



IADB PROJECT

*“Strengthening National Metrology Institutes in the Hemisphere,
in support of emerging technologies”*

March 2016- March 2020

FUNDING U\$S 700.000

Executed 76%

General Objective

Development and implementation of new measurement expertise available in member countries to address emerging technology needs.



3 SPECIFIC TECHNICAL COMPONENTS

- Measurement science for emerging technologies
- Strengthening the regional links with the public and private sectors for the regional regulatory environment and emerging industrial quality infrastructure.
- Strengthening global positioning of the hemispheric metrology infrastructure in international fora.

COMPONENT I

- 10 EMERGING TECHNOLOGIES WORKSHOPS

Workshop on Dimensional Metrology (NIST, October 2016)

Workshop Protein CRM and Biometrology (INMETRO, June 2017)

Workshop Time and Frequency in emerging technologies (INM, October 2017)

Workshop on Metrology in Chemistry at the Nanoscale (NRC, June 2018)

Workshop on Mycoytoxins (INTI, September 2018)

Workshop Photonic Thermometry (CENAM, October 2018)



6 RESEARCH PROJECTS IN EXCECUTION (2017-2020)

- 1. *Industrial Dynamic Measurements (NIST, INTI, INMETRO, CENAM, INM)*
- 2. *Large- scale dimensional metrology (INACAL, INTI, CENAM, INMETRO, LACOMET)*
- 3. *Calibration of standard reference material for use in calibrating the magnification or scale of optical microscopy (INACAL, INTI, CENAM, INMETRO)*
- 4. *Improvement and updating of interferometric systems for traceable dimensional nanometrology at SIM (INTI, INMETRO, LATU, CENAM, LACOMET)*
- 5. *Calibration de weighing instruments: microbalances (INTI, LATU, INACAL, CESMEC, CENAM)*
- 6. *Development of a protein Certified Reference Material (CRM) of Bovine Serum Albumin (INTI, CENAM, INMETRO, LACOMET, INM)*

Measurement comparison and pilot studies

“Length Comparison Meeting”- June 2019 (Santa Cruz, Bolivia)

Representatives from 11 NMIs



FIRST AND SECOND CALL **18 INTERSHIPS IN THE FIELD OF EMERGING** **TECHNOLOGIES (2018-2019)**

NMI Representative	BENEFICIARY NMI	HOSTING NMI
Gabriel Ybarra	INTI	NIST
Ana Silva	LATU	INMETRO
Bruno Carius Garrido	INMETRO	NRC
Rubén Dario Gil Chacaltana	INACAL	CENAM
Jhon Jaiver Escobar Soto	INM	CENAM
Octavio Hernández	CENAM	NIST
Priscila Costa Gabriel	INMETRO	NIST
Willian Paucar	INEN	CENAM
Guilherme Luiz Pinheiro	INMETRO	NIST
John Emerson L Guerrero	INM	NIST
Wilmar A M Rodriguez	INM	CENAM
Luis Palma	INACAL	CENAM
Rodrigo Milne	INTI	CENAM
Donny Taipe	INACAL	INTI
Frederick King	TTBS	CENAM
Jorge Campbell	INTI	NIST
Luiz V G Tarelho	INMETRO	NIST
William J G Tovar	INM	CENAM



THIRD CALL (AUGUST 2019)
8 NEW INTERSHIPS IN THE FIELD OF BASIC
AND EMERGING TECHNOLOGIES (2019)

NMI Representative	BENEFICIARY NMI	HOSTING NMI
Alex Ricardo Rocha	INEN	INTI
Klaus Natorf Quelhas	TTBS	INMETRO
Edison Guerrero	INEN	CENAM
Daniel González	LATU	CENAM
Edwin Aizpurúa	CENAMEP	LATU
Tania González	CENAMEP	LATU
Alwin Etwah	GNBS	INTI
Jairo Ramírez	CIM	CENAM

COMPONENT II

- 3 LABORATORY MANAGEMENT BEST PRACTICES WORKSHOPS

Workshop on CMCs (Calibration and Measurement Capabilities). (INMETRO, November 2017)

Workshop “Good practices of laboratories based on Integrated Management Systems (ISO 9001: 2015, ISO / IEC 1725: 2017 and ISO 31000: 2018)” (INM, July 2018)

SIM Quality Symposium (NIST, September 2018)



- 4 PUBLIC- PRIVATE DIALOGUE TO ENGAGE NMIs WITH INDUSTRY STAKEHOLDERS

- *Metrology for Innovation Forum (Uruguay, November 2016- SURAMET)*
- *Workshop “Impact of the Metrology on the Industrial Innovation and Development” (Colombia, March 2018- ANDIMET)*
- *Workshop “The metrology in development of innovation and emerging technologies in the CAMET region” (Costa Rica, April 2019- CAMET)*
- *Workshop “Challenges in Metrology for Advanced Manufacturing and the 4th Industrial Revolution” (Querétaro, June 2019- NORAMET)*



METROLOGY FOR DIGITALIZATION

- Workshop on Metrology and Digitalization- Optimization and digitalization in laboratories of National Metrology Institutes

February 25th and 26th, 2019 (Lima)- February 28th March 1st, 2019(Bogota)

42 representatives from SIM trained!

Organized and funded by PTB, SIM and IADB

- Workshop “Metrology for the Digital Transformation”

September 25th, 2019 (Santa Cruz)





COMPONENT III

- Consultancy “SIM Permanent Secretary” – Period: June- November 2019 / Contract: U\$S 10.000

- Technical Consultancies- 2019/ 2020

“Development of measurement capabilities in biotechnology at the National Metrology Institutes of LAC” – Willie May (USA). U\$S 10.000

“Development of measurement capabilities in nanotechnology at the National Metrology Institutes of LAC” – Joaquin Valdes (Argentina). U\$S 10.000



- Participation at international forums where regulatory and trade issues are discussed (2017-2019)
- *Attendance of MWG Chairs to the CIPM Consultative Committees 2017-2019 (Electricity, Mass, Acoustics, Chemistry, Length, Thermometry, Radiometry)*
- *Attendance of the Legal Metrology Chair to the meeting of the OIML Certification System Management Committee (2018)*
- *Participation of 3 SIM QSTF representatives in the Train the trainer Course: transitioning to ISO/IEC 17025:2017 in the CIPM (2018)*
- *Participation of the SIM President and the SIM representatives in the JRCB meetings (2018-2019)*
- *Participation of 14 SIM delegates in the General Assembly 2018 and 11 delegates in this General Assembly 2019*
- **COMPONENT 4: NEW WEBSITE !**

www.sim-metrologia.org



FUTURE CHALLENGUES AND EXPECTATIONS

- Execute all the internships approved
- Obtain good results from the 6 research projects in execution
- Spread and learn from the two technical consultancies in the field of nanotechnology and biotechnology
- Move forward with the development of the new RPG Project.