



U.S. Drugmaker Biogen Inc. Said to Approach Samsung To Sell Shares

Date of analysis: Jan. 12th, 2022

Table of Contents

Click on a page number to read

Background

[3](#)

Patent Portfolio

Coverage and Status

[5](#)

Technologies

[7](#)

Top Inventors

[8](#)

Transaction History

[9](#)

Litigation History

[10](#)

Quality and Value Evaluation

Quality and Value Rankings

[12](#)

Peer Comparison - Quality and Value

[15](#)

Quality and Value Highlights

[17](#)

Do more with *Due Diligence*

Download Report

[22](#)

Matrix Analysis in Patent Vault

[23](#)

According to the Korea Economic Daily, the U.S. biotechnology firm Biogen Inc. was in talks with Samsung Group to sell shares.

-
- Biogen Inc. (NASDAQ: BIIB.O) is a biotechnology company based in Cambridge, Massachusetts. Founded in 1978, the company is dedicated to neuroscience research, focusing on discovering and treating neurological disorders. Biogen also provides treatments for rare and autoimmune diseases.
 - On December 30, 2021, the Korea Economic Daily reported that Biogen was in talks to sell its shares to Samsung Group, which could put the company's value at US\$ 42 billion or more. Samsung BioLogics, the biotech arm of Samsung Group, denied the report in a regulatory filing, saying the information was untrue with no further details.
 - According to the Patent Rankings developed by InQuartik, around 55% of Biogen's patents in some major markets are more likely to be monetized. The potential targets for Biogen to monetize its patents include Conforma Therapeutics, Novartis, and AbbVie.

Coverage and Status - Global Coverage

Applications: 9,670

Families: 1,536

Active

2,423 (25.057%)

of them are active and enforceable.

Pending

2,224 (22.999%)

of them are still pending and may acquire patent rights in the future.

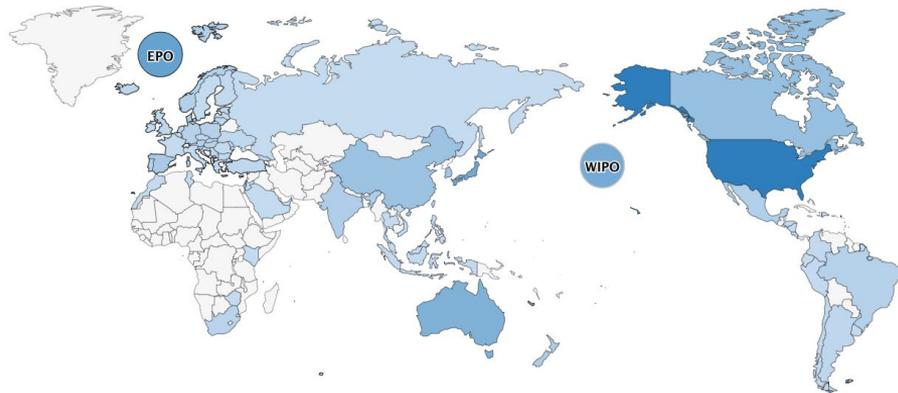
Inactive

5,023 (51.944%)

Inactive

The geographic coverage of Biogen's patents:

Country :	US(1,426)	EP(866)	JP(761)	WO(736)	AU(637)	CA(407)	CN(360)	HK(320)
	KR(307)	IL(279)	ES(244)	DK(219)	NZ(216)	IN(193)	MX(161)	NO(143)
	PL(137)	BR(136)	AT(134)	PT(130)	DE(125)	HU(119)	SI(112)	EA(103)
	ZA(101)	SG(96)	TW(85)	RS(73)	IS(71)	CY(71)	Expand	



Around 25.06% of Biogen's patent applications are active patents and around 23.00% are pending.

Country	Patent Appl.	Legal Status		
US	1,426	383	103	940
EP	866	167	136	563
JP	761	101	59	601
WO	736	47		689
AU	637	124	173	340
CA	407	56	86	265
CN	360	56	66	238
HK	320	197	123	
KR	307	56	69	182
IL	279	237	42	

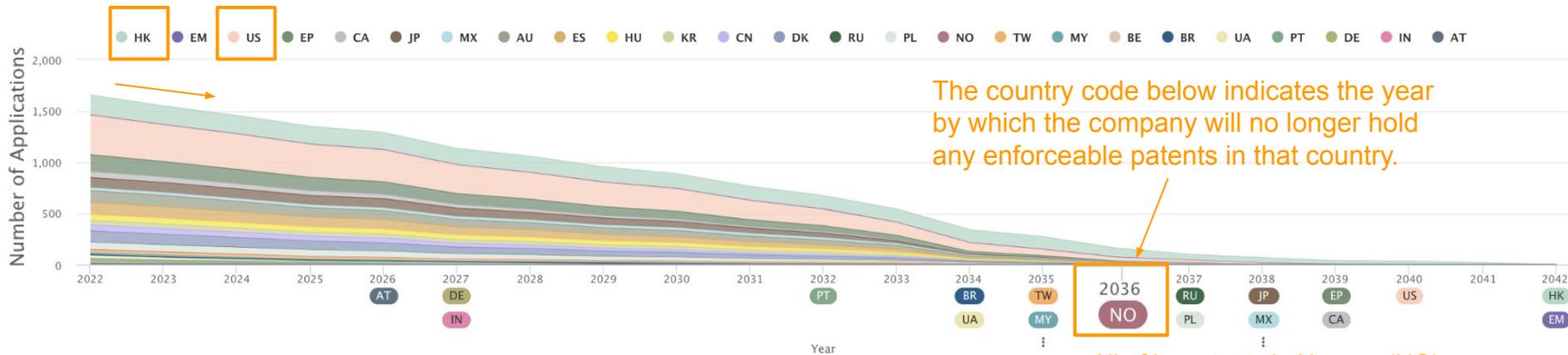
Biogen filed the most patents with the USPTO.

The company has a significant proportion of pending applications in Australia and Israel.

● Active ● Pending ● Inactive

Coverage and Status - Remaining Life

The number of Biogen's active patents is decreasing rapidly — mainly due to the increase of expiring patents in Hong Kong and the U.S.



The country code below indicates the year by which the company will no longer hold any enforceable patents in that country.

All of its patents in Norway (NO) will expire before January 1, 2036.

Technologies

Main technical fields 1

PREPARATIONS FOR MEDICAL, DENTAL, OR TOILET PURPOSES

587 Patent families (38%)

Main technical fields 2

PEPTIDES

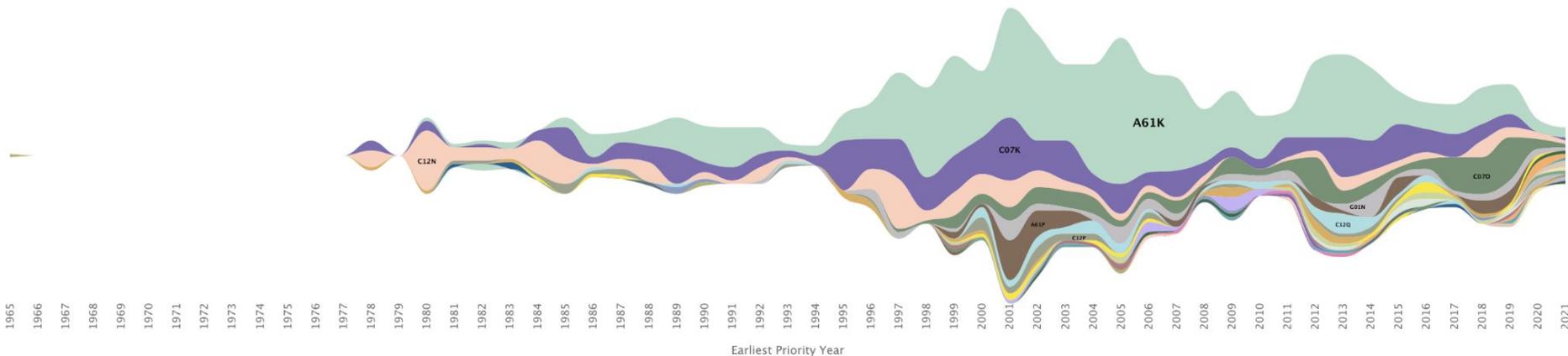
267 Patent families (17%)

Main technical fields 3

MICROORGANISMS OR ENZYMES; COMPOSITIONS THEREOF

157 Patent families (10%)

Around 55% of Biogen's patents fall in Preparations for medical, dental, or toilet purposes (IPC A61K) and Peptides (IPC C07K).



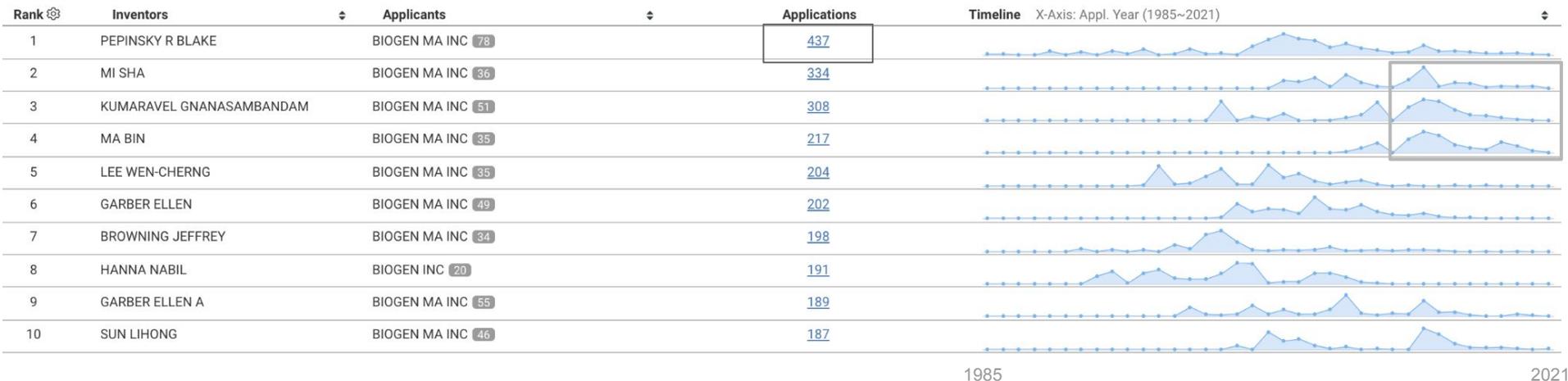
Top Inventors

We found the ten most productive inventors in terms of patent applications.

Notice that the major inventors may shift over time.

Blake Pepinsky, the inventor in 1st place, has filed more patent applications than other inventors.

The inventors in 2nd, 3rd, and 4th places applied for more patents than Pepinsky over the past decade.



Patent Transaction History

According to the patent records in the U.S. and China, around 19.99% of Biogen's patents have been transacted.

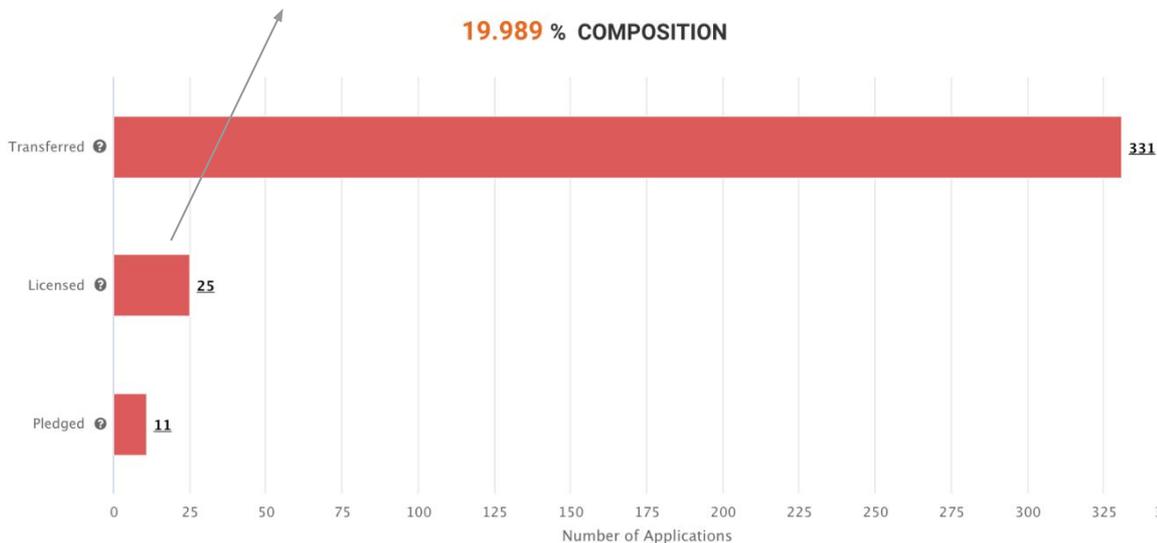
Transacted Patents



Data Selected 25 Applications; 18 Families

#	Patent No.	Title	Legal Status
16	US10273474B2	Methods for modulating Tau exp...	Active
17	US9527890B2	FC receptor (FcRn) binding pepti...	Active
18	US20190330318A1	ANTI-HSPA5 (GRP78) ANTIBODI...	Abandoned Appl.

Twenty-five patents currently owned by Biogen have been licensed. Go to [Due Diligence](#) to find out more.



Patent Litigation History

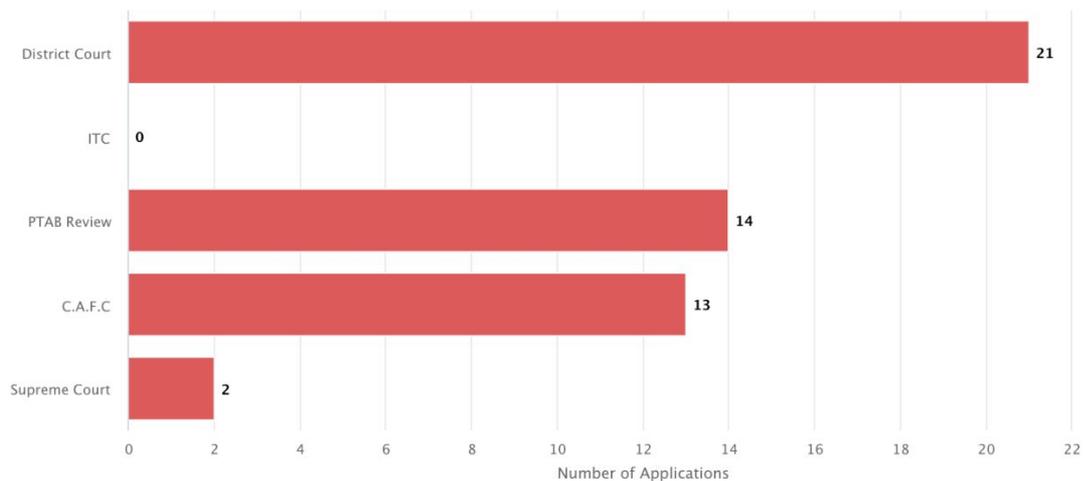
Around 1.68% of Biogen's U.S. patent applications have been litigated.

See the government bodies to which these patent applications were taken.

Litigated Patents



1.683% COMPOSITION



Quality and Value Evaluation

Why Quality and Value?

Quality and Value are the two cornerstones of patent evaluation. By reflecting on a patent's true quality and value, we can evaluate patents with an objective viewpoint instead of relying on subjective guesswork—eventually giving a fair price to patents.

Quality and Value Definition

Quality:

Predicts the tendency for invalidation.

Describes whether a patent is eligible, novel, non-obvious, and described with clarity.

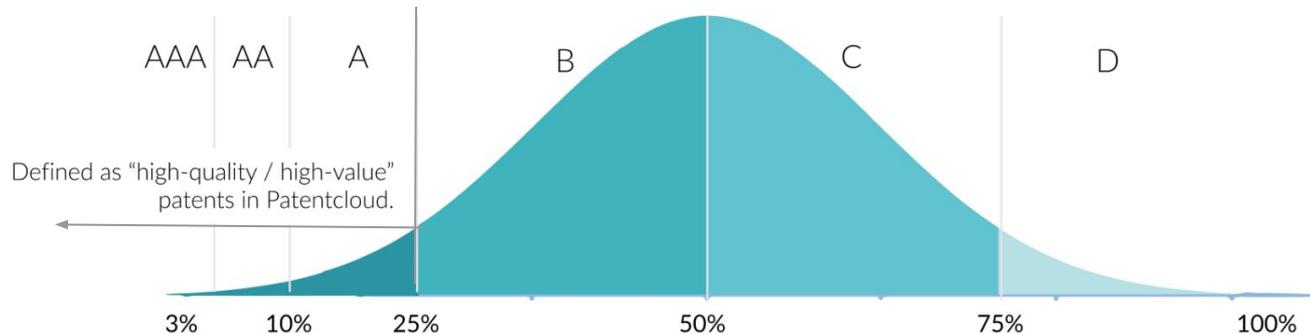
Value:

Predicts the tendency for monetization.

Describes whether a patent has commercial viability—either realized from enforcement, transaction, or other commercial practices.

According to our proprietary models, each patent is ranked as per the quality and value dimensions and is categorized into one of the following six grades: AAA, AA, A, B, C, and D.

A patent with a quality score in the 97th percentile is graded as AAA.

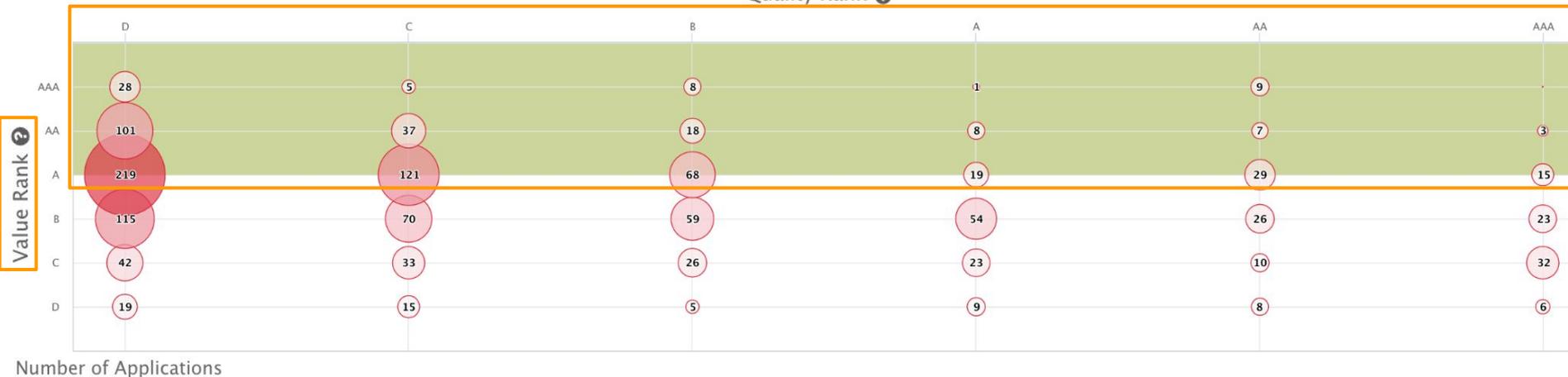


Quality and Value Rankings - Quality and Value*

Our Patent Quality & Value Dashboard shows that 55% of Biogen's patents in major countries are of high value.

Of the 393 patent families, 1,271 patents are active or pending in major countries, of which 696 (55 %) are high-value patents.

Quality Rank ?



* The scope of the Quality and Value analysis includes patents filed with the patent offices of the US, China, Europe, Japan, Korea, Taiwan, and the WIPO.

Quality and Value Rankings - Quality and Value*

Among the high-value patents, some have a higher likelihood of standing against legal challenges.

High-value, low-quality patents: They have good monetization potential, but the risk of invalidation is high.

High-quality, high-value patents: The potential for monetization is high, and the risk of being invalidated is low.



* The scope of the Quality and Value analysis includes patents filed with the patent offices of the US, China, Europe, Japan, Korea, Taiwan, and the WIPO.

Peer Comparison - Quality Rankings

For Biogen's patents under IPC A61K, the proportion of high-quality patents is **22.49%**, slightly lower than Novartis (**25.35%**).



Peer Comparison - Value Rankings

The proportion of Biogen's high-value patents in the same field is **57.21%**, **higher** than Novartis (**39.09%**).

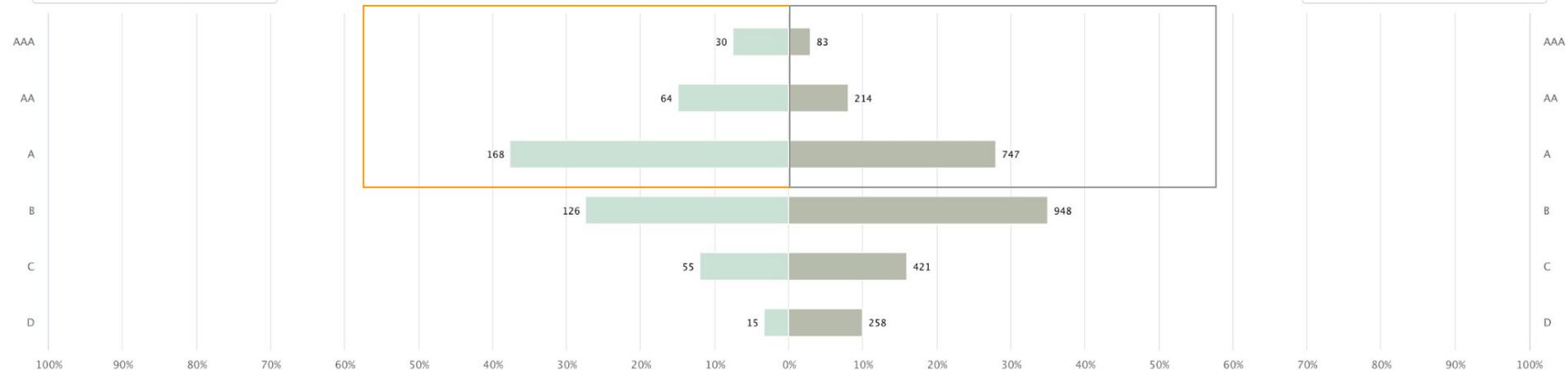
Compare : Quality Value

Main Technical Fields of the Portfolio

PREPARATIONS FOR M...(458)

Compared with ?

Top 3 - NOVARTIS... (2671)



Quality and Value Highlights - Eligibility and Novelty Issues

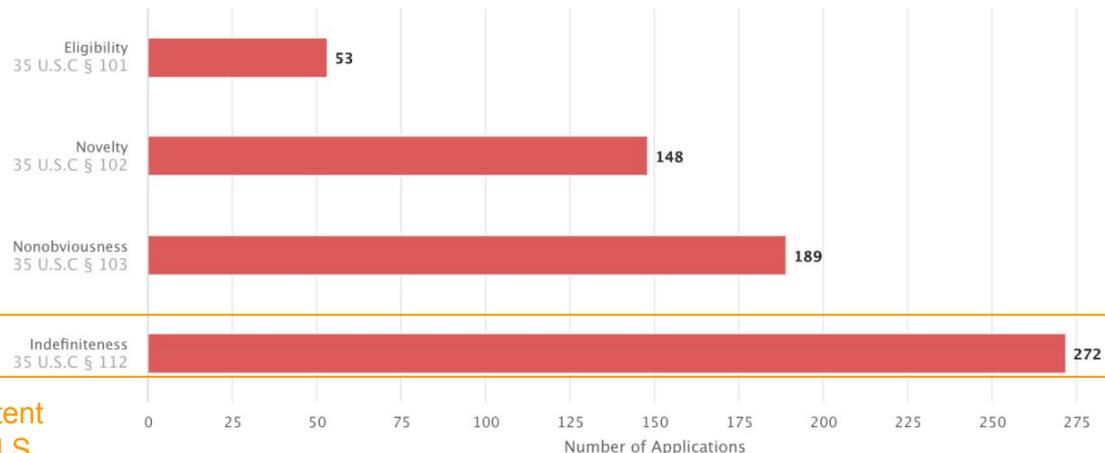
Around **71.19%** of Biogen's U.S. patents have been challenged during prosecution or at PTAB — an indicator of potential quality issues for its patents' family members.

Eligibility and Novelty Issues



Indefiniteness is the most common challenge brought against Biogen's patent applications in the U.S.

71.193 % COMPOSITION

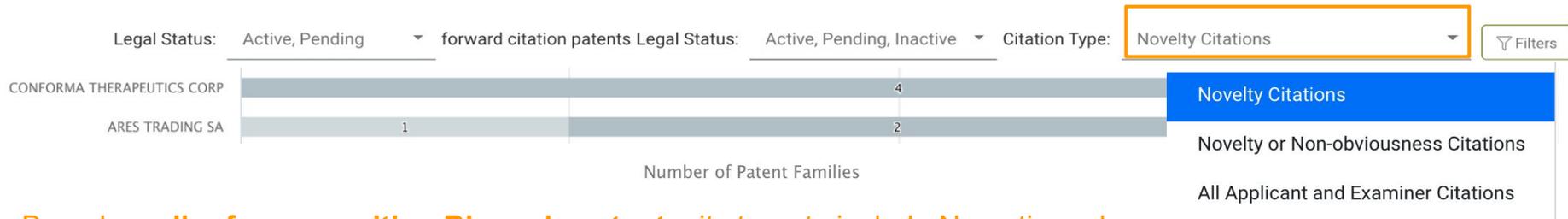


Quality and Value Highlights - Potential Targets of the Portfolio

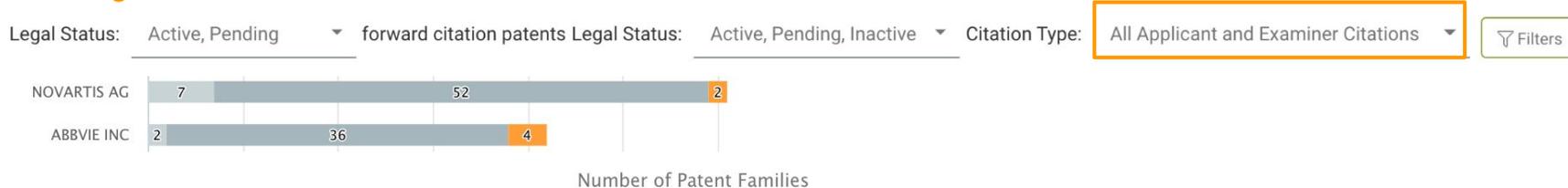
Biogen's potential targets based on **novelty citations** include Conforma Therapeutics Corp and Ares Trading SA, among others.

Some of these companies' patent applications received a novelty (§102) rejection based on patents currently held by Biogen.

You can search for potential targets based on the nature of the citations.



Based on **all references citing Biogen's patents**, its targets include Novartis and AbbVie, among others.



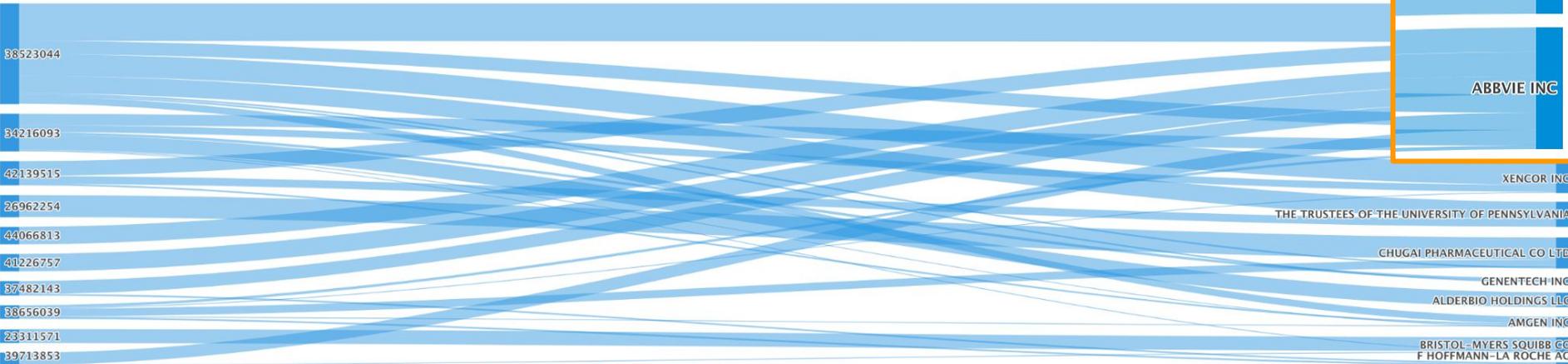
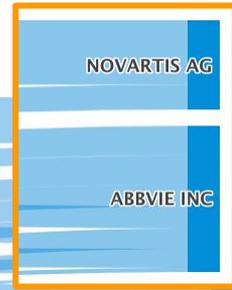
Patents Against the Potential Targets

Legal Status: Active, Pending forward citation patents Legal Status: Active, Pending, Inactive Citation Type: All Applicant and Examiner Citations Filters Patent Families

The ten companies that cite Biogen's patents the most. They are potential targets for Biogen to monetize its patents.

Patent Families in Portfolio (ID Number)

Ranked by: Family ID Potential Targets



Patents Against the Potential Targets

Legal Status: Active, Pending forward citation patents Legal Status: Active, Pending, Inactive Citation Type: All Applicant and Examiner Citations Filters Patent Families

The most heavily cited families — these patent families are ideal for Biogen to use against potential targets.

You can view potential targets by the types of references that cite Biogen's patents.



Do more with *Due Diligence*

Download Report

1. Download Report

Download Report

Export: All Dashboards **Customize**

5 Charts Selected [Clear](#)

[Select 25 Items](#)

Coverage and Status

- Global Coverage
- Remaining Life
- Pending Patents

Technologies

- Technical Fields
- Technology Timeline

Owner/Inventor/Applicant

- Co-Ownerships and Co-Applicants

Assignees and Inventors

- Assignees
- Inventors

[Confirm](#)

Shopping cart icon | JC DEMO | Document icon | Bell icon | Grid icon | Profile icon

[Download Report](#) | Date Modified : 2021-04-14 18:27

Analysis Scope

Applications	Families
3,896	1,331

Quality Highlights | Quality and Value | Quality Highlights | Value Highlights

Matrix Analysis

Analyze like an expert!

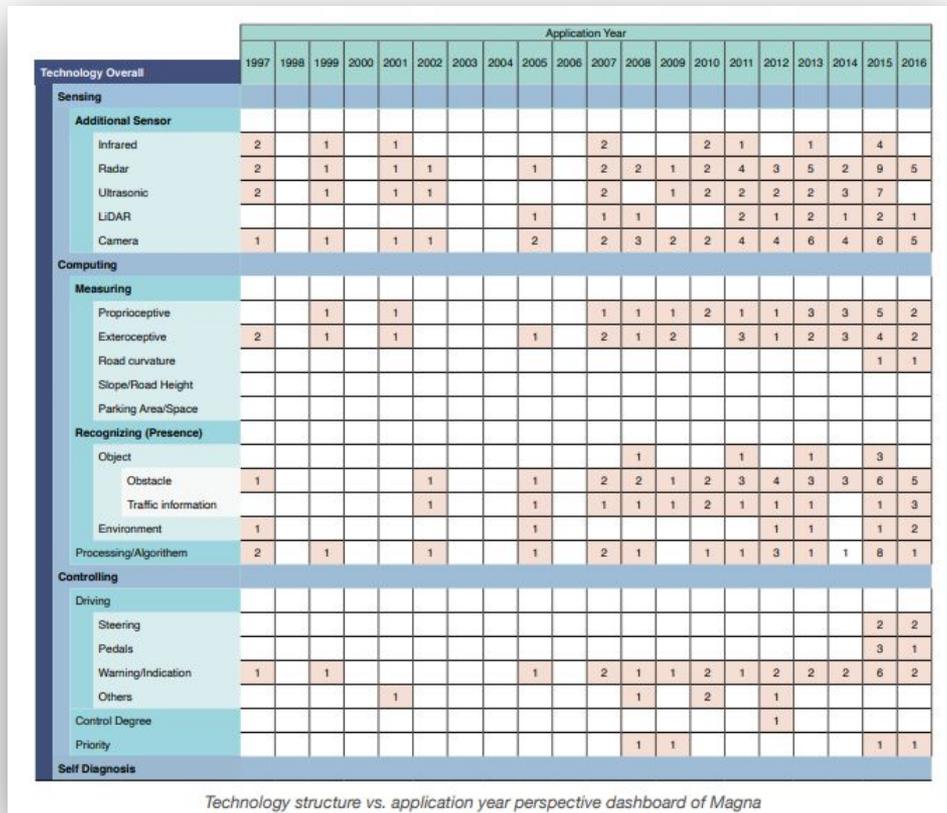
Patent Landscaping made easy with *Due Diligence*.

Save your patent portfolio in *Due Diligence* and pass it to *Patent Vault*. Visualize your own analysis and share it with stakeholders in a secured workspace.

Patent Vault is a space where you can save, analyze, and monitor patent portfolios and collaborate easier than ever before.

Get a free trial of [Due Diligence](#) and [Patent Vault](#) to experience a hassle-free patent analysis journey.

Source: Patent Vault



Technology structure vs. application year perspective dashboard of Magna



Visualize patent assets with just one click

- Instantly access and examine patent portfolio attributes to aid in decision-making.
- Discover the patents with the greatest monetization potential – and the most likely targets.
- Identify the strengths and weaknesses of a patent portfolio.
- Maximize investment opportunities and value.