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Blockbuster Drugs Of 2024 And Emerging Giants Of 2025: A Review Of Market Trends And Therapeutic Impact

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Abstract: The course of contemporary pharmaceutical innovation has been influenced by blockbuster drugs, which are generally understood as medications with yearly sales of more than \$1 billion. In 2024 alone, the top 25 drugs generated over USD 143 billion, accounting for nearly 13% of global pharmaceutical revenues. In addition to offering revolutionary treatments for autoimmune, metabolic, and cancer conditions, they also act as financial backbones for ongoing research and development (R&D). However, their success raises concerns about healthcare equity, affordability, and the disregard for less lucrative therapeutic areas. The pharmaceutical industry is moving toward more specialized but no less profitable products like biologics, orphan drugs, and advanced targeted therapies as patents expire and personalized medicine changes treatment paradigms. Looking ahead, this review also highlights emerging candidates like AWIQLI and CagriSema, which are expected to reshape the 2025 market and beyond. To emphasize the need for a more balanced framework, this paper examines the evolution of the blockbuster model, its advantages and limitations, and its implications for future therapeutic and commercial landscapes

Index Terms - Blockbuster drugs, Pharmaceutical market, Biologics, Patent cliff, Drug innovation, Therapeutic impact.

I. Introduction

The term "blockbuster" in pharmaceuticals generally applies to drugs whose global sales exceed \$1 billion annually. These medications are widely used by a variety of patient populations and are frequently linked to important therapeutic breakthroughs or advancements. Due to their high sales, these medications can cover significant R&D expenses and make a substantial contribution to pharmaceutical companies' profitability. These medications frequently treat common illnesses that impact sizable portions of the population, guaranteeing strong demand. They are essential options for clinicians because they often introduce new mechanisms of action or substantial therapeutic improvements over current treatments. Thorough marketing and promotion plans aid in raising patient and healthcare provider awareness and adoption.¹

These types of drugs tend to be pillars in the management of prevalent chronic diseases like cancer, cardiovascular disease, diabetes, and autoimmune diseases. Born in the 1980s and widely embraced in the 1990s, the blockbuster model became a force to reckon with in determining the strategies of multinational drug companies. Initial examples include ranitidine (Zantac) for ulcers and fluoxetine (Prozac) for depression. The concept, however, reached its peak with atorvastatin (Lipitor), which became the world's best-selling drug, generating more than \$13 billion annually at its height.²

Blockbuster pharmaceuticals are generally bolstered by robust intellectual protection, property and large clinical development programs aggressive promotion tactics,

that prove superiority to current therapies. With these drivers, companies are

able to control market niches and gain preferential formulary status. Adalimumab (Humira), used in rheumatoid arthritis and several other inflammatory disorders, generated peak revenues of over \$20 billion

before losing patent protection, a success sustained by expanding indications and global market reach.³ Similarly, pembrolizumab (Keytruda), which is a big deal in the world of immuno-oncology, it's been approved for over 20 different cancer types, including melanoma, lung cancer, and triplenegative breast cancer.⁴

But the blockbuster model has also come under fire for prioritizing financial gain over the interests of public health. Rare diseases and less lucrative treatment areas are frequently neglected as a result, leaving gaps in innovation where smaller patient populations are underserved.⁵ Additionally, the model's reliance on exorbitant prices has sparked discussions about accessibility and affordability, especially in low- and middle-income nations. Due to premium pricing strategies and exclusivity extensions, the industry is now shifting toward biologics, orphan drugs, and precision medicine, where smaller patient populations can still generate high returns, as a result of the patents for many traditional blockbusters expiring.⁶

Yet, there is limited literature that bridges the past success of blockbusters with the sales data of 2024 and the therapeutic innovations anticipated in 2025. By mapping this transition, the present review provides timely insights into both commercial trends and evolving treatment paradigms, offering value to researchers, policymakers, and industry stakeholders alike.

II. HISTORICAL CONTEXT AND EVOLUTION

The late 20th century is when blockbuster medications first appeared. One important turning point in this development is Cimetidine (Tagamet), approved in the 1970s, introduced the first effective H2 receptor blockade, revolutionizing therapy for ulcers and reflux disease. In addition to being a breakthrough in the treatment of disorders related to acid reflux, its success set a standard for mass-consumption marketing, which is a characteristic of blockbuster medications.^{7,8}

In a similar vein, lovastatin, also marketed under the brand name Mevacor, was the first statin to reduce cholesterol by blocking the HMG-CoA reductase enzyme when it was first introduced in the 1980s. Statins quickly established themselves as a mainstay in the management of cardiovascular risk, generating remarkable profits and being prescribed widely. The success of these medications demonstrated a trend toward using drugs with high sales volume to address common health issues.⁹

The blockbuster model saw a significant expansion in the 1990s and 2000s. To maximize their market potential, big pharmaceutical companies started making significant investments in R&D to produce medications that could treat common ailments. Other important blockbusters like Lipitor (atorvastatin) and Viagra (sildenafil) were discovered in this setting.

Originally created to treat erectile dysfunction, Viagra unexpectedly found great market appeal and, after its 1998 launch, became one of the fastest-selling medications in history. Its marketing approach and social ramifications demonstrated the profitable potential of focusing on extremely common but non-life-threatening illnesses. 10,11

However, Lipitor, which was made available in 1997, exemplified the enormous market potential of statins. At its height, it brought in over \$13 billion annually, primarily as a result of its ability to reduce cholesterol and prevent further cardiovascular events.¹²

Biotechnology advancements and a move toward personalized medicine have also impacted the development of blockbuster medications. As seen with medications like Herceptin (trastuzumab) for breast cancer and Humira (adalimumab) for autoimmune diseases, the emphasis has shifted more and more toward targeted therapies that may serve smaller patient populations but have the advantage of being significantly more expensive .^{13,14}. High-risk and high-reward medications are developed in the pharmaceutical industry, which is reflected in these modernization practices. The blockbuster model adjusts as the industry continues to negotiate shifting consumer expectations and regulatory environments, emphasizing a combination of both broad and focused therapeutic approaches. ¹⁵.

Although the pharmaceutical industry has grown significantly as a result of the blockbuster drug model, issues like patent expirations and the emergence of generics pose a threat to the industry's long-term viability. To ensure future economic viability, this calls for a change to creative drug development techniques. New therapeutic classes and treatment paradigms have been produced as a result of pharmaceutical research and science being driven by the desire to create blockbuster drugs. Blockbuster medications increase access to healthcare overall by offering large patient populations efficient treatment options. ^{16&17} For the treatment of chronic illnesses, where continuous care is frequently required, this is essential. Widespread use of popular medications has been linked to better public health metrics, including lower hospitalization rates and overall medical expenses. ¹⁸

Blockbuster medications have significant financial ramifications that affect not just the businesses that manufacture them but the pharmaceutical sector as a whole. Blockbuster medications frequently make up a sizeable portion of overall sales, which greatly boosts pharmaceutical companies' profits. Businesses are able to finance ongoing research and development (R&D) initiatives thanks to this revenue. Blockbuster drug success can increase a pharmaceutical company's market value, drawing in investors and increasing shareholder value. Businesses are able to grow and enter new markets thanks to their financial stability. Businesses that successfully introduce blockbuster medications frequently acquire a competitive edge and establish themselves as authorities in particular therapeutic fields. Market dynamics may be impacted by this influence on a global scale. Increased R&D expenditures for novel medications and treatments are frequently made possible by the profits from popular medications. Blockbuster products in the future may result from this innovation cycle. ^{19&20}

Pharmaceutical companies rely heavily on blockbuster drugs because of their significant revenue contribution. These medications frequently make up a sizeable amount of a business's total revenue, supplying funds that can be used to fund the creation of novel medications and treatments.²¹

- Revenue Generation: High revenue from blockbuster drugs supports further innovation, as these funds can be redirected into R&D for future compounds, balancing the high costs associated with drug development, which can range between \$1 billion to over \$2 billion per successful drug.²²
- Market Positioning: Companies with blockbuster drugs often enjoy a dominant position in the market, leveraging the sales from these drugs to expand their portfolio through acquisitions and partnerships. This consolidation trend within the industry is primarily driven by the need to maintain growth in a competitive environment.²³
- Investment and Shareholder Interest: The anticipation of blockbuster drugs coming to market often attracts significant investment, portraying a positive outlook for shareholders. Financial analysts closely monitor key drug launches, as their success can dramatically influence stock prices and market capitalizations.²⁴

III. IMPACT ON INNOVATION AND DRUG DEVELOPMENT

Pharmaceutical companies are under pressure to prioritize potential blockbusters over smaller, potentially beneficial therapies, which can stifle innovation in some therapeutic areas. However, blockbuster drugs can also provide vital financial resources.²⁵

- R&D Focus Shift: Pharmaceutical firms tend to invest in drugs that have high commercialization potential rather than addressing unmet medical needs, which may lead to a concentration on chronic conditions over acute or rare diseases. This tendency can lead to an innovation gap where essential but less profitable medicines are overlooked.²⁶
- Market Competition: The success of blockbuster drugs can lead to increased competition among pharmaceutical companies striving to develop next-generation therapies. This intensifies the race for patents and exclusive rights, driving innovation but also increasing costs as companies engage in aggressive R&D strategies.²⁷

IV. IMPACTS ON THE HEALTH CARE SYSTEM

Accessibility, inequality, and treatment paradigms are all impacted by the prevalence of blockbuster medications in the global healthcare system.

- Cost Implications for Patients: Both consumers and insurance companies may incur higher healthcare expenses as a result of the exorbitant costs of popular medications. Patients' access to these medications may be restricted by the high out-of-pocket costs associated with many of them, especially in low- and middle-income nations.²⁸
- Healthcare Inequality: Because vulnerable populations may find it difficult to pay for these treatments, the emphasis on high-revenue medications can make healthcare access disparities worse. This situation emphasizes the necessity of value-based pricing models and pricing reforms that could increase access to these essential drugs.²⁹
- Adaptation to Global Health Needs: The pharmaceutical industry is forced by the financial dynamics of blockbuster drugs to better align its strategies with global health priorities, especially in emerging markets where the demand for essential medicines differs significantly from the interests of large corporations that prioritize profit.³⁰

V. GLOBAL SALES TRENDS AND THERAPEUTIC DISTRIBUTION OF BLOCKBUSTER DRUGS (2024)

The 2024 global pharmaceutical market was characterized by a high level of revenue concentration within a few number of very effective treatments. The Rx 2024 – Top 25 Drugs by Sales, Growth & Market Trends research states (Table.1) that these popular medications brought in over USD 143 billion in sales annually, or about 13% of all pharmaceutical earnings worldwide. Key therapeutic categories, including oncology, metabolic diseases, immunology, and cardiovascular disease, were represented among the year's top medicines. This pattern emphasizes how biologics and therapies for chronic illnesses are becoming more and more important in determining clinical priorities and business plans. The industry's dependence on a few number of high-value items to spur innovation, profitability, and competitive advantage in a more complicated global market environment is further evidenced by these agents' ongoing success.³¹

Table 1: Summary of Blockbuster drugs with their Manufacturer name, Annual Sales of 2024 and indication. *Source: Adapted from MedicinMan 2025*

Sl. No.	Generic Name	Brand Name	Company	Approx. Global Sales 2024 (USD Bn)	Main Approved Uses
1	Pembrolizumab	Keytruda	Merck &	~29.5	Broad range of
			Co.		cancers
2	Semaglutide	Ozempic	Novo	~17.5	Type 2 diabetes,
			Nordisk		weight control
3	Tirzepatide	Mounjaro	Eli Lilly	~11.5	Type 2 diabetes
4	Apixaban	Eliquis	BMS / Pfizer	~11.4	Anticoagulation (AF, DVT, PE)
5	Bictegravir/FTC/TAF	Biktarvy	Gilead	~10.8	HIV-1 infection
			Sciences	//2	
6	Dupilumab	Dupixent	Sanofi /	~10.7	Atopic
			Regeneron		dermatitis,
					asthma
7	Daratumumab	Darzalex	John <mark>son &</mark>	~10.4	Multiple
			Johnson		myeloma
8	Ustekinumab	Stelara	Johnson &	~9.7	Psoriasis,
			Johnson	/ 11	Crohn's disease,
				7.3	ulcerative colitis
9	Nivolumab	Opdivo	Bristol-	~9.3	Oncology
			Myers		(various cancers)
			Squibb		
10	Adalimumab	Humira	AbbVie	~9.0	Autoimmune
		~	2.5	0.5	conditions
11	HPV vaccine	Gardasil 9	Merck &	~8.6	HPV prevention
10	D 1 1 21	TD 11 1	Co.	0.7	T. 0.11.1
12	Dulaglutide	Trulicity	Eli Lilly	~8.7	Type 2 diabetes
13	Ibrutinib	Imbruvica	AbbVie /	~8.3	B-cell
1.4	C1-14-11 + 37-1	Entract	J&J	7.7	malignancies
14	Sacubitril + Valsartan	Entresto	Novartis	~7.7	Heart failure
15	Palbociclib	Ibrance	Pfizer	~7.1	HR+ breast cancer
16	Lenalidomide	Revlimid	BMS	~6.9	Multiple
					myeloma
17	Rivaroxaban	Xarelto	Bayer / J&J	~6.8	Anticoagulation
					(AF, DVT, PE)
18	Ocrelizumab	Ocrevus	Roche	~6.6	Multiple
					sclerosis
19	Atezolizumab	Tecentriq	Roche	~6.4	Cancers
					(immunotherapy)

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20	Remdesivir	Veklury	Gilead	~6.2	Antiviral for
			Sciences		COVID-19
21	Risankizumab	Skyrizi	AbbVie	~6.0	Psoriasis,
					Crohn's disease
22	Secukinumab	Cosentyx	Novartis	~5.8	Psoriasis,
					ankylosing
					spondylitis
23	Sitagliptin	Januvia	Merck &	~5.6	Type 2 diabetes
			Co.		
24	Budesonide +	Symbicort	AstraZeneca	~5.4	Asthma, COPD
	Formoterol				
25	Dapagliflozin	Farxiga	AstraZeneca	~5.2	Type 2 diabetes,
					heart failure

The table.2, below categorizes the top-selling drugs of 2024 based on their primary therapeutic applications. This classification highlights the therapeutic areas where pharmaceutical innovation and market demand are most concentrated. (Fig.1)

Table 2: Top-selling drugs of 20<mark>24 based on their therapeutic applications.</mark>

Sl.no	Category	Examples
1	Oncology	Keytruda, Opdivo, Darzalex, Tecentriq, Imbruvica
2	Metabolic Diseases	Ozempic, Mounjaro, Trulicity, Farxiga
3	Autoimmun <mark>e Disorders</mark>	Dupixent, Stelara, Humira, Skyrizi
4	Cardiovascular Disorders	Eliquis, Xarelto, Entresto
5	Infectious Diseases	Biktarvy <mark>, Veklury, Gardasil 9</mark>

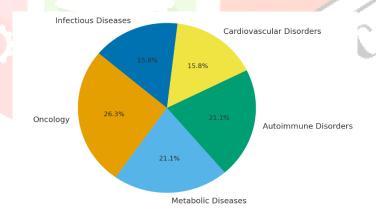


Fig.1: Therapeutic area distribution of Top 25 Blockbuster drugs 2024

VI.BLOCKBUSTER WATCHLIST: TOP CONTENDERS FOR 2025 PHARMA SUCCESS

According to Clarivate's annual Drugs to Watch report, a number of revolutionary cures that have been recognized as possible blockbuster medications are expected to debut in 2025. These medications cover a wide range of medical conditions, such as uncommon genetic disorders, diabetes, obesity, dermatology, and oncology. Their novel modes of action—such as mRNA vaccines, PROTACs, bispecific T-cell engagers, and GLP-1 agonists—are what distinguish them. The trend toward patient-centered, focused treatments with significant commercial potential is best illustrated by medications such as COBENFY, AWIQLI, and CagriSema. In addition to changing treatment paradigms, these medicines are anticipated to significantly increase pharmaceutical industry income as they move closer to regulatory approval and commercialization.³² (Table 3)

Table: 3: Potential blockbuster drugs to watch in 2025. Source: Clarivate Reports 2025

Sl.no	Drug (Brand)	Developers (s)	Key Indication(s)
1	AWIQLI (insulin icodec)	Novo Nordisk	Type 1 & Type 2 diabetes
			mellitus
2	CagriSema	Novo Nordisk	Obesity and Type 2
	(cagrilintide + semaglutide)		diabetes mellitus
3	COBENFY (KarXT;	Bristol Myers Squibb	Schizophrenia;
	xanomeline-trospium)		Alzheimer's disease–
			related psychosis
4	EBGLYSS (lebrikizumab)	Eli Lilly & Almirall	Moderate-to-severe atopic
			dermatitis
5	Qfitlia (Fitusiran)	Alnylam	Hemophilia A & B
		6Pharmaceuticals &	(including inhibitor
		Sanofi	patients)
6	GSK-3536819	GSK plc	Pentavalent meningococcal
	(MenABCWY)		vaccine (A, B, C, W, Y
			serogroups)
7	IMDELLTRA	Amgen	Extensive-stage small-cell
	(tarlatamab-dlle)		lung cancer (ES-SCLC)
8	mRESVIA (mRNA-1345)	Moderna	RSV prevention in older
			adults (\geq 60)
9	SEL-212	Sobi & Cartesian	Chronic gout (pegylated
		Therapeutics / Selecta	uricase + ImmTOR)
		Biosciences	
10	Vepdegestrant (ARV-471)	Arvinas Inc & Pfizer	Estrogen receptor-positive
			breast cancer (PROTAC)
11	Zanzalintinib	Exelixis	Rena <mark>l cell carcinoma,</mark>
			colorectal, head & neck
			squamous cell carcinoma

VII. THE FUTURE LANDSCAPE OF BLOCKBUSTER DRUGS

The future landscape of blockbusters is drastically changing as the pharmaceutical industry prepares for a "patent cliff," with almost \$180 billion in top-selling medications, including Keytruda, losing exclusivity by 2027–2028. In order to overcome impending revenue losses, Big Pharma is embracing targeted acquisitions, pipelines.³³ boosting innovation. and collaborating with biotech restock Concurrently, the prevalence of metabolic treatments, particularly GLP-1, and dual agonists such as tirzepatide and semaglutide highlights a dominant trend, with estimates approaching a \$100 billion valuation by 2030.³⁴ The time from concept to clinic is being accelerated by technological advancements like AI-driven drug discovery, precision medicine, and tailored modalities (such gene and cell therapies), which are also increasing R&D productivity. Additionally, cross-border biotech partnerships—especially with Chinese companies—are becoming more popular as an affordable way to access innovative assets; in the first half of 2025 alone, 14 U.S.—China license agreements totalling \$18 billion were signed, according to Reuters. 35

VIII. CONCLUSION

By providing ground-breaking treatments for common chronic and life-threatening illnesses, blockbuster medications have unquestionably changed the pharmaceutical landscape. They are also important sources of revenue for the sector. Their capacity to produce substantial sums of money has stimulated innovation, maintained significant R&D expenditures, and influenced the dynamics of international markets. The blockbuster model does have several drawbacks, though. Concerns regarding healthcare equity and accessibility have been raised by its emphasis on profitability, which has frequently resulted in the underrepresentation of rare diseases and unmet medical needs. Emerging biotechnologies, patient-centric strategies, and strategic alliances are redefining the future of blockbuster medications as the industry deals with impending patent expirations and moves toward precision medicine. To guarantee that the upcoming

generation of blockbusters not only promotes financial success but also tackles more significant public health issues, a balanced emphasis on therapeutic innovation, affordability, and global health priorities will be necessary.

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