International Cooperation on Harmonisation of Technical Requirements for Registration of Veterinary Medicinal Products

Applying VICH Guidelines : OVERVIEW
Focus on stability

Rick Clayton, HealthforAnimals

6th cycle regional seminar for OIE focal ponts for veterinary products
Kuala Lumpur, 14-16 January 2020

VICH Quality Guidelines

4 CATEGORIES

- ANALYTICAL VALIDATION
- IMPURITIES
- STABILITY
- SPECIFICATIONS

VICH Quality Guidelines

1. Analytical validation

> Validation of analytical procedures : Definition and Terminology
- VICH GL1 - Implemented in October 1999

> Validation of analytical procedures : Methodology
- VICH GL2 - Implemented in October 1999

VICH Quality Guidelines

2. Impurities

- Impurities in New Veterinary Drug Substances
  - VICH GL10(R) – January 2008
- Impurities in New Veterinary Medicinal Products
  - VICH GL11(R) –January 2008
- Impurities: Residual Solvents in new veterinary medicinal products, active substances and excipients
  - VICH GL18(R) - July 2011

VICH Quality Guidelines

3. Stability

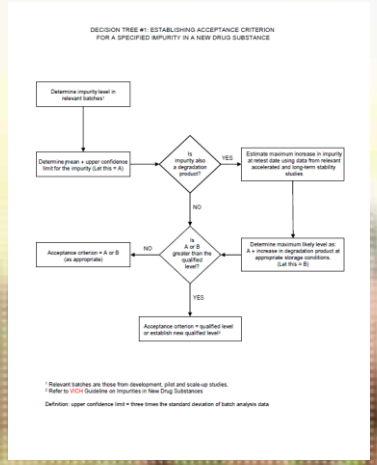
- Stability Testing of New Veterinary Drug Substances and Medicinal Products VICH GL3(R) – January 2008
- Stability Testing: Requirements for New Dosage Forms
  - VICH GL4 Annex to the VICH GL3 Implemented in May 2000
- Photostability Testing of New Drug Substances and Products
  - VICH GL5 (Quality - Stability) - Implemented in May 2000
- Stability Testing for Medicated Premixes
  - VICH GL8 - November 1999
- Bracketing and matrixing designs for stability testing
  - VICH GL45 - April 2011
- Statistical evaluation of stability data
  - VICH GL51 February 2014
- Stability testing of new biotechnological/biological veterinary medicinal products
  - VICH GL17 June 2000

VICH Quality Guidelines

4. Specifications

> Test Procedures and Acceptance Criteria for New Veterinary Drug Substances and New Medicinal Products: Chemical Substances + Decision Trees
  - VICH GL39 - November 2006

> Decision Trees
  - VICH GL39



Stability Guidelines

VICH Stability guidance: objective

What is the objective of VICH stability guidelines?

- **Provide guidance for conducting the stability studies**

  of new drug substances or medicinal products that will support a re-test period (drug substance), a shelf life (drug substance/medicinal product) and recommended storage conditions.

- **Define the stability data package**

  for a new drug substance or medicinal product that is sufficient for a registration application.

- **Provide recommendations for the evaluation of stability data**

Structure of VICH Stability guidance: Guidance on the stability studies to conduct

> What are the stability guidelines applicable to new drug substances and new medicinal products according to their type?

PARENT GUIDELINE: VICH GL3

«*Stability Testing of New Veterinary Drug Substances and Medicinal Products*”

Annex: guideline GL 4

«*Requirements for New Dosage Forms* “

Further guidance for medicated premixes:

VICH guideline GL 8

Further guidance for biotechnological/biological products:

VICH guideline GL 17

Bracketing and matrixing
Statistical analysis

DEFINITIONS (1/2)

- **New dosage form**: a new dosage form is defined as a drug product which is a different pharmaceutical product type, but contains the same active substance as the existing approved product.
- Different pharmaceutical product types include
  - different administration route (e.g., oral to parenteral),
  - new functionality/delivery systems (e.g., immediate release tablet to modified release tablet) and
  - different dosage forms (e.g. capsule to tablet, solution to suspension).

DEFINITIONS (2/2)

- **Medicated premix** (Type A Medicated Article): a medicated premix is a veterinary medicinal product consisting of a mixture of one or more drug substances, generally with a carrier, that is prepared to facilitate oral administration of the drug to animals when mixed with feed.

- **Biotechnological/biological product (scope of VICH GL17)**: well-characterized proteins and polypeptides, and their derivatives which are isolated from issues, body fluids, cell cultures, or produced using recombinant deoxyribonucleic acid (r-DNA) technology. The guideline does not cover antibiotics, heparins, vitamins, cell metabolites, DNA products, allergenic extracts, conventional vaccines, cells, whole blood, and cellular blood components.

Structure of VICH Stability guidance: General methodology for protocols and data

> Where to find general recommendations for designing the protocol of stability studies and evaluating data?

VICH GL3 (Parent guideline)
«*Stability Testing of New Veterinary Drug Substances and Medicinal Products*"

General principles for:

- Stress testing
- Selection of batches
- Design of stability studies
- Stability commitments
- Evaluation of data
- Statements/Labeling

VICH guideline GL 5: « *Photostability Testing of New Drug Substances and Products*"

- Testing equipment and protocol
- Stepwise procedure for photostability testing from the API to the packaged drug product

VICH guideline GL 45: «*Bracketing and matrixing designs for stability testing of new veterinary drug substances and medicinal products*"

- Bracketing: methodology and interpretation of data
- Matrixing: methodology and interpretation of data

VICH guideline GL 51: «*Statistical evaluation of stability data*"

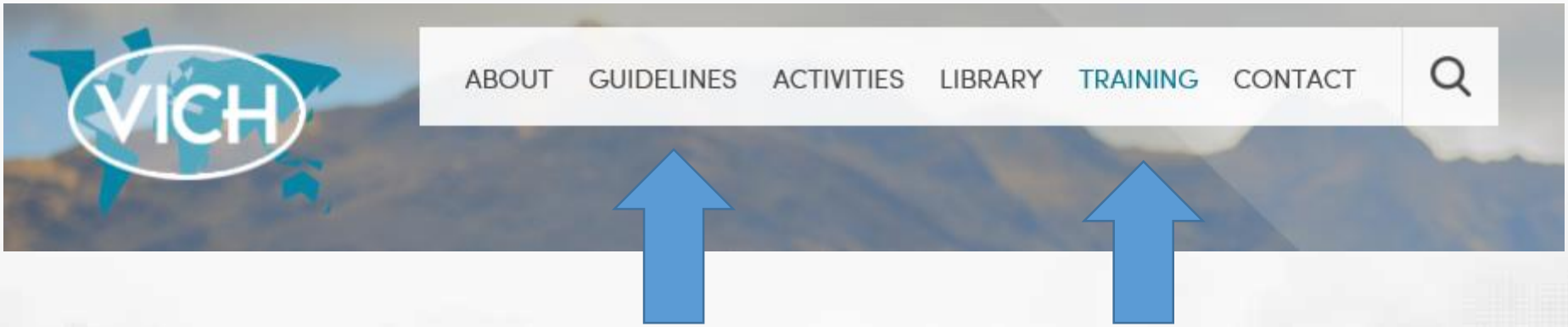
- Recommendations for use of statistical analysis
- Interpretation of stability data in accelerated and intermediate conditions for extrapolation of data at the long-term condition

Link to the presentations of VICH stability guidelines

#	Title
	VICH Guidelines on stability: OVERVIEW (*this presentation*!)
GL 3 and GL 4	Stability Testing of New Veterinary Drug Substances and Medicinal Products and Requirements for New Dosage Forms (Annex to VICH GL 3)
GL 5	Stability Testing: Photo-stability Testing of New Drug Substances and Products
GL 8	Stability Testing for Medicated Premixes
GL 45	Bracketing and matrixing designs for stability testing of new veterinary drug substances and medicinal products
GL 51	Statistical evaluation of stability data
GL17	Stability testing of new biotechnological/biological veterinary medicinal products

Access to the guidelines and training material

- VICH website



GUIDELINES

QUALITY
ANALYTICAL VALIDATION | IMPURITIES | STABILITY | SPECIFICATIONS

SAFETY
ENVIRONMENTAL SAFETY | METABOLISM AND RESIDUE KINETICS | TOXICOLOGY | TARGET ANIMAL SAFETY | ANTIMICROBIAL SAFETY

EFFICACY
GOOD CLINICAL PRACTICE | ANTHELMINTICS | BIOEQUIVALENCE

Analytical validation

- Validation of analytical procedures : Methodology
  VICH GL2 (Validation methods) – Implemented in October 1999
- Validation of analytical procedures : Definition and Terminology
  VICH GL1 (Validation definitions) – Implemented in October 1999

TRAINING

Module 2 – Quality

- VICH Guidelines on Stability: Overview
- VICH GL3 (R) & 4 – Stability testing of new veterinary drug substances and medicinal products + Annex GL4 – Requirements for new dosage forms
- VICH GL5 – Photostability testing of new veterinary drug substances and medicinal products
- VICH GL8 (R) – Stability testing for medicated premixes
- VICH GL10: Impurities – GL on impurities in new veterinary drug substances
- VICH GL11: Impurities: GL on impurities in new veterinary medicinal products
- VICH GL18 (R): Impurities: Residual solvents in new veterinary medicinal products, active substance and excipients
- VICH GL45 (R) – Bracketing and matrixing designs for stability testing of new veterinary drug substances and medicinal products
- VICH GL51 – Statistical evaluation of stability data


VICH
www.vichsec.org