Biosimilar and Interchangeable Products: Brief Update from FDA

FDLI Annual Conference
May 3, 2018

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Biosimilar approvals/351(k) submissions

• As of May 1, 2018, nine 351(k) BLAs for biosimilar products have been approved.
  – Zarxio (filgrastim-sndz)  – Cyltezo (adalimumab-adbm)
  – Inflectra (infliximab-dyyb)  – Mvasi (bevacizumab-awwb)
  – Erelzi (etanercept-szsz)  – Ogivri (trastuzumab-dkst)
  – Amjetiva (adalimumab-atto)  –Ixifi (infliximab-qbtx)
  – Renflexis (infliximab-abda)

• Since program inception and as of May 1, 2018, 12 companies have publicly announced submission of 23 351(k) BLAs to FDA.
Development-Stage Advice to Sponsors

As of May 1, 2018,

• **67 programs** were enrolled in the Biosimilar Product Development (BPD) Program to discuss development of proposed biosimilar products or proposed interchangeable products

• CDER has received meeting requests to discuss the development of biosimilar or interchangeable products for **31 different reference products**.
FDA Biosimilars Guidance Development

1. Scientific Considerations in Demonstrating Biosimilarity to a Reference Product (final, 2015)
2. Quality Considerations in Demonstrating Biosimilarity to a Reference Protein Product (final, 2015)
4. Formal Meetings Between the FDA and Biosimilar Biological Product Sponsors or Applicants (final, 2015)
5. Clinical Pharmacology Data to Support a Demonstration of Biosimilarity to a Reference Product (final, 2016)
8. Labeling for Biosimilar Products (draft, 2016)
9. Considerations in Demonstrating Interchangeability With a Reference Product (draft, 2017)
10. Statistical Approaches to Evaluate Analytical Similarity (draft, 2017)
Development of Future Guidance

- FDA has committed to publish draft, revised draft, or final guidance describing the following:
  - **Statistical Approaches to Evaluate Analytical Similarity** (draft guidance published September 2017; revised draft or final guidance by 5/21/19)
  - **Considerations in Demonstrating Interchangeability With a Reference Product** (draft guidance published January 2017; revised draft or final guidance by 5/19/19)
  - **Labeling for Biosimilar Biological Products** (draft guidance published March 2016; revised draft or final guidance by 5/31/19)
  - **Formal Meetings Between the FDA and Biosimilar Biological Product Sponsors or Applicants** (final guidance published November 2015; revised draft by 9/30/18)
  - **Good Review Management Practices** (revised draft by 9/30/18)
  - Processes and further considerations related to post-approval manufacturing changes for biosimilar biological products (draft guidance by 3/31/19)
BsUFA II Commitment Letter Highlights

• **351(k) Review**: “Program” review model for 351(k) BLAs, similar to PDUFA review model

• **Meeting management modifications**

• **FDA commitment to strengthen staff capacity to**:
  – Develop new regulations and guidance to clarify scientific criteria for biosimilar development and approval
  – Develop or revise MAPPs and SOPPs, and review templates
  – Deliver timely information to the public to improve public understanding of biosimilarity and interchangeability
  – Deliver information concerning the date of first licensure and the reference product exclusivity expiry date, to be included in the Purple Book

• **Enhancements related to hiring capacity and management of user fee resources**
BsUFA II Commitment Letter Highlights

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• Guidance development commitments
FDA’s Education and Outreach Campaign for Biosimilars

• Launched by FDA in October 2017
• Goals of this initiative are to increase:
  – Understanding of biologics, reference products, biosimilars and interchangeable products.
  – Awareness of FDA’s role in the biosimilar approval process.
  – Knowledge of the data and information FDA reviews/requires to determine biosimilarity.
For more information, go to www.fda.gov/biosimilars

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Topics to Cover

• Quick refresher on the Supreme Court’s opinion in *Sandoz, Inc. v. Amgen, Inc.*

• Resolution of *Sandoz, Inc. v. Amgen, Inc.* on remand and other takeaways

• Other recent case law on reoccurring issues for BPCIA interpretation
Biologics Price Competition & Innovation Act

• Abbreviated pathway to FDA licensure for follow-on alternatives to biologics

• Timing
  – Applications may not be submitted until 4 years after Reference Product is licensed
  – Licenses “may not be made effective” until 12 years after Reference Product is licensed

• Two “phases” of patent litigation under the BPCIA scheme
Early Phase Litigation

“Patent Dance”

Early litigation proceeds on patents agreed to during negotiations

Negotiation
If parties disagree, Applicant selects number of patents at issue
A selection of 0 means that RPS may choose 1 patent
Patent Dispute Process

- Applicant provides **Notice of Commercial Marketing**. 
  42 U.S.C. § 262 (l)(8)(A)
- Late phase litigation: Before the first commercial marketing, the reference product sponsor (“RPS”) may seek a preliminary injunction prohibiting the commercial manufacture or sale of the biosimilar product until the court decides issues of patent validity, enforcement, and infringement.

  Late litigation can proceed on any patent included on one of the initial “lists” provided by the RPS or Applicant that is not included on the early phase negotiated lists.
Notice of Commercial Marketing

• The subsection (k) applicant shall provide notice to the reference product sponsor (RPS) not later than 180 days before the date of the first commercial marketing of the biological product licensed under subsection (k).

• Failure to Provide Notice of Commercial Marketing
  – RPS may bring Declaratory Judgment action for patent infringement, validity or enforceability. 42 U.S.C. § 262(l)(9)(B))
**Sandoz, Inc. v. Amgen, Inc. (S. Ct. June 12, 2017)**

- Sandoz’s aBLA for biosimilar to Amgen’s Neupogen® (filgrastim)
- Supreme Court addressed two primary questions of BPCIA interpretation:
  - Is 180-Day Notice of Commercial Marketing (which gives the RPS an opportunity to seek a preliminary injunction on patents not yet litigated) given by the biosimilar applicant before FDA licensure effective?
  - Can the RPS seek an injunctive remedy to compel disclosure of the aBLA and other manufacturing information?
- Unanimous decision, reversing Federal Circuit in part (180-day notice) and affirming in part (injunctive remedy)
- 180-Day Notice of Commercial Marketing may be given before FDA licenses aBLA
  - Based on statute’s plain language
  - Notice of intent to launch may be given either before or after receiving FDA approval
- Amgen (RPS) not entitled to an injunction compelling disclosure of aBLA
  - Statute specifies “remedy” – Amgen can seek an immediate declaratory judgment patent action under Sec. 262(l)(9) – this is the “sole remedy” at least in federal law
  - Amgen got control over the timing/content of patent litigation because Sandoz failed to provide the aBLA/manufacturing information
- Remanded to Federal Circuit to determine state law remedies
On Remand . . . Federal Law is the Final Word


• The BPCIA did not expressly preempt state law, but is there field preemption or conflict preemption?
On Remand . . . Federal Law is the Final Word

- **Field preemption**: State law preempted “where it regulates conduct in a field that Congress intended the Federal Government to occupy exclusively” where Congressional intent may be inferred from a “scheme of federal regulation ... so pervasive as to make reasonable the inference that Congress left no room for the States to supplement it,” or where an Act of Congress “touch[es] a field in which the federal interest is so dominant that the federal system will be assumed to preclude enforcement of state laws on the same subject.”

- No presumption against preemption for biosimilar patent litigation because biosimilar patent litigation “is hardly a field which the States have traditionally occupied.”

- Patents are “inherently federal in character” and FDA has exclusive authority to license biosimilars

- Moreover, “the [BPCIA] scheme here is ‘comprehensive’ and ‘provide[s] a full set of standards governing’ the exchange of information in biosimilar patent litigation, ‘including the punishment for noncompliance.’”

- This supports the inference that Congress intended no room for the States
On Remand . . . Federal Law is the Final Word

- **Conflict preemption**: Conflict preemption occurs “where it is impossible for a private party to comply with both state and federal requirements, or where state law stands as an obstacle” to Congress’ objectives

- Amgen’s state law claims “clash” with the BPCIA
  - Differences in remedies offered by the BPCIA and those sought under state law support conflict preemption
  - Moreover, making state law claims available under 50 states’ tort regimes and unfair competition standards would “dramatically increase the burdens” on biosimilar applicants *beyond what Congress contemplated*

- Accordingly, permitting the state law claims to proceed would “conflict with the careful framework Congress adopted.”

- “We must assume that Congress acted intentionally when it did not provide an injunctive remedy for breach of § 262(l)(2)(A)'s disclosure requirements.”
Additional Considerations

- Although decision does not address whether a biosimilar applicant’s failure to comply with the patent dance provisions was unlawful, it essentially closes the door on remedies to enforce Sandoz’s compliance with the patent dance provisions.
- Supreme Court opinion leaves open possibility that failure to dance can be a consideration in a district court’s analysis of the preliminary injunction factors (fn. 2).
- Overall viewed as a win for biosimilar applicants.
- Biosimilar applicants retain more control over commercially sensitive information about their product pre-litigation instead of risking disclosure under state law remedies.
- Going forward, biosimilar applicants may choose to opt out of disclosure and, thus, first phase patent litigations, leaving branded companies to file suit after receiving notice of commercial marketing (i.e., late phase) or in a declaratory judgment action.
If Opting In, How Much Disclosure Must Be Provided?

- Once a biosimilar applicant opts in to the dance, how much disclosure of proprietary product/process information is sufficient to comply with (l)(2)(A):
  
  Not later than 20 days after the Secretary notifies the subsection (k) applicant that the application has been accepted for review, the subsection (k) applicant shall provide to the [RPS] a copy of the [(aBLA)] submitted to the Secretary under subsection (k), and such other information that describes the process or processes used to manufacture the biological product that is the subject of the [(aBLA)].

- BPCIA does not define “and such other information” nor have courts definitely decided this question

- Biosimilar applicants and RPSs have disagreed as to the extent of sufficient disclosure case to case
If Opting In, How Much Disclosure Must Be Provided?

- **Compare** *Amgen Inc. v. Sandoz Inc.*, No. 16-1276, 2016 WL 3965192, at *3 (D. N.J. July 22, 2016), where Sandoz’s disclosure seemed to satisfy the (l)(2)(A) disclosure requirement:
  - Sandoz provided file transfer link to its pegfilgrastim biosimilar aBLA and information relating to the manufacturing process
  - Disclosure appeared to be sufficient based on allegations set out in complaint and court did not indicate any dispute with the sufficiency of disclosure

- **With** *Genentech v. Amgen Inc.*, 1:17-cv-00165-GMS (filed Feb. 15, 2017)(D.Del.), where aBLA alone was alleged to be insufficient disclosure and court suggested that more may be required under the statute:
  - Amgen provided its bevacizumab biosimilar aBLA to Genentech within 20 days of its filing acceptance by FDA, but did not submit additional manufacturing information
  - Genentech sought declaratory relief and order that Amgen’s disclosure did not satisfy (l)(2)(A)
  - Amgen felt sufficient manufacturing information was disclosed in its aBLA to allow Genentech to comply with patent listing requirements
  - During Feb. 24 hearing, court suggested that the plain language of (l)(2)(A) (“and such other information”) means that disclosure of the aBLA alone does not satisfy the applicant’s obligations
  - On March 1, 2017, the district court judge dismissed Genentech’s complaint for lack of subject matter jurisdiction, without deciding on the sufficiency of Amgen’s disclosure
If Opting In, How Much Disclosure Must Be Provided?

- Biosimilar applicants have taken differing approaches as to the extent of disclosure under (l)(2)(A) - some disclosing full aBLA and manufacturing information, with others more selectively disclosing
- RPS have often taken issue with the sufficiency of the disclosure
- Motions to compel more complete disclosure have not proven effective so far (e.g., Genentech) but RPS may seek to maintain allegations of incomplete disclosure under (l)(2)(A) in order to maintain option of bringing immediate declaratory judgment action under (l)(9)(C)
- But there may nevertheless be a reasonable and sufficient basis for an RPS to bring suit on a particular patent ever where it did not receive adequate disclosure under (l)(2)(A). Amgen Inc. v. Hospira Inc., 866 F.3d 1355 (Fed. Cir. August 10, 2017 (“if a sponsor forms a belief based on an inquiry limited by an applicant’s withholding of information, the sponsor has still satisfied Rule 11”).
But Once the Dance Begins, You Can’t Speed It Up

• Once an applicant “opts in” to the patent dance by making a full or partial Section 262(l)(2)(A) disclosure, the applicant has few strategic options other than to follow the steps of the dance.

• District court dismisses attempt by biosimilar applicant to initiate a declaratory judgment action on all patents listed by the RPS during patent negotiations after it provided 180-Day Notice of Commercial Marketing, but before the negotiations were completed and the RPS had an opportunity to file a patent suit on the patent list in the “first phase” of the dance. Amgen Inc. v. Genentech, Inc. and City of Hope; No. 17-07349 (N.D. Cal. Feb. 2, 2018).
  – Under the BPCIA’s plain language, a DJ action is limited only to “second phase” patents that had not been litigated in the “first phase”
  – Supreme Court’s Sandoz decision expressly recognized two separate phases of BPCIA litigation
  – Biosimilar applicant cannot “side-step” the remainder of the patent dance by bringing suit on any patent in negotiations immediately after filing its 180-day notice – to do so would vitiate the parts of the statute
Other Takeaways on Disclosure and Timing

• *City of Hope* decision suggests that once a biosimilar applicant chooses to embark on the patent dance, they may not be able to short circuit that pathway to bring a litigation more quickly

• Biosimilar applicants may nonetheless wish to undertake the full patent dance to narrow the patents asserted in the litigation in the first phase and focus their early efforts on the strongest or latest-expiring RPS patents

• That said, the biosimilar applicant should consider the anticipated review time at FDA for aBLAs – recent approvals have been fairly quick, while the two-phase patent dance is a lengthy process
  – A biosimilar applicant may seek to jumpstart patent litigation by opting out of the patent dance, but that approach has its own risks by placing timing in the hands of the RPS. For example, in *Amgen Inc. v. Adello Biologics*, No. 18-03347 (D.N.J.), the applicant Adello provided 180-day notice to Amgen once its filgrastim aBLA was accepted for filing by FDA but refused to comply with the (l)(2)(A) disclosure to Amgen. Amgen did not sue Adello until almost 6 months after receiving notice, close to Adello’s anticipated approval date.

• In short, biosimilar applicants should continue to carefully consider whether and to what extent they will embark on the patent dance, and keep an eye on evolving district court dockets
Questions?
The BPCI Act Transition and Reference Product Exclusivity: The $84 Billion Questions

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The BPCI Act Transition

“An approved application for a biological product under section 505 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. § 355) shall be deemed to be a license for the biological product under such section 351 [of the PHS Act] on the date that is 10 years after the date of enactment of [the BPCI Act].”

Citation: Affordable Care Act (Biologics Price Competition and Innovation Act), § 7002(e)(4); 42 U.S.C. § 262.
FDA’s Draft Transition Guidance

- On March 23, 2020, approved NDAs and ANDAs for “proteins” (greater than 40 amino acids) will become BLAs with accompanying changes in regulation under the PHS Act.

- Regulation of NDAs and ANDAs for “chemically synthesized polypeptides” (40 to 100 aa) will stay the same.
Unanswered Transition Questions

• Can we rely on the definitions of “protein” and “chemically synthesized polypeptide” in guidance?

• What happens to products that rely on master files?

• Will 505(b)(2)s and ANDAs become 351(a) BLAs or 351(k) BLAs?

• Will transition products receive the balance of 12 year reference product exclusivity?
Reference Product Exclusivity

• Under 42 USC § 262(k)(7), a biological product generally receives 12 years of exclusivity before FDA can approve a biosimilar version.

(7) EXCLUSIVITY FOR REFERENCE PRODUCT.—

(A) EFFECTIVE DATE OF BIOSIMILAR APPLICATION APPROVAL - Approval of an application under this subsection may not be made effective by the Secretary until the date that is 12 years after the date on which the reference product was first licensed under subsection (a).
Exceptions to RP Exclusivity

• But any supplements or subsequent applications by the same sponsor or a corporate affiliate aren’t eligible for exclusivity, and may be available as reference products for a biosimilar.

(C) FIRST LICENSURE.—Subparagraphs (A) and (B) shall not apply to a license for or approval of —

(i) a supplement for the biological product that is the reference product; or
(ii) a subsequent application filed by the same sponsor or manufacturer of the biological product that is the reference product (or a licensor, predecessor in interest, or other related entity) for—

(I) a change (not including a modification to the structure of the biological product) that results in a new indication, route of administration, dosing schedule, dosage form, delivery system, delivery device, or strength; or

(II) a modification to the structure of the biological product that does not result in a change in safety, purity, or potency.
Purple Book: Lists of Licensed Biological Products with Reference Product Exclusivity and Biosimilarity or Interchangeability Evaluations

The “Purple Book” lists biological products, including any biosimilar and interchangeable biological products, licensed by FDA under the Public Health Service Act (the PHS Act).

The Purple Book includes the date a biological product was licensed,
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No Decisions About RP Exclusivity

• 98 percent of licensed biologics in the Purple Book have no reference product exclusivity determination.

• On average, these products were approved more than 5 years ago.

• FDA’s reference product exclusivity guidance has been in draft since August 2014.
Unanswered Questions About RPX

• What’s the “reference product?” Is it the active ingredient, the BLA, an individual product presentation, or something else?

• Is there “umbrella” exclusivity? Are new strengths, dosage forms, and other post-approval changes to a BLA still protected?

• How much “modification to the structure” is required for new exclusivity?

• Does a subsequent application lose exclusivity if FDA required “unbundling” (e.g. different ROAs) for user fee reasons?

• Do licensing and collaboration agreements make sponsors “affiliated” such that only one product from the joint venture can receive exclusivity?
Why Hasn’t FDA Done More?

• Obsession with drug pricing.

• Inadequate legal resources.

• New bureaucracy of “deregulation” sent many rules and guidances back to the drawing board.
Health and Economic Impacts

- Over 90 marketed products will transition including insulins, pancreatic enzymes, choriogonadotropin and others.

- At least 224 million prescriptions and $51.5 billion in annual sales will be affected by the statutory transition.

- Products with an additional $33.4 billion in annual sales are projected to come off exclusivity by 2021.

- It takes 8-10 years to develop a biosimilar, 10-15 for a new biologic. (In)decision now will take over a decade to correct.

Sources: FDA, Quintiles IMS, Natl. Academies.
THANK YOU

Questions?
Biosimilars Landscape in the U.S.

Christine M. Simmon
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Executive Director, Biosimilars Council
The Biosimilars Council

About:
The Biosimilars Council, a division of the Association of Accessible Medicines (AAM), works to support the broad components of the biosimilar industry, and enable patients increased access to safe, effective and affordable biosimilar medicines.

Focus Areas:
The Biosimilars Council

Current Members:
The Council actively seeks new members that are supportive of our mission. Member organizations include any company or stakeholder organization working to develop biosimilar products with the intent to compete in the U.S. market.
"Millions of American patients stand to benefit from increased utilization of lower-cost, high quality biosimilar products.

The public health benefits of a robust, competitive market for biosimilars are impossible for us to ignore. Strong market incentives are critical to future biosimilar development in the same way these incentives are key for the development of innovator drugs and biologics.

*FDA is invested in making sure that the new biosimilar pathway works, and that we can help facilitate a robust market for these products.*

- FDA Commissioner Scott Gottlieb, M.D.
  March 7, 2018
Fostering a Robust Biosimilars Market in the U.S.

- The FDA has now approved 9 biosimilars applications in the U.S.

- By comparison the E.U. has seen over 40 approvals for a wider variety of product classes.

- However, in the U.S., only 3 products have launched and only 2 have been able to acquire any meaningful market share.
  - Lengthy patent challenges
  - Contracting challenges under litigation
Lessons Learned from the E.U. Experience

• More than a decade of patient experience with biosimilars in the E.U. has shown no difference in health outcomes between patients who use a biosimilar and those who take the reference biologic medicine.

• An estimated combined 700 million patient days of clinical experience with marketed biosimilars in Europe confirms that they have the same safety and effectiveness as their brand reference products.
Biosimilars Present Significant Opportunities for Savings in the U.S.

Source: The $250 Billion Potential Biosimilars, Express Scripts, April 2013
Biosimilars = Greater Access for Patients


• Patient Access Study done on behalf of the Council by Avalere Health.

• *Report indicates that 1.2 million U.S. patients could gain access to biologics by 2025 as the result of biosimilar availability.*

• The report also suggests that women, lower income, and elderly individuals would particularly benefit from access to biosimilar medicines.
Recent Policy Advances

• Biosimilars in Medicare Part B
  – CMS revised its Part B biosimilars reimbursement policy to include separate codes and reimbursement calculations for each biosimilar of a particular reference product, which will help foster a competitive market for biosimilars in outpatient settings

• Biosimilars in Medicare Part D
  – Congress recently amended the Part D Coverage Gap Discount Program (CGDP) to include biosimilars. This allows biosimilar manufacturers to compete on a level playing field for Part D plans’ formulary placement. This will lower beneficiaries out-of-pocket costs as well as Part D program spending.

  – CMS recently lowered the biosimilars and interchangeable biologics copay for the Low-Income Subsidy (LIS) population in their CY 2019 Medicare Part D Final Rule. This will increase patient access and lower beneficiaries’ out-of-pocket costs.
A Number of Outstanding Issues Jeopardize Expanded Patient Access & Savings

• Regulatory Challenges

• IP/Patent Abuse

• Reimbursement

• Anti-Competitive Market Access Tactics

• Education
Regulatory Challenges

• Anticompetitive abuse of Risk Evaluation and Mitigation Strategy (REMS) and restricted distribution systems
  – Brand companies continue to abuse FDA-mandated REMS programs and voluntary wholesaler agreements to prevent generic and biosimilars manufacturers from gaining access to samples and thus delaying competition.
  – The bipartisan, bicameral Creating and Restoring Equal Access to Equivalent Samples (“CREATES”) Act would create a legal mechanism for generic and biosimilars manufacturers to gain access to samples.
  – This policy would save government payers $3.8 billion over 10 years.

• Outstanding FDA Guidances:
  – Interchangeability
  – Extrapolation
  – Labeling
  – Post-approval manufacturing changes
  – “Deemed” guidance – transition process
IP/Patent Abuse

• Brand biologic manufacturers create “Patent Thickets” around their products as a means of unfairly prolonging a brand drug’s monopoly and delaying patient access to more affordable biosimilar alternatives.
  – AbbVie’s Humira principal patent expired in 2016. Prior to that expiration, AbbVie filed more than 100 late-stage patents to delay biosimilar competition.

• Brand companies seeking to pay Native American tribes to take "ownership" of their patents and claim sovereign immunity to shield patents from review.
  – In September 2017 when the pharmaceutical company Allergan paid millions of dollars to rent the sovereign immunity of a Native American Tribe.
  – Preserving Access to Cost Effective Drugs (PACED) Act would restore the power of the Patent and Trade Office (PTO) to review patents regardless of sovereign immunity claims.
Reimbursement

• Threats to Pass-Through Status for Biosimilars in Medicare Part B
  – CMS presently provides “pass-through payment” status for all biosimilars so that manufacturers can create a market for newly launched products and compete on a level playing field with their reference biologic counterparts.
  – Certain brand biologic manufacturers continue to challenge the inclusion of biosimilars in the pass-through program as a means to stifle biosimilar competition.
Anti-Competitive Market Access Tactics

• Exclusionary Contracting Practices
  – Brand biologic manufacturers contract with payors and provide significant rebates and other incentives to retain preferential formulary placement for their reference products.
  – These contracts act as a significant barrier for biosimilars adoption; the payor is able to leverage the biosimilar competitor to extract greater rebates and the manufacturer avoids competition.
  – This has been highlighted by the Pfizer v. J&J Case.
Education

• Last year, the Council commissioned a survey of patients with autoimmune conditions to better understand what patients know and understand about biologic and biosimilar medications.

• Only 32% of patients had heard the term “biosimilar.” Of these, only 7% were aware of any FDA-approved biosimilar treatments.

• This lack of awareness presents a significant opportunity for the Council to continue to establish itself as the authority on the promise of biosimilars as affordable alternatives to expensive brand-name biologics.
Education

• FDA recently launched an educational campaign focused on prescribers.

• The Biosimilars Council will be focusing on allied health professionals, patients, payors, and policymakers.

Visit www.fda.gov/biosimilars to learn more.