Regulation of Biopharmaceutical Products: Government Perspectives

- Laura Gomez Castanheira, National Health Surveillance Agency (ANVISA), Brazil
- Chris Joneckis, CBER, FDA
- Steven Kozlowski, CDER, FDA
- Shinji Miyake, Center for Product Evaluation, Pharmaceuticals and Medical Devices Agency, Japan
- Wassim Nashebeh, Genentech
- Peter Richardson, European Medicines Agency, UK
- Anthony Ridgway, Health Canada, Canada
### Harvesting the Benefits of Investments in Product and Process Understanding

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Investments</th>
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<tbody>
<tr>
<td>- Technological and analytical advances</td>
<td>- Greater understanding of manufacturing processes</td>
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<tr>
<td>- Increasing complexity in products</td>
<td>- Increased knowledge regarding product structure (function?)</td>
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<tr>
<td>- Enhanced globalization of development and manufacturing</td>
<td>- Enhanced discipline regarding manufacturing development (QbD)</td>
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<td>- Increased complexity of manufacturing operations</td>
<td>- Increased harmonization using ICH</td>
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<td>- Additional opportunities for product lifecycle management (Biosimilars)</td>
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**WCBP 2012**
Program

- Introduction and format 5’
- Introductory Statements 35’
  - Laura Gomez Castanheira, ANVISA, Brazil
  - Chris Joneckis, CBER, FDA, US
  - Steven Kozlowski, CDER, FDA, US
  - Shinji Miyake, PMDA, Japan
  - Wassim Nashebeh, Genentech
  - Peter Richardson, European Medicines Agency
  - Anthony Ridgway, Health Canada
- Discussion on Topics 60’
  - Biosimilars Progress and Innovation 20’
  - Globalisation of Development and Manufacturing 20’
  - Joint Activities to Benefit Patients 20’
- Closing Comment

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Strategic Priorities:
Laura Gomes Castanheira, ANVISA, Brazil

- New guideline regarding two regulatory pathways
  - Comparability pathway
  - Individual development pathway
- Define requirements for reference products in case of global development.
- Improve mAb regulation: issue specific guidelines
- Strengthen pharmacovigilance system.

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Some CBER Priorities 2012

• **Access to Safe & Effective New Products**
  – User Fees Implementation, Quality Systems, New Technologies, Outreach & Guidance, Standards

• **Advancing Safety and Effectiveness of Medical Products**
  – Monitoring, Electronic Applications, Workshops, New Technologies

• **Advancing Global Public Health & Product Safety**
  – Coalitions, Collaborations, Clusters, Parallel Advice
2012 Strategic Priorities:
Steven Kozlowski, CDER, FDA
Today’s priorities of PMDA
(Pharmaceutical and Medical Device Agency)

1. Enhance the Agency’s ability to perform its mission
   staffs 2006 April 319  2011 April 648  2013 end 751 in plan

   The median total time for
   priority reviews of new pharmaceuticals: 9 months
   regular reviews of new pharmaceuticals: 12 months

2. Advance Regulatory Science

3. Promoting the drug development
   New consultation program for academia and venture companies
   started on July 2011. “Pharmaceutical Affairs Consultation on R&D Strategy”

4. Strengthen International Programs
   International cooperation: ICH etc.
   Advance Global Clinical Trials
Two biosimilar products have been approved in Japan.

Somatropin BS s.c. “Sandoz”
Reference product: Genotropin

Dec 2007
Submitted as NME

March 2009
GL was issued

May 2009
reported to PAFSC
Approved as Biosimilar

Nov 2008
Submitted as NME

Epoetin alfa BS “JCR”
Reference products: Espo

Nov 2009
reported to PAFSC
Approved as Biosimilar
PMDA Experience with QbD

• Consultations with PMDA about QbD

  A number of Consultations
  (until August in 2011)

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
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<tbody>
<tr>
<td></td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>2</td>
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</table>

• As for DS, RTRT etc.
• Two consultations were about DS for Biotechnological /Biological products.
• Five consultations were about DS and RTRT for chemical products.
2012 Priorities – Wassim Nashabeh

• Making global QbD implementation for Biologics a reality
• Embracing and cascading true risk-based decisions
• Managing global supply chain: simplification and compliance
• Facilitate collaboration and harmonization among regulators
• Emerging Markets and Most (rest) of the World: Increased exchange on Biologics understanding globally
<table>
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<tr>
<th>EC Legislation:</th>
<th>London Olympics</th>
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<tbody>
<tr>
<td>- Pharmacovigilance</td>
<td>- Business continuity.</td>
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<tr>
<td>- Clinical trials</td>
<td>- Biologicals</td>
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<tr>
<td>- Falsified medicines</td>
<td>- Biosimilars (BWP/BMWP)</td>
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<tr>
<td><strong>Agency road map 2015:</strong></td>
<td>- Pandemic lessons learned</td>
</tr>
<tr>
<td>- Addressing public health needs</td>
<td>- QbD implementation</td>
</tr>
<tr>
<td>- Facilitating Access to Medicines</td>
<td>- Quality defects / GMP</td>
</tr>
<tr>
<td>- Safe and Rational Use of Medicines</td>
<td>- Guidelines</td>
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2012 Strategic Priorities:
Anthony Ridgway, Health Canada
Major Theme for the Panel:

**What are the opportunities for harvesting benefits from investments in regulatory science and technology?**

- **Facilitating Benefits from Innovation and Regulatory Science (for example)**
  - Biosimilar regulatory pathways were rapidly developed to take advantage of timing of patent expirations
  - QbD has developed rapidly to enhance process development. Are there other benefits?

- **Global Partnerships to enhance safety and access of drugs and biologics**
  - Are there opportunities for greater efficiencies to manage drug manufacturing and supply chains?
  - What additional actions can be taken globally to harmonize regulatory approaches and ultimately enhance access?

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Topics for Discussion

1. Biosimilars: Status and Future
2. Globalization of Development and Manufacturing
3. Accelerating joint programs for bringing drugs to patients faster
Topic 1: Biosimilars, status and future?

- What have we learned from recent experiences and what changes are being envisioned?
- Recent publications make reference to a risk-based approach for biosimilar evaluation.
  - However, it is not clear what this approach means and how one could evaluate the factors that would go into a risk-based approach.
  - Is this case-by-case with another name?
- Does the WHO document demonstrate an effective approach for harmonized approach to regulation?
  - Are we starting to see some divergence between different regions with regard to the approach for the evaluation of biosimilars?
Topic 2: Globalization of Development and Manufacturing

What are the views with regard to the impact and implementation of QbD?
- Has this resulted in greater value for patients and at what expense?
- Is this a model for future investments in technology or do we need to ensure that business practices can change to accommodate the technological innovation?

How can we achieve better harmonization of standards; product, process, and pharmacopeial?
- Differences in pharmacopoeial standards continue to complicate globalization of development and manufacturing. What approaches could be used to accelerate mutual acceptance?
Topic 3: Global and Creative Partnering seems to be a theme. What can we do together to bring new drugs to patients faster to meet public health needs?

- ICH has established harmonized guidance’s in a number of different areas over the years.
  - Can the ICH process be used more effectively?
  - What is the role of ICH (and other international associations) in driving coherent implementation beyond the three key regions?
- What are the key concerns and mitigation areas in supply chain security and potential harmonized agency efforts?
- What are the opportunities for industry/agency collaborations in developed countries to facilitate evolution of regulations in emerging countries?

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We have been warned about Black Swans……..

But they do exist, and they can bring great opportunity and beauty!!!

Thank you for your participation!

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Assessment of Biosimilarity

Evaluation is based on a tiered analysis of data?

- Risk Management
- Clinical Safety and Efficacy
- Preclinical
- Quality

Evaluation is based on the totality of the data?

- Risk Management
- Clinical Safety and Efficacy
- Biosimilarity
- Preclinical
- Quality

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Business changes can happen rapidly to take advantage of opportunities: Example Biosimilars

EU Directive 2004
EU Guidelines 2004 – 2006
First Approval 2006