

# CASSS CMC STRATEGY FORUM

## *ICH Quality Discussion Group Roadmap for the Future*

15 July 2021

Roger Nosal

Vice President & Head Global Chemistry, Manufacturing & Controls



Global Product Development, Groton, CT 06340

([roger.nosal@pfizer.com](mailto:roger.nosal@pfizer.com))

# ABSTRACT

ICH has dramatically improved global harmonization of regulatory expectations. ICH Q guidelines have provided direction for global regulatory convergence based on science & risk-based approaches.

However, interpretation & implementation have been inconsistent, especially for ICH Q - 8, 9, 10 & 11. While ICH has established an effective paradigm for improving convergence of regulatory expectations and alignment of innovative approaches for product commercialization, global regulatory harmonization through a product's lifecycle remains a challenge.

The ICH Quality Discussion Group has completed a comprehensive assessment of all existing Q guidelines, considered new proposals and developed a roadmap of recommendations for future ICH guidance.

# CONTENT

- ICH QDG REMIT & SCOPE - ICH QUALITY REFLECTION PAPER
- REPORT ON PROGRESS
- FUTURE GOALS FOR ICH Q HARMONIZATION
- FACTORS THAT INFLUENCE THE FUTURE OF ICH Q GUIDELINES
- ICH Q ROADMAP OBJECTIVES
- FUTURE VISION FOR ICH Q GUIDELINES - DEMAND FOR GLOBAL ALIGNMENT

# ICH QUALITY REFLECTION PAPER

*“Develop a harmonised pharmaceutical quality system applicable across the lifecycle of the product emphasizing an integrated approach to quality risk management and science”*

Established in 2019 following ICH endorsement

[ICH Quality Reflection Paper on Advancing Biopharmaceutical Quality Standards](#)

# ICH QUALITY REFLECTION PAPER

- a) The establishment of a theme within ICH on “*Advancing Pharmaceutical Quality Standards to Support Continual Improvement and Innovation in Manufacturing Technologies and Approaches*” to help identify, plan, and prioritize future harmonization work
- b) Drafting of guidance on selected new topics to be undertaken in the near term
- c) A comprehensive survey of existing ICH Quality guidelines to determine those in need of revision or modernization
- d) A set of other activities to facilitate global efforts, including training

# ICH QDG REMIT

- Purpose: To advance the ICH Quality Vision
  - Identify regulatory harmonization gaps for quality topics
  - Assess harmonization improvements for existing ICH Q guidelines
    - ✓ New topics,
    - ✓ Revisions/clarification (updates, annexures, clarifications, Q & A),
    - ✓ Enhanced implementation & regulator training
  - Determine & prioritize recommendations to the ICH Management Committee
- 37 leaders representing 18 ICH members

# REPORT ON PROGRESS

- Highest priority topics were submitted and endorsed by ICH Assembly. Start time TBD.
  - Maintenance and modernisation of the Q1 / Q5C Stability guideline series
  - Maintenance and modernisation of the Q6A / Q6B Specifications guideline series
- Nitrosamine issue acknowledged as a high priority topic.
- A roadmap of additional priorities to be delivered in August 2021.

# FUTURE GOALS FOR ICH Q HARMONIZATION

- Increased patient access to medicines
  - Simultaneous global development & filing
  - Mutual recognition or joint review of marketing applications
- Single PAs following global standards, i.e., PIC/S
- Reduced drug shortages
  - Improved post-approval change implementation
  - Reduced supply chain complexity
- Reduced administrative costs for industry & BOH

# FACTORS THAT INFLUENCE THE FUTURE OF ICH Q GUIDELINES

- Expedited regulatory pathways to accelerate regulatory application approval in multiple countries to improve access to patients globally;
- Advancements in new therapeutic modalities and innovative technologies;
- Emphasis on digital solutions to improve accuracy, transparency and efficiency of data;
- Expansion of ICH membership has broadened technical and regulatory perspectives in the assessment of existing ICH quality guidelines and the development of new topic proposals

# ICH QDG ROADMAP OBJECTIVES

1. Provide a perspective of the future Quality landscape of scientific innovations, patient need and associated regulatory expectations.
2. Convey recommendations for the prioritization of future modernization to improve the currency and implementation of the remaining ICH suite of quality guidelines.
3. Propose the establishment of a standing ICH Quality Discussion Group under the auspices of the ICH Management Committee.

# FUTURE VISION FOR ICH Q GUIDELINES - DEMAND FOR GLOBAL ALIGNMENT

## New Modalities

- Advanced Therapeutic Medicinal Products (ATMP) that include gene and cell therapies among other genetically based platforms, e.g., mRNA/saRNA/siRNA, adeno-associated viral vectors and exosome delivery systems
- Oligonucleotide products frequently include unique product related impurity profiles that are ineffectively characterized due to gaps within current ICH guidelines which creates differences in regulatory expectations globally.

# FUTURE VISION FOR ICH Q GUIDELINES - DEMAND FOR GLOBAL ALIGNMENT

## Innovative Technologies

- Increased manufacturing automation and the use of sophisticated digital technology to support manufacturing and operational control consistency.
- Applications of artificial intelligence and modeling, i.e., product dissolution and IVIVR, purge and fate of impurities, CCI, etc., to control variability and predict product quality.
- Approaches to improve knowledge management through the establishment of data clouds, structured data formats and comprehensive quality overall summaries for regulatory application review and inspections
- New digital technologies that will impact how quality data is generated, utilized and submitted.

# FUTURE VISION FOR ICH Q GUIDELINES - DEMAND FOR GLOBAL ALIGNMENT

## Accelerated Patient Access for Unmet Medical Need

- Expedited regulatory approaches can accelerate and increase simultaneous regulatory applications and authorizations
- Assess training materials and update key ICH guidance to enable science and risk-based principles and expedite development and availability of quality medicines.

# FUTURE VISION FOR ICH Q GUIDELINES - DEMAND FOR GLOBAL ALIGNMENT

## Inspections

- While global harmonisation of inspection standards are not within the scope of ICH, identifying opportunities to ensure connectivity of global regulatory inspections with the concepts described in ICH Q guidelines can improve alignment, integration and implementation particularly for ICH Q8 - Q14.

# FUTURE VISION FOR ICH Q GUIDELINES – DEMAND FOR GLOBAL ALIGNMENT

## ICH Membership and Approach to Harmonization

- Enlarging ICH membership expands the breadth of experience and diversity of perspectives but presents challenges in achieving consensus on meaningful harmonization that will provide effective, convergent, consistent and practical guidance. Increased emphasis on opportunities to establish unilateral reliance/mutual recognition as well as reinforcement on training, implementation and adherence to ICH guidelines will be critical in demonstrating global harmonization.

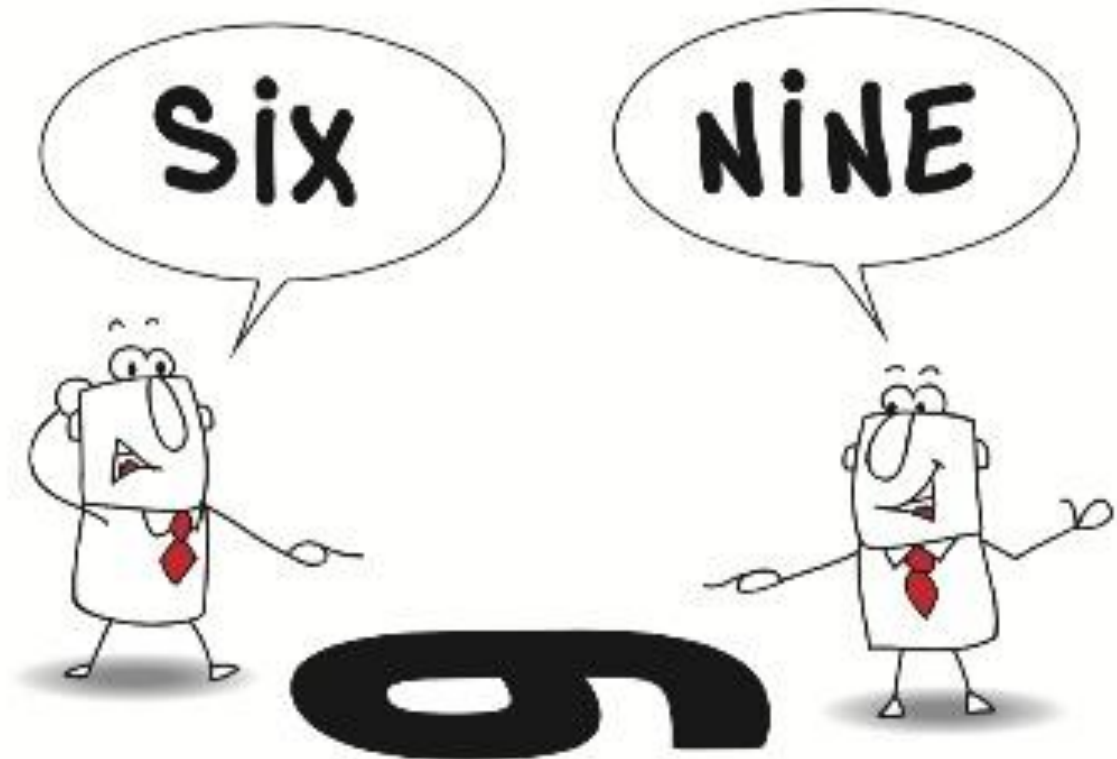
# REMINDER ABOUT ICH GUIDELINES

- Intentionally integrated/interconnected & intended to be adopted & implemented holistically
- Developed to be consistent with recognized quality standards
  - Intended to provide harmonized descriptions of what the regulatory expectations are
  - Not intended to prescriptively describe how to meet regulatory expectations
- Developed to be comprehensive
  - Scientifically justified to demonstrate quality assurance
  - Local regulatory expectations are extraneous
- Intended to be complimentary with cGMP requirements

# CHANGE CAN BE DIFFICULT

## Alignment Drift

Two  
perspectives  
dominate



# THANK YOU

Antony Fake  
Atsushi Nishikawa  
Aya Ishihara  
Barbara Allen  
Betsy Fritschel  
Blanka Hirschlerova  
Brian Hasselbalch  
Cathie Vielle  
Chien-Wen Hsu  
Daehyun Baek  
Diane Zezza  
Ellen Nogueira  
Gary Condran  
Hatsuki Asahara  
Helene Bruguera  
Hing Chong  
Ingrid Markovic  
Issei Takayama



Janeen Skutnik Wilkinson  
Jennifer Ahearn  
Joseph Park  
Kendsersky, Beth  
Matthew Popkin  
Melanie Bouveret  
Mijeong Kim  
Nadia Myers Biggs  
Nanna Abby Kruse  
Ning Zhang  
Pang-Te Lin  
Qinghua Chen  
Sabine Kopp  
Soren Thuesen Pedersen  
Stephan Roenninger  
Steven Walfish  
Tomonori Nakagawa  
Uri Hillel