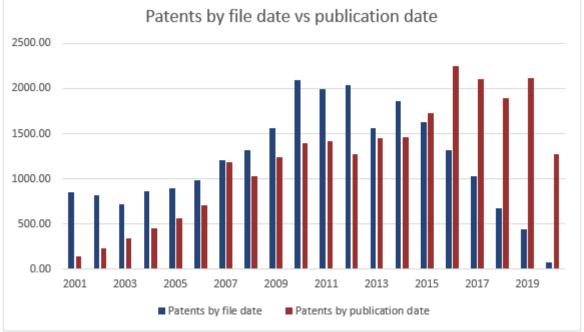


Sanofi eyes more M&A as deals drive increase in IP portfolio quality

Last week Sanofi announced a \$3.4 billion deal to purchase US biotech company Principia Biopharma. It's the third-largest pharmaceutical acquisition this year and the company's second big ticket deal since Paul Hudson joined as CEO in September 2019. The former Novartis executive has made his priorities at Sanofi clear: cut costs and invest in innovative - and lucrative - medicines. His refocusing of the product portfolio is welcome news for a company that's stock has seen better days due to falling prices in diabetes drugs and a patent pipeline in need of refreshing.

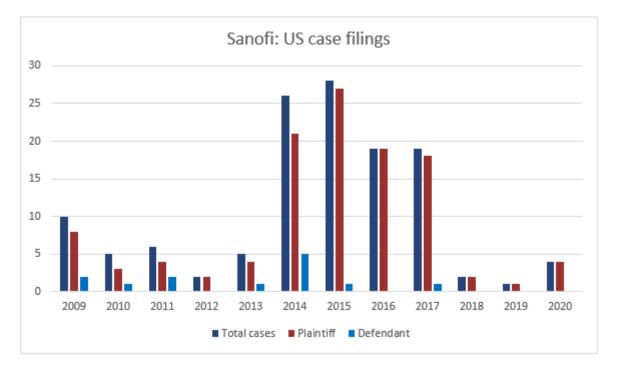
Hudson's predecessor, Olivier Brandicourt, had already taken steps to improve Sanofi's balance sheet and this is evident in the company's filing levels. Application output has been on a downward trend since 2014, reaching a nearly 20-year low of 671 patents filed in 2018 (see graph below).

Sanofi owns a global portfolio of 24,249 active patents, 8,228 of which are grants and 16,021 applications. It has largely sought protection in the United States and Europe, but Japan and China are becoming increasingly important jurisdictions with 818 and 649 grants respectively.



Source: <u>Anaqua's AcclaimIP Analytics Software</u>; Data is accurate as of 25th August 2020. The data for 2019 and 2020 is incomplete given the 18-month lag between when a patent is filed and when it is published.

The French pharmaceutical giant's litigation strategy also appears to have been re-evaluated in the last few years. Sanofi has been involved in 127 US patent cases filed since 1st January 2009 and has featured as the plaintiff in 113 of these (see graph below). The bulk of its litigious activity took place between 2014 and 2017 when it lodged 85 lawsuits. It has since backed off from offensive action, with two cases filed in 2018, one in 2019 and four so far in 2020.

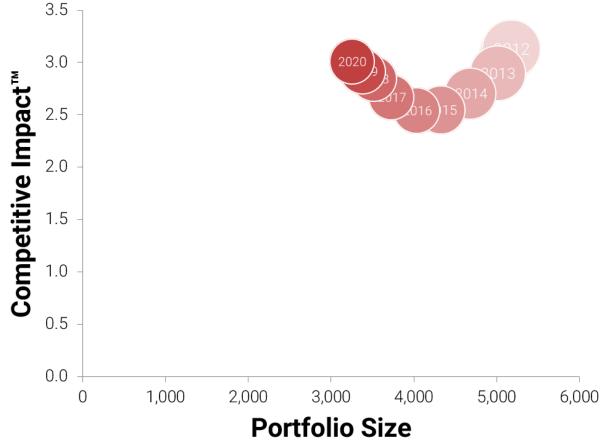


Source: <u>Lex Machina</u>; Data is accurate as of 21st August 2020. Sanofi appears at the plaintiff in 113 instances, and the defendant in 13 and the third party in one case.

1

Portfolio insights

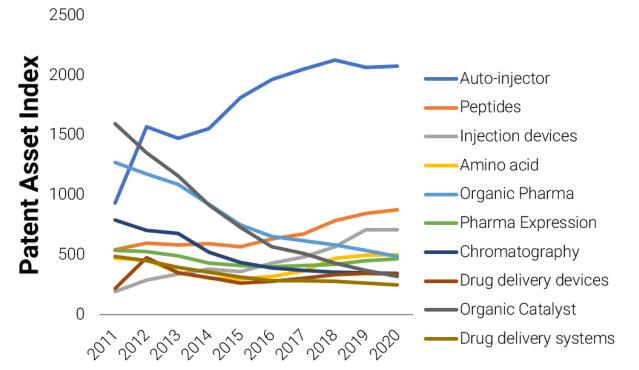
"Sanofi has actively reduced its portfolio size over the past decade. Initially this also meant reductions in quality, indicating some higher quality patents were pruned which perhaps may have still had some value to give," says <u>PatentSight</u> analyst William Mansfield (see graph below). However, in recent years we can see the company's Competitive Impact score recover, indicating that patent quality is on the rise. The PatentSight Competitive Impact tool considers the technology relevance and market coverage of a portfolio; its value is stated relative to other patents in the field, where 1 represents the global average.



Development of the active portfolio of Sanofi over the past 10 year in terms of Quality and Quantity. Data as of 20th August 2020. Source: PatentSight Business Intelligence Platform

Source: PatentSight

The company's greatest technological strength is in medical devices, particularly within the area of automated injections (such as those used to inject insulin at home) (see graph below). Auto-injector related patents were an important part of the portfolio back in 2011 and Sanofi's strength in this field has since skyrocketed, as measured by the Patent Asset Index (PAI). The PAI considers the number and quality of active patents to calculate the overall strength of a portfolio. As auto-injector related patents have increased in importance there has been a decline in other areas that are more closely linked to pharmaceuticals and drug development.



Reporting Date

Development of the active portfolio of Sanofi by Technology Field over the past 10 years. Data as of 20th August 2020. Source: PatentSight Business Intelligence Platform

Source: PatentSight

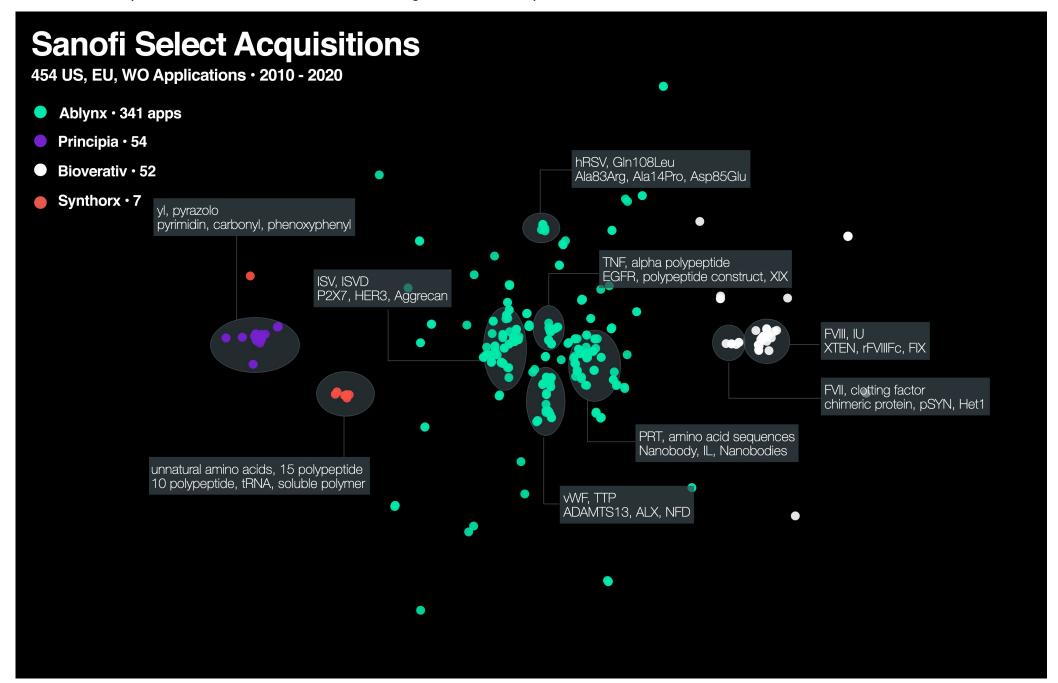
Acquisition impact

In May, Hudson took the strategic decision to unload Sanofi's stake in Regeneron, raising \$11.7 billion in the process. It was part of a simple plan: fill the coffers to obtain "bolt-on targets". Sanofi can now spend as much as \$50 billion on acquisitions and its focus will be on buying-up companies that specialise in cancer and gene therapy technologies, as well as immunology.

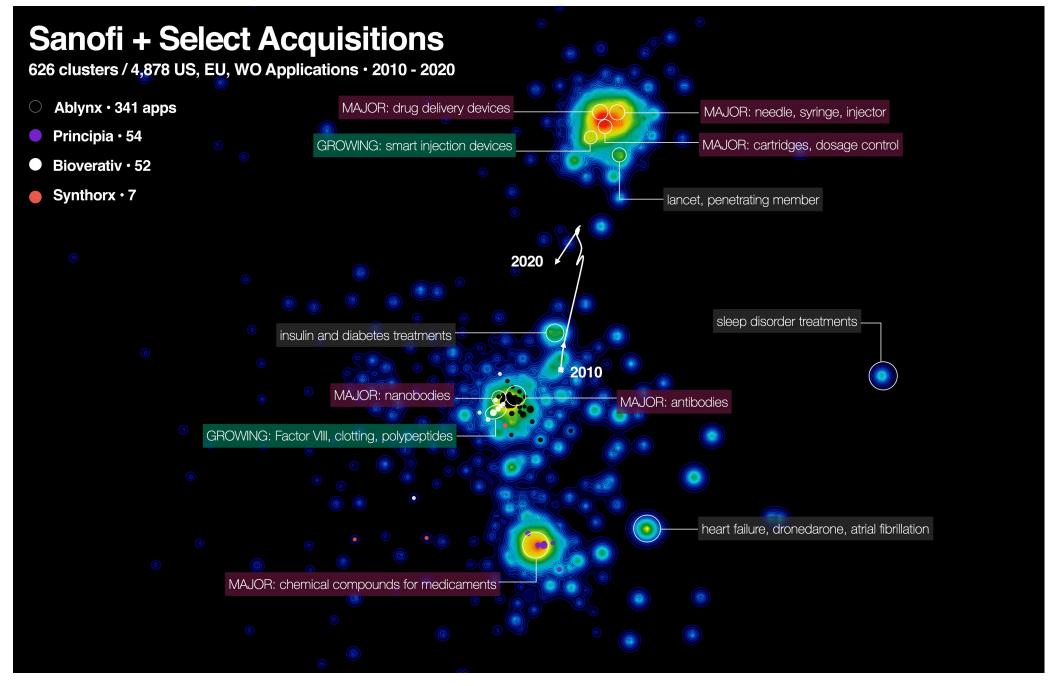
Sanofi's bid for US autoimmune drugmaker Principia is the CEO's second "bolt-on" deal, <u>having purchased</u> Synthorx Inc. for \$2.5 billion in December of last year. Hudson is not the only one to boost the portfolio with acquisitions. Brandicourt closed two high-end transactions in 2018 with the purchase of <u>Bioverativ</u> for \$11.6 billion and <u>Ablynx</u> for \$4.8 billion.

According to analysis conducted by <u>Valuenex</u>, Sanofi's acquisitions have been highly strategic. The targets have bolstered areas where the company has a history of innovation and there is no overlap between the four businesses' patent portfolios (see images below). The only exception is Synthorx which has patent clusters in outlying regions.

The second landscape shows the complete Sanofi portfolio combined with the portfolios of the four acquisitions. From this image it clear that there are three core areas: medicinal delivery methods and accompanying components (such as hardware), disease treatment, and chemical compounds. Tracking Sanofi's trendline between 2010 and 2020 shows that the company was focused more heavily on the bottom two regions (disease treatment and chemical compounds) in earlier years but then made a significant shift in its R&D efforts to hardware before backtracking to its original focus. The latest movement towards disease treatment and chemical compounds is worth noting given that these are the areas that the four acquisitions fit in, with none of them owning assets in the top area of the radar.

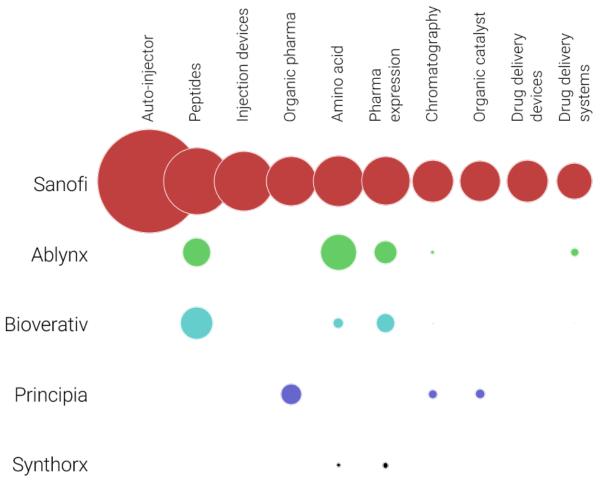


Source: VALUENEX; see full size image here



Source: VALUENEX; see full size image <u>here</u>

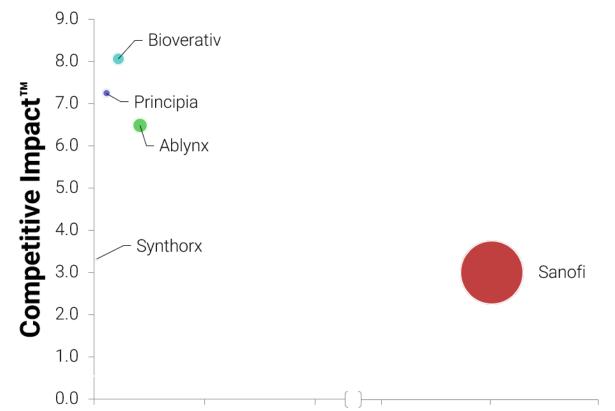
Sanofi's acquisitions have strengthened its pharmaceutical business rather than its already well-established medical device business, says Mansfield (see graph below). This begs the question that with another pharma-related acquisition under its belt will this area of the business see a re-vamp in importance and quality, or will it continue on its relative decline? Given the data from both PatentSight and Valuenex, it appears the former is more likely.



Active portfolios over Sanofi and recent acquisitions by technology field. Data as of 20th August 2020. Source: PatentSight Business Intelligence Platform

Source: PatentSight

Notably, says Mansfield, nearly all of the firms Sanofi has acquired have had higher quality patent portfolios than itself, so their contribution has helped improve the overall quality of the company's IP (see graph below).



0 250 500 3,000 3,250 3,500 Portfolio Size

Active portfolios over Sanofi and recent acquisitions as of today, in terms of Quality and Quantity. Data as of 20th August 2020. Source: PatentSight Business Intelligence Platform

Source: PatentSight

IAM says:

Hudson hit the acquisition trail hard and his sale of the company's stake in Regeneron sends a clear message that there are more deals on the way. M&A has certainly defined the company's patent strategy in the past few years with Sanofi utilising these purchases to push up the quality of its portfolio and strengthen innovation in fast growth areas. However, the spate of purchases is only a short-term solution to hold the company over until it can build up its portfolio in-house, <u>says</u> Dietmar Berger, global head of development at Sanofi.

The French pharmaceutical's R&D goal is for two-thirds of its pipeline to be built internally. Indeed, an announcement on the company's website after Hudson took the helm explained that the business would allocate capital to organic investment first, with business development and M&A activities taking second priority. As such, the 2019 patent numbers might be much higher after all the data comes in and we can expect Sanofi's portfolio to continue growing both in terms of size and quality.

4