

## Life Sciences Innovations Advanced by M&A

Mergers and acquisitions (M&A) are a unique and fundamental component of America's life sciences industry, allowing companies of all sizes to partner and combine the resources, expertise and funding needed to bring new treatments and cures to patients.

Some of the biopharmaceutical innovations made possible by M&A include:

### A Cure for Inherited Blindness

#### Spark Therapeutics' acquisition by Roche (2019)<sup>1</sup>

*"With its extensive experience running global clinical trials, navigating FDA approvals, and deploying international commercial and marketing teams for new products, Roche has been able to let Spark focus on what it does best—develop innovative gene therapies. As Spark's experience shows, mergers often give new products the best chance of surviving the long and perilous road to market."*

—SPARK THERAPEUTICS<sup>2</sup>

Spark, a Philadelphia-based biotech, was founded in 2013 by highly specialized researchers and funded via seed investment from the Children's Hospital of Pennsylvania. Starting with just a few dozen employees, the company quickly emerged as a pioneer in the discovery and development of gene therapies—medicines that target or replace damaged genes to address the root cause of a disease. In December 2017, Spark obtained FDA approval for Luxturna, the first gene therapy ever approved to treat an inherited genetic disease and a potentially transformative breakthrough that could restore patients' vision.

Shortly after, Spark sought to partner with a company that could help it expand its gene therapy science. In 2019, Roche acquired Spark, allowing the start-up access to the sophisticated global manufacturing and distribution infrastructure necessary to bring Luxturna—and other promising gene therapies in their pipeline—to a greater number of patients across the world.

Today, Spark continues to operate as an independent, Philadelphia-based company within the Roche group. The two companies' collaborative relationship has allowed them to leverage their own unique and highly sophisticated resources and expertise and ultimately innovate more effectively.

### An Innovative CAR-T Therapy for Blood Cancer

#### Juno Therapeutics' merger with Celgene (2018)<sup>3</sup>

*"The people at Juno channel their passion for science and patients towards a common goal of finding cures by creating cell therapies that help people live longer, better lives. Continuing this work will take scientific prowess, manufacturing excellence and global reach. This union will provide all three."*

—HANS BISHOP, CEO, JUNO THERAPEUTICS<sup>4</sup>

Although Juno quickly developed an innovative pipeline of promising CAR-T cancer treatments, costly clinical trial setbacks threatened to prevent their transformative science from reaching patients. As Juno looked to overcome these challenges, the company narrowed its focus to just one investigational therapy, Breyanzi, for patients with refractory diffuse large B-cell lymphoma (DLBCL). To connect Breyanzi with the resources and infrastructure needed to bring it to market, Juno merged with Celgene in 2018.

Three years later, in 2021, Breyanzi was approved to treat refractory DLBCL and brought hope in the form of a new treatment option to the thousands of patients affected by this life-threatening disease. Through Juno's merger with Celgene, and Celgene's subsequent acquisition by BMS, thousands more patients with blood cancer have benefitted from treatment with Breyanzi.

The merger also helped open the floodgates of life sciences investment in the Puget Sound region. By serving as a model to translate the region's scientific prowess into cutting-edge therapies—and allowing investors to recoup the considerable investments that make these new therapies possible—Juno has served as a model for other biotech companies to start up and pursue new innovations.



## A Pair of Breakthroughs for a Rare Blood Disease

### Alexion's acquisition by AstraZeneca (2020)<sup>5</sup>

*“For nearly 30 years Alexion has worked to develop and deliver transformative medicines to patients around the world with rare and devastating diseases... We remain committed to continuing to serve the patients who rely on our medicines and firmly believe the combined organization will be well positioned to accelerate innovation...”*

—DR. LUDWIG HANTSON, CEO, ALEXION<sup>6</sup>

Alexion was born out of a conversation between Yale physician Leonard Bell and his friend, Steven Squinto. The pair believed that therapies which blocked the complement system—a complex set of enzymes within the immune system—represented a potentially transformative approach to treating many inflammatory conditions. They quickly discovered a niche for this promising science: treating rare diseases like paroxysmal nocturnal hemoglobinuria (PNH).

15 years after Alexion first set out to bring a new medicine to patients, the company's leading complement inhibitor, Soliris, was approved in 2007 as the first disease-modifying treatment for PNH. A decade later, Alexion secured FDA approval for Ultomiris. Together, these therapies have contributed to a dramatic increase in life expectancy and quality of life for those living with PNH.

Despite these successes, the small and widely dispersed nature of the PNH patient population led to challenges for Alexion's ability to reach those who would benefit most from their innovative therapies. In an effort to expand the global reach of their pipeline, Alexion was acquired by AstraZeneca in 2020.

By combining Alexion's existing scientific expertise with AstraZeneca's established resources and distribution infrastructure, the merger has allowed the companies to more effectively reach people living with PNH.

To read more about these, and other examples of Innovations Advanced by M&A, visit:

<https://pulseforinnovation.org/news-resources/innovations-advanced-by-ma/>.

<sup>1</sup> Partnership for the U.S. Life Science Ecosystem. Innovations Advanced by M&A: A Cure for Inherited Blindness. April 18, 2024. <https://pulseforinnovation.org/innovations-advanced-by-ma-a-cure-for-inherited-blindness/>.

<sup>2</sup> Spark Therapeutics. Comments to Multilateral Pharmaceutical Merger Task Force. June 25, 2021. <https://www.regulations.gov/comment/FTC-2021-0025-0032>.

<sup>3</sup> Partnership for the U.S. Life Science Ecosystem. Innovations Advanced by M&A: An Innovative CAR-T Therapy for Blood Cancer. June 5, 2024. <https://pulseforinnovation.org/innovations-advanced-by-ma-an-innovative-car-t-therapy-for-blood-cancer/>.

<sup>4</sup> BusinessWire. Celgene Corporation to Acquire Juno Therapeutics, Inc., Advancing Global Leadership in Cellular Immunotherapy. January 22, 2018. <https://www.businesswire.com/news/home/20180122005858/en/Celgene-Corporation-to-Acquire-Juno-Therapeutics-Inc.-Advancing-Global-Leadership-in-Cellular-Immunotherapy>.

<sup>5</sup> Partnership for the U.S. Life Science Ecosystem. Innovations Advanced by M&A: Breakthroughs for a Rare Blood Disease. June 26, 2024. <https://pulseforinnovation.org/innovations-advanced-by-ma-breakthroughs-for-a-rare-blood-disease/>.

<sup>6</sup> AstraZeneca. AstraZeneca to acquire Alexion, accelerating the Company's strategic and financial development. December 12, 2020. <https://www.astrazeneca.com/media-centre/press-releases/2020/astrazeneca-to-acquire-alexion.html#>.