

Dear colleagues and partners,

IQLS (Integrated Quality Laboratory Services, www.iqls.net) offers various trainings and workshops for laboratory and public health professionals to provide them with the fundamentals of human and veterinary laboratory science, both at system and facility level.

IQLS's approach is based on practical trainings and workshops, taking into consideration future implementation demands in countries in transition or resource limited settings.

IQLS's aim is to deliver trainings and workshops that are adapted to the issues encountered in real-world situations and that improve the competence and autonomy of laboratory staff and laboratory networks. Our courses are led by an experienced team of laboratory specialists, microbiologists, pathologists, veterinarians, as well as quality managers or regulatory specialists .

IQLS works in English and French, and through translators in numerous other languages.

You will find below the list of IQLS laboratory strengthening activities, split into 3 groups: assessments, laboratory systems and laboratory training courses.

1- Assessments

Assessment of national laboratory systems:

- Human laboratory networks
- Veterinary/Food safety laboratory networks
- Specific TB laboratory network assessment
- Development of strategic planning following assessments, prioritization and implementation steps

Assessments are performed employing standardized assessment tools, developed by IQLS and tested in more than 20 countries. These multilingual MS Excel-based tools automatically produce indicators enabling easy monitoring and follow-up.

Assessment of laboratories:

- Human laboratory assessment: general assessment, QMS assessment, ISO 15189 assessment
- Veterinary/food safety laboratory assessment: general assessment, QMS assessment, ISO 17025 assessment
- Pathogen specific laboratory assessment: Tuberculosis, Malaria, Influenza, Hepatitis, Arboviruses, etc.
- Human and/or veterinary laboratory biosafety assessment
- A short summary per lab (SWOT) as well as recommendations for improvement are produced for each laboratory assessed

When assessing laboratories, IQLS also builds capacities at country level through training (theory and twinning) of a team of national laboratory specialists, allowing them to perform future laboratory assessments independently.

Assessments are performed using the same type of multilingual MS Excel-based tools, generating indicators which are easy to use for follow-up.

2- Laboratory systems strengthening

Initial laboratory system training: A one-week workshop on laboratory systems, with theoretical presentations in the morning and practical implementation in the afternoon. Usually courses include participants from three similar countries so favoring country-to-country exchanges (max 12 persons in total, allowing significant interactions to occur).

Topics addressed: coordination, regulations, inspections, tiered laboratory levels, reference laboratories and referral system, sample transportation, IHR and laboratories, funding strategies, staff, training and equipment management at country level, biosafety management, quality management, national EQA program, national documents and guidelines, standardization, preparation of a national plan of action.

This training is preferably organized at our premises in our interactive training room.

Several 4-day workshops for practical implementation (organized in-country):

- National laboratory coordination body implementation
- Laboratory tiered level development workshop
- Reference laboratory/referral system workshop
- National sample transportation implementation workshop
- Biosafety regulations implementation at country level
- Minimal QMS standards implementation at country level
- Training and documentation management at country level
- Laboratory mapping at country level, including GIS indicator display on geographical maps (workload, staffing, equipment, lab capacities, etc.)

3- Laboratory trainings

Human, veterinary and food safety trainings

- **QMS training** (general, LQSI, 15189, 17025, 9001)
- **Biosafety**, theory and practical (15793, future 35001, WHO guideline, Risk assessment theory and practices, BSL3 laboratories)
- **Technical trainings**: culture media preparation, bacteriology identification, Antibiotic Susceptibility Testing, molecular biology, serology, Malaria microscopy, TB laboratory diagnosis, BLS3 laboratory training, biobank management (needs assessment, theory, software, practical implementation)
- **EQA**: implementation of a national EQA program: documentation, web interface, simulated specimens preparation and control (Enteric pathogens, Malaria, Tuberculosis, Brucella, Serology), Implementation of national EQA according to ISO 17043

Veterinary/food safety specific trainings

- Brucella diagnosis, laboratory network, national EQA
- Brucella control program and role of the laboratory network, diagnosis strategy
- Food safety microbiology bench training
- Molecular biology and/or serology training (RVF, CCHF, PPR, FMD, etc.)
- OIE recommended techniques training (OIE guidelines)

General/common topics

- **Statistics**: general statistics for lab specialists, general statistics for lab specialists using MS Excel, Method validation and uncertainty measurement
- **One-Health**: Training on all ISO standards for lab (QMS, human, veterinary, food, water, food processing, etc.)
- **Regulatory trainings**: IVDMD regulations, IVDMD selection, control and validation

Dr. Antoine Pierson, Chief Scientific Officer pierson@iqls.net

Antoine Pierson