JCTLM webpages.

Signature of JCTLM Declaration of Cooperation document

The revised text of the Declaration of Cooperation (DoC) between the BIPM, IFCC and ILAC was signed in April 2016 by the three sponsoring organizations and was made available for download from the BIPM JCTLM website.

See the text of the [Declaration of Cooperation](#).

JCTLM Quality Manual modifications

The JCTLM Executive approved the revised JCTLM Quality Manual documents, and the Executive, Secretariat and Database working group set of procedures have been published on the BIPM JCTLM website. The changes introduced in the procedures describe notably the new organizational structure described in the Declaration of Cooperation published in April, the new Database WG policies for soliciting and reviewing the nominations for materials, methods, and services. In addition, it clarifies JCTLM review and acceptance criteria regarding the level of validation required as well as the evidence requested by JCTLM when a method developer submits a nomination for possible inclusion in the JCTLM. It also extended the acceptance criteria for listing a reference measurement service of a provider using a listed reference measurement method applied

to new materials or matrices provided that the validation report is made available to and is approved by the review team, and published in the database.

See the full set of [JCTLM Quality Manual procedures](#)

Change in Executive Representatives

Prof. Lothar Siekmann retired from his JCTLM positions as IFCC representative at the Executive Committee and vice-Chair of the Database WG covering JCTLM Review Team for Drugs, Metabolites and Substrates and Non Peptide Hormones. The Committee acknowledged his important contribution in the establishment of the JCTLM and thanked him for his continued work in support of the JCTLM and its working groups from the start. The Executive appointed Dr Qinde Liu (HSA) as new vice-Chair of the Database WG covering the JCTLM Review Team for Drugs, Metabolites and Substrates and Non Peptide Hormones.



The Executive Committee at their meeting in December 2016

9 New JCTLM Member Organizations

The Committee approved the application of the Korean Society of Clinical Chemistry (KSCC) from the Republic of Korea for JCTLM Regional and National Membership and the seven applications for JCTLM Stakeholder Membership of:

- ECAT Foundation, The Netherlands;
- Korean Association of External Quality Assessment Service (KEQAS), Republic of Korea;
- Wales External Quality Assessment Scheme (WEQAS), United Kingdom;
- Laboratory of Toxicology, Faculty of Pharmaceutical Sciences, Ghent University (Ref4U), Belgium;
- Guangdong Provincial Hospital of Chinese Medicine (GPHCM), China;
- Beijing Aerospace General Hospital, China;
- Quik S.A.S. "Quality is the Key" (QUIK), Colombia.

See the full list of [JCTLM Member organizations](#)

To apply for membership of the JCTLM click here: [How to join](#)

10 Future JCTLM meetings

- 18th Meeting of the JCTLM Executive to be held in Athens, 11 June 2017
- JCTLM Symposium on traceability at IFCC EFLM EuroMedLab, Athens, 14 June 2017
- JCTLM Symposium on traceability at IFCC WordLab Congress, Durban, October 2017
- JCTLM Members' and Stakeholders' Meeting to be held at the BIPM on 4-5 December 2017
- JCTLM Database WG Meeting to be held at the BIPM on 6 December 2017
- JCTLM TEP-WG Meeting to be held at the BIPM on 6 December 2017
- JCTLM Workshop on the implementation of IFCC enzyme reference measurement procedures by service provider to be held at the BIPM on 6 December 2017
- 19th Meeting of the JCTLM Executive to be held at the BIPM on 7-8 December 2017