

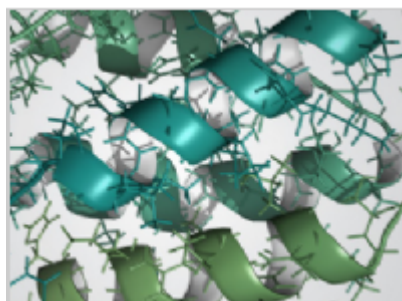
MONTHLY  
INJECTION



December 9, 2019



LATEST NEWS

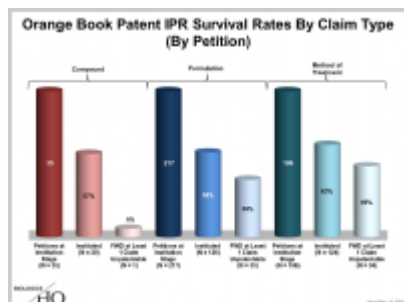


**Will Authorized Biologics Disrupt the Market for Biosimilars?**

By: [Ha Kung Wong](#) and [Erica Norey](#)

In an article for Biosimilar Development, [Ha Kung Wong](#) and [Erica Norey](#) discuss the potential impact of authorized biologics on the developing biosimilars market. The article draws upon experience with authorized generics in the small molecule drug market and discusses the role

interchangeability designations for biosimilars could play in prompting authorized biologic development.



**Seven Years of Orange Book Patent IPRs: Where Are We Now?**

By: [Corinne Atton](#) and [April Breyer Menon](#)

Heralded as a less expensive, faster way to challenge patents, inter partes review (IPR) before the US Patent Trial and Appeal Board (PTAB) has proven remarkably popular. IPR was first available on September 12, 2012, and within days, the first petitions challenging patents listed in the U.S.

Food and Drug Administration Orange Book (small molecule drug patents) were filed. Seven years on and close to 500 such petitions have been filed. The data is insightful: the number of petitions filed per fiscal year peaked in 2015 and has since fallen; the institution rate has dropped from 87% in fiscal year 2013 to 62% in fiscal year 2019; survival rates vary by claim type – with compound claims, unsurprisingly, proving the strongest; novelty challenges have been few and generally unsuccessful; and 63% of final written decisions have been appealed to the U.S. Court of Appeals for the Federal Circuit, which has affirmed almost all of them.

**Spotlight On: Biosimilar Litigations**



**Spotlight On: Rituxan<sup>®</sup> (rituximab) / Truxima<sup>®</sup> (rituximab-abbs) / Ruxience<sup>®</sup> (rituximab-pvvr)**

**Spotlight On: Humira<sup>®</sup> (adalimumab) / Amjevita<sup>™</sup> (adalimumab-atto) / Cyltezo<sup>®</sup> (adalimumab-adbm) / Hyrimoz<sup>™</sup> (adalimumab-adaz) / Hadlima<sup>™</sup> (adalimumab-bwwd) / Abrilada<sup>™</sup> (adalimumab-afzb)**

**Spotlight On: Enbrel<sup>®</sup> (etanercept) / Erelzi<sup>®</sup> (etanercept-szsz) / Eticovo<sup>™</sup> (etanercept-ykro)**

**Spotlight On: Lantus<sup>®</sup> / Lantus<sup>®</sup> SoloSTAR<sup>®</sup> (insulin glargine recombinant) / Basaglar<sup>®</sup> (insulin glargine)**

BiologicsHQ's "Spotlight On" product dashboards provide, at a glance, an overview of the status of U.S. patent proceedings. The dashboards concerning rituximab (Rituxan<sup>®</sup>, Truxima<sup>®</sup>, and Ruxience<sup>®</sup>), adalimumab (Humira<sup>®</sup>, Amjevita<sup>™</sup>, Cyltezo<sup>®</sup>, Hyrimoz<sup>™</sup>, Hadlima<sup>™</sup>, and Abrilada<sup>™</sup>), etanercept (Enbrel<sup>®</sup>, Erelzi<sup>®</sup>, and Eticovo<sup>™</sup>), and insulin glargine (Lantus<sup>®</sup> / Lantus<sup>®</sup> SoloSTAR<sup>®</sup> and Basaglar<sup>®</sup>) have been updated with activity through November 30, 2019.

BiologicsHQ's "Spotlight On Biosimilar Litigations" dashboard provides, at a glance, an overview of the status of U.S. biosimilar patent litigations through November 30, 2019.

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News

## UPDATES

### IPRs and PGRs

#### Lantus<sup>®</sup> (insulin glargine recombinant):

- On November 19, 2019, in Mylan v. Sanofi, Fed. Cir. Appeal No. 19-1368 and consolidated appeal 19-1369, the Federal Circuit affirmed the PTAB's determinations that all challenged claims were unpatentable in IPR2017-01526 and IPR2017-01528.

### Litigations

#### Ultomiris<sup>®</sup> (ravulizumab-cwvz):

- On November 12, 2019, Chugai filed Case No. 1:19-cv-02120 (D. Del.) against Alexion.

#### Neupogen<sup>®</sup> (filgrastim) / Neulasta<sup>®</sup> (pegfilgrastim):

- On November 15, 2019, the Court dismissed Amgen v. Accord, Case No. 0:18-cv-61828 (S.D. Fla.) at the parties' request.

### **Neupogen® (filgrastim):**

- On November 25, 2019, the Court dismissed **Amgen v. Kashiv BioSciences**, Case No. 2:18-cv-03347 (D.N.J.) at the parties' request.

### **Amjevita™ (adalimumab-atto):**

- On November 26, 2019, the Court dismissed **Coherus v. Amgen**, Case No. 1:19-cv-00139 (D. Del.) at the parties' request.

## **aBLA Applications and FDA Activity**

### **Ziextenzo® (pegfilgrastim-bmez):**

- On November 4, 2019, the FDA approved **Sandoz's Ziextenzo® (pegfilgrastim-bmez)**, a biosimilar of **Amgen's Neulasta® (pegfilgrastim)**. On November 15, 2019, **Sandoz** launched **Ziextenzo®**.

### **Truxima® (rituximab-abbs):**

- On November 7, 2019, **Celltrion** and **Teva** announced **Truxima® (rituximab-abbs)**, a biosimilar of **Genentech's Rituxan® (rituximab)**, would be launched on November 11, 2019 at a 10% discount.

### **Abrilada™ (adalimumab-afzb):**

- On November 15, 2019, the FDA approved **Pfizer's Abrilada™ (adalimumab-afzb)**, a biosimilar of **AbbVie's Humira® (adalimumab)**.

### **SB8 (bevacizumab):**

- On November 19, 2019, **Samsung Bioepis** announced that the FDA accepted for review its aBLA for **SB8 (bevacizumab)**, a proposed biosimilar of **Genentech's Avastin® (bevacizumab)**.

## **CDER Purple Book Updates**

### **Reblozyl® (luspatercept-aamt):**

- On November 8, 2019, the FDA approved **Celgene's Reblozyl® (luspatercept-aamt)**.

## **Non-U.S. Biosimilars / Follow-On Biologics**

### **Remsima® SC (subcutaneous infliximab):**

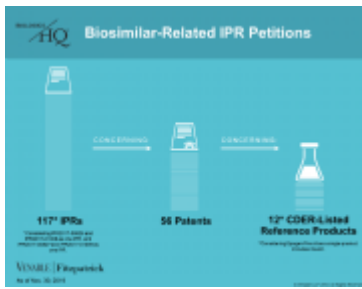
- On November 25, 2019, **Celltrion** announced it received approval in the E.U. for its subcutaneous version of **infliximab**. This is the world's first subcutaneous formulation of **infliximab**. The intravenous formulation of **Remsima®** (called **Inflectra®** in the U.S.) is a biosimilar of **Janssen's Remicade® (infliximab)**.

## **STATISTICS**

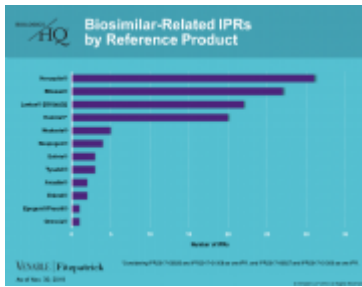
**Biosimilar-  
Related IPR  
Petitions**

**Biosimilar-Related  
IPR Petitions  
by Fiscal Year**

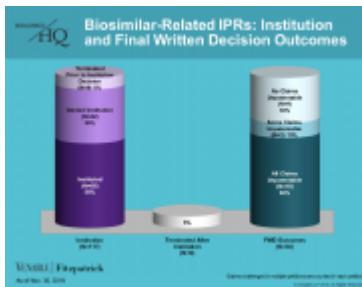
**Biosimilar-Related  
IPR Petitions  
by Quarter**



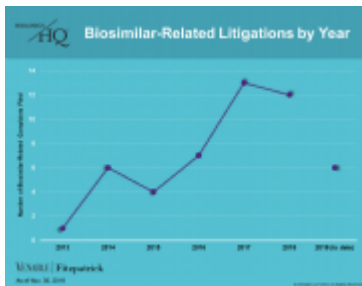
**Biosimilar-Related IPRs by Reference Product**



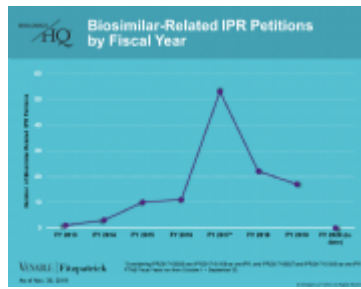
**Biosimilar-Related IPRs: Institution and Final Written Decision Outcomes**



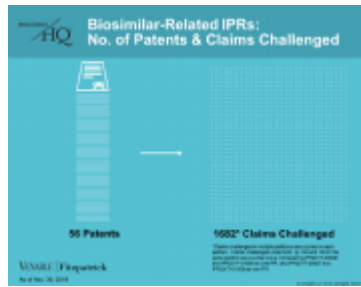
**Biosimilar-Related Litigations by Year**



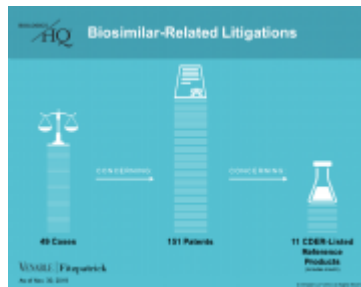
**Biosimilar Applications Pending in the United States**



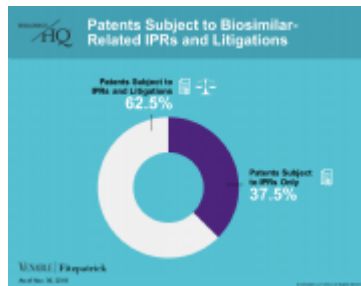
**Biosimilar-Related IPRs: Number of Patents and Claims Challenged**



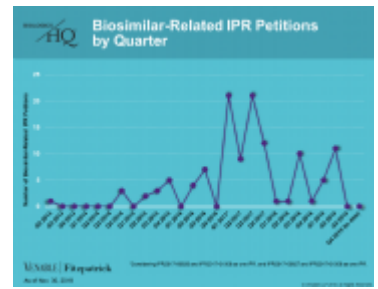
**Biosimilar-Related Litigations**



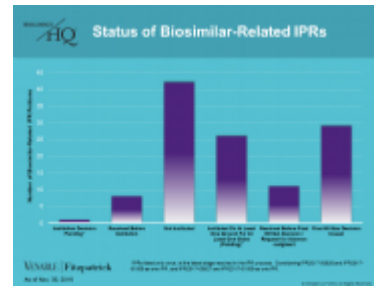
**Patents Subject to Biosimilar-Related IPRs and Litigations**



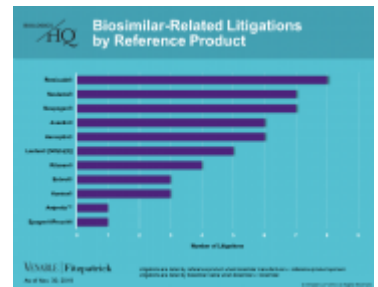
**Biologic Drug IPR Petitions**



**Status of Biosimilar-Related IPRs**



**Biosimilar-Related Litigations by Reference Product**



**Biosimilars Approved in the United States**

**Biosimilars Approved in the United States**

ANDA No.	Reference Product	Reference Product Name	AND-12 (PDUFA)	Approval Date	Approval Status	Reference Product Expiry	U.S. Marketing
ANDA 141-031	Amgen	Humalog	Humalog	Dec 20, 2014	Approved	Humalog	Humalog
ANDA 141-032	Amgen	Humalog	Humalog	Dec 20, 2014	Approved	Humalog	Humalog
ANDA 141-033	Amgen	Humalog	Humalog	Dec 20, 2014	Approved	Humalog	Humalog
ANDA 141-034	Amgen	Humalog	Humalog	Dec 20, 2014	Approved	Humalog	Humalog
ANDA 141-035	Amgen	Humalog	Humalog	Dec 20, 2014	Approved	Humalog	Humalog
ANDA 141-036	Amgen	Humalog	Humalog	Dec 20, 2014	Approved	Humalog	Humalog
ANDA 141-037	Amgen	Humalog	Humalog	Dec 20, 2014	Approved	Humalog	Humalog
ANDA 141-038	Amgen	Humalog	Humalog	Dec 20, 2014	Approved	Humalog	Humalog
ANDA 141-039	Amgen	Humalog	Humalog	Dec 20, 2014	Approved	Humalog	Humalog
ANDA 141-040	Amgen	Humalog	Humalog	Dec 20, 2014	Approved	Humalog	Humalog

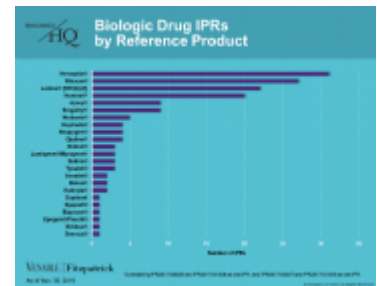
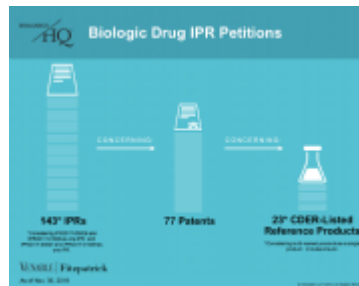
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As of Nov. 30, 2018

**Biologic Drug IPRs by Reference Product**

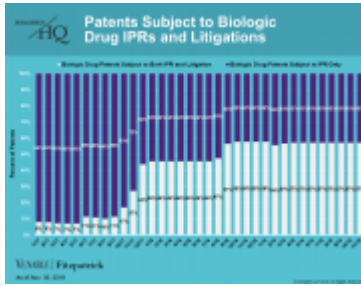
### Biosimilar Applications Pending in the United States\*

Brand Name	Generic Name	MA Holder (Sponsor)	Reference Product	Approval Pathway	Expiration
Humira®	Adalimumab	Amgen Inc.	Humira®	Standard	Approved Dec. 2016
Humira®	Adalimumab	Amgen Inc.	Humira®	Standard	Approved Dec. 2016
Humira®	Adalimumab	Amgen Inc.	Humira®	Standard	Approved Dec. 2016
Humira®	Adalimumab	Amgen Inc.	Humira®	Standard	Approved Dec. 2016
Humira®	Adalimumab	Amgen Inc.	Humira®	Standard	Approved Dec. 2016
Humira®	Adalimumab	Amgen Inc.	Humira®	Standard	Approved Dec. 2016
Humira®	Adalimumab	Amgen Inc.	Humira®	Standard	Approved Dec. 2016
Humira®	Adalimumab	Amgen Inc.	Humira®	Standard	Approved Dec. 2016
Humira®	Adalimumab	Amgen Inc.	Humira®	Standard	Approved Dec. 2016
Humira®	Adalimumab	Amgen Inc.	Humira®	Standard	Approved Dec. 2016

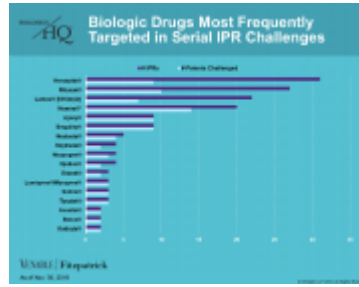
UNABLE | Fitzpatrick  
As of Dec. 31, 2016



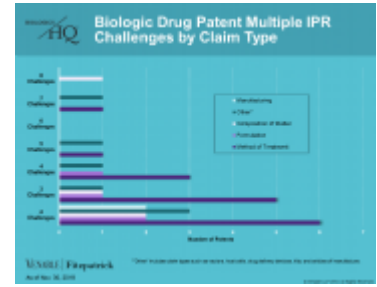
**Patents Subject to Biologic Drug IPRs and Litigations**



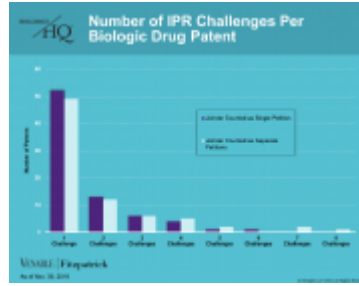
**Biologic Drugs Most Frequently Targeted in Serial IPR Challenges**



**Biologic Drug Patent Multiple IPR Challenges by Claim Type**



**Number of IPR Challenges Per Biologic Drug Patent**



## BiologicsHQ Search

Information contained in the Venable Fitzpatrick BiologicsHQ database relates to FDA-approved drug products listed in the CDER Purple Book. Product and Company page search results are reported for FDA-approved indications, aBLA and 505(b)(2) activity, approved foreign biosimilars, IPRs and U.S. litigations.

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