Biosimilars in China

Regulatory Trends, Opportunities and Challenges

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Biosimilars in China
Existing Regulations and Recent Developments

❖ Current approval path in China
  ❦ Regulated as new biologics with clinical trials requirements
  ❦ Does not require non-innovative biologics to prove equivalence in efficacy, quality, and safety through systematic comparison with the originator
  ❦ SFDA admits unavailability of technical requirements and quality control rules written specifically for biosimilars

❖ New guidelines for biosimilars proposed by the SFDA
  ❦ Project teams assembled in 2H/2012 to investigate and research on new guidelines
  ❦ Advisory board made up by relevant scientists, researchers and entrepreneurs
  ❦ CFDA will proceed very cautiously due to challenges and considerations over reference substances, various technical issues, assessment of bio-similarities, and cost-effectiveness
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RDPAC: Observations and Recommendations

- RDPAC Calls for More Stringent Regulation of Biosimilars in China
  - Generic copies of biological drugs or biosimilars can be registered as new products in China with fewer testing requirements than originals.
  - This regulation framework is inconsistent with global norms and can expose patients to unknown risk.
  - China does not clearly grant data exclusivity protection for biologics, though it is six years for new chemical entities, it is unclear whether this includes biologics and, if so, whether it can be effectively enforced.
  - China’s current patent protection scope narrower than global standards. To be patentable, a biologic molecule patent claim is typically a specific sequence or a series of sequences. Therefore, a biosimilars manufacturer can change the protein sequence slightly to create a molecule that avoids incurring infringement liability, a situation that is avoided elsewhere by recognizing that biologic molecules that have only minimal conservative substitutions in the sequence cannot be patented by non-innovator firms. However in China for example, three similar molecule patents from different biologics manufacturers co-exist for Rituximab, which was originally developed by Biogen Idec/Roche.
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RDPAC: Observations and Recommendations

- RDPAC positions and recommendations
  - Provide robust IP protection for biologics by broadening patent scope and granting data exclusivity.
  - Clarify the definition of biologics and biosimilars and establish a clear biologics and biosimilars regulatory pathway with appropriate standards and requirements.
  - A clear biosimilars pathway aligned with global standards (e.g. the WHO Guidelines on Evaluation of Similar Biotherapeutic Products).
  - While comparative analytical studies of molecular characteristics and quality form the foundation of the biosimilarity assessment, appropriate non-clinical and clinical studies are needed to ensure the safety and efficacy of biosimilars.
  - Analytical characterization and quality assessments should be followed by preclinical and clinical testing to establish that neither identified nor undetected quality differences are clinically meaningful.
  - With China’s increasing use of biologics and biosimilars, attention and focus on post-marketing surveillance is of continued importance.
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Kantar Study: Opportunities and Challenges

- It examines six molecules in nine key indications across three therapeutic areas. Key findings are:
  - The competitive strength of local biosimilars lies in lower prices
  - The ankylosing spondylitis market has a higher potential than the rheumatoid arthritis market.
  - Biosimilars would be the first choice for hepatitis C patients who cannot afford the standard treatment.
  - Efficacy and safety of biosimilars are more important to physicians than similarity to the original molecules.
  - Due to long approval times, physicians are willing to prescribe biosimilars off-label
  - Chinese companies are active in all stages of biologics development, most of R&D are still conducted under contract or in collaboration with global firms
  - Top MNCs have a greater opportunity to influence Chinese physicians due to their brand image, and need to provide better efficacy and safety data
  - Requirements for clinical trials are becoming more stringent and developers should prepare more cases and better designed endpoints for successful approvals
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Deallus Consulting: Observations and Recommendations

- Shifting disease burden and increasing reimbursement pressure for innovator biologics makes China an ideal market for biosimilars
  - 40% of China's $1.5bn recombinant biologic product sales come from biosimilars
  - Sector enjoyed approximately 25-30% CAGR over the past decade
  - Chinese biosimilar market could grow to $2bn, around 20% of the global market, by 2015

- Domestic players are the winners of the biosimilars ‘boom' while the opportunities of MNCs are squeezed due to intensifying competition and an absence of a biosimilar licensure pathway
  - Domestic biosimilars have been marketed in China for 20 years. The high number and increasingly wide range of local offerings have left little space for new entrants.
  - Most biologics manufactured by domestic players are first generation biosimilars including rhEPO, rhIFN, rhInsulin, rhIL-2, rhGCSF, rhGM-CSF, and rhGH, suggesting innovative MNCs with a complex biosimilar portfolio might have a competitive advantage.

- Forming strategic alliances and partnerships with local Chinese manufacturers can turn the risks of the Chinese biosimilar market into opportunities. Such partnerships provide a win–win situation as local players also benefit from MNCs' expertise and capabilities.