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## **Collaborations and Partnerships in the Pharmaceutical Industry: Enhancing Innovation and Market Access**



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**Introduction:**

The pharmaceutical industry is a significant contributor to the advancements in healthcare, improving its outcomes and enhancing the quality of life of people worldwide. As a result of rapidly growing technology, cut-throat competition, and a complicated regulatory environment, collaborations and partnerships have emerged as crucial strategies for pharmaceutical companies to achieve growth, stimulate innovation, and expand their market access.

### **Types of Collaborations and Partnerships in the Pharmaceutical Industry:**

- 1. Mergers and Acquisitions:** The terms merger and acquisition are often used interchangeably, but both involve two distinct operations. In a merger, two companies of similar size merge to form a single entity, while an acquisition occurs when a larger company buys a smaller company, completely absorbing it. Ex. In 2018, Takeda acquired Shire for \$62 billion
- 2. In-licensing Agreements:** Through a licensing agreement, pharmaceutical companies can obtain the right to sell a medicine patented by another company (or a research facility) by paying the royalties to the licensor company. Ex. AstraZeneca signed a licensing agreement with Daiichi Sankyo for their antibody-drug conjugates (ADCs).
- 3. Outsourcing R&D Processes from CROs:** Contract Research Organizations (CROs) are entities within the service sector that provide various services to pharmaceutical and biotechnology companies. Instead of recruiting full-time staff with the specialized expertise required for performing specific tasks within the development process, pharmaceutical companies hire a CRO to conduct these tasks externally. Research services include activities ranging from the identification of new drugs to bringing them to market, with a specific emphasis on the clinical phase. Ex. IQVIA is one of the leading CROs in the world.
- 4. R&D Collaborations:** R&D Collaborations fall under the class of indirect partnerships, as they do not involve the direct procurement of products or services from an external entity. Instead, they are involved in the exchange of knowledge that ultimately results in the creation and commercialization of novel pharmaceutical products. Through them, each company can concentrate on what it does best and rely on third parties to acquire knowledge in areas where it lacks expertise. Ex. Pfizer in 2014, opened a research facility in Cambridge, Massachusetts, which houses Harvard University and MIT - two of the world's most famous academic institutes.
- 5. Public-Private Partnerships:** These are collaborations between public organizations and private companies for carrying out various projects within the companies. In the field of pharmaceuticals, these arrangements involve funding R&D activities using public funds or donations from charitable organizations. The focus is discovering new medications, particularly in areas of medical treatment that lack adequate options, and where pharmaceutical research is not as active. Ex. Innovative Medicines Initiative, a public-private partnership between the European Union and the European Federation of Pharmaceutical Industries and Associations [EFPIA], aims to speed up drug development, making it better and safer, especially in areas of particular need.
- 6. Crowd Sourcing:** Crowdsourcing is an activity that is conducted online, wherein a company, an institution, or a private individual proposes a problem and requests opinions, suggestions, and ideas to solve it from internet users in exchange for a cash prize. Thus, it involves getting knowledge from an external source, similar to what happens in partnership and collaborative efforts. Ex. InnCentive global network where experts from different industries propose solutions to problems posted by various

companies, government institutes, non-profit organizations, research institutes, and public and private laboratories.

**7. Innovation Centers:** These centers provide a hub for scientists from various multinational pharmaceutical companies as well as academic experts from all around the world to discuss and collaborate, to come up with innovative solutions. Ex. Merck has built its innovation center in Darmstadt, Germany, where both employees and partners can grow their ideas.

**8. Open Source:** Open source is software that involves making source code, blueprints, or documentation available free of charge to anyone, so that it can be further developed or modified and then shared with the community. It encourages free access to knowledge to achieve collaborative advancements with no financial incentive in return. Ex. GlaxoSmithKline and MIT and Alnylam Pharmaceuticals formed the “Pool for Open Innovation against neglected tropical diseases”, allowing free access to 2,300 patents on drugs that treat tropical diseases.

### **Significance of Collaboration & Partnership in the Pharmaceutical Industry:**

#### **1. Shared expertise and resources:**

Through collaborations and partnerships, pharmaceutical companies can pool their expertise and resources. By doing so they can combine their knowledge, experience, and ideas and fast-track the drug development process. As a result, there is efficient utilization of funds and infrastructure which enables companies to introduce their products into the market much quicker.

#### **2. Reducing financial risks:**

The pharmaceutical sector requires huge funding for its various processes, right from drug development to manufacturing. Through collaborations, the financial burden is divided amongst the partners, thus reducing individual risks. This approach can encourage stakeholders to invest in a high-budget, ambitious project, which they might hesitate to pursue alone.

#### **3. Increased access to New Technologies:**

In today’s constantly evolving world, new technologies are coming up every other day. By forming partnerships with technology companies and startups, pharmaceutical firms can gain access to novel technologies such as artificial intelligence, machine learning, and data analytics. These innovations can revolutionize drug discovery, clinical trials, and patient care, leading to more personalized and effective therapies.

#### **4. Improved Market Access:**

When companies work together, they can use each other's distribution networks and reputation to reach more patients. Also, international partnerships help in entering foreign markets where rules and cultural differences might be tough for one company to handle alone.

#### **5. Enhancing Regulatory Compliance:**

The pharmaceutical industry is a highly regulated sector as medicines and medical devices are consumed and used by patients. Hence it is of utmost importance to ensure that the products are safe and

efficacious. Collaborating with companies providing regulatory support will help enhance deciphering and adhering to complex regulations and speed up the approval process.

### **Conclusion:**

In conclusion, the pharmaceutical industry is at a turning point, where collaboration and partnership have become inevitable for success. By embracing collaboration, pharmaceutical companies can harness collective expertise, accelerate innovation, and improve market access for life-changing treatments. As we move forward, let us adopt a culture of collaboration, where competitors become collaborators, and we collectively work towards a healthier and more sustainable future for all.

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