



International Alliance for  
Biological Standardization

**Animal Testing Replacement for Vaccines.  
A One Health View: Global Outlook and Future Strategy**  
December 2-4, 2025  
Bangkok, Thailand

***How to Build NCL Competences? A Case Study from the Belgian National Control Laboratory***

**Author:** Lorenzo Tesolin, Sciensano – Belgium

Competence development within Official Medicines Control Laboratories (OMCLs or NCLs) is essential for ensuring regulatory robustness, scientific reliability and public trust in vaccines. This case study presents a structured framework for building and sustaining expertise in complex analytical and regulatory environments. It highlights key enablers such as targeted training, method transfer protocols, and reference & reagent supply. Emphasis is placed on harmonizing technical aspects and promoting peer learning. Practical examples illustrate how competence building supports assay validation and replacement of in vivo testing by non-animal testing.

