White Paper

Drug Development 2022

BlueReg
A ➤ PHARMALEX COMPANY

4 Tips for biotechs developing orphan drugs for the EU market

Introduction

The European Medicines Agency (EMA) and the United States Food and Drug Administration (FDA) provide specific incentives to companies who are granted ODD for their product.

Orphan drugs are an important part of the European Union's (EU) strategy to improve care for people with rare diseases. The EU Orphan Regulation provides a framework to encourage companies to develop orphan drugs and make them available to patients. It also ensures that orphan drugs receive a higher level of scientific and regulatory support during development and gives them 10 years of market exclusivity once they are approved.

Definitions

- An Orphan drug is a drug, or a biological product used for the prevention, diagnosis, or treatment of a rare disease.
- A Rare Disease is a disease that affects a small percentage of the population. This small percentage – and thus the definition of rare – varies across countries/legislations. Most rare diseases are genetic, and thus are present throughout the person's entire life, even if symptoms do not immediately appear.
- 1/17 People in the EU has a rare disease, around 30 million patients suffer from rare diseases out of a population of 510 million in the EU.

01

Key facts about Orphan Medicinal Product (OMP) Regulation and Rare Diseases in EU

In 2001

80

Orphan Designation Applications
which increased to 3678 in 2020.

In 2001

3

authorized OMPs they increased up to 192 in 2020.

30M

Europeans
suffer from rare diseases.

6000

Rare diseases
5 new ones every week

95%

of rare diseases
don't have authorized treatments

For more than 15 years, Orphan drugs have been one of the fastest-growing segments of the pharmaceutical market.

- Most OMP developments focus on disease areas where treatments already exist. Of all the authorized OMPs between 2000 and 2017, only 28% targeted rare diseases without any authorized OMPs.
- OMP development benefits only a limited number of diseases. Between 2000-2019, 67% of OMP designation applications targeted the same three disease areas (Blood; antineoplastic/ immunomodulating agents, and dermatology).
- OMP development is not equally focused, no less than 70% of rare diseases occur exclusively in paediatrics. Only 12% of orphan designations between 2000-2019 related to conditions that only affect children.
- OMP development concentrates on the least rare diseases 96% of rare diseases have a prevalence of <1 in 10,000.
  Between 2000-2019, 56% of authorized OMPs targeted rare diseases with a prevalence >1 in 10,000.
- OMPs tend to be developed in certain more profitable therapeutic areas.

02

Cost and incentives of OMPs

The cost of bringing OMPs to the market outweigh potential market revenue. Less than 50% of OMPs were developed between 2000-2017. Orphan drugs would not have been economically viable in the absence of the OMP regulation and its incentives.

- OMP regulation encourages pharma and biotech to develop OMPs. For the research, you can access EU grants. Communication and cross-border collaboration is improved with Orphanet. In the regulatory environment, you can benefit from protocol assistance. There is an important fee reduction on regulatory activities, tax reduction/exemption, access to the centralized procedure, potential conditional approval, compassionate use program, and additional incentives if you have an SME status.
- In terms of commercial, there is an enhanced exclusivity period of 10 years market exclusivity +2 if PIP is completed. The pricing committee may also agree to a high price.

03

Incentives & Orphans: A profitable market

EU funded research, around **620 M euros in funding over 120 research projects** between 2007 and 2013.

Fees reductions, 78M euros between 2000 and 2015.

Access to high price: **Annual per-patient treatment costs of OMP range between 755€ to over 1M€ in the EU** (24% >10 000€, 18% >100 000€, 58% between this range)

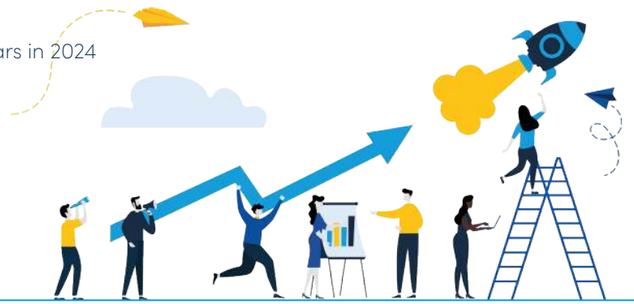
OMP Regulation, EU driven funding and access to high prices have made OMPs a cornerstone of pharmaceutical markets.

It appears that the market of Orphan Drugs is highly profitable:

- 70 BN dollars in 2012
- 138 BN dollars in 2020
- It will grow to 250 BN dollars in 2024

For the growth/year:

- + 7% per year since 2010
- +12% per year between 2019 and 2024



The rate forecasted for the market of non-orphan drugs is about 6,4. In 2024, OMPS will capture 20% of all worldwide prescription drug sales. OMP regulation stimulated pharma/biotech to enter the rare disease space.

04

After Orphan Drug Designation – EU

Examples of several activities that can take place after ODD

- Annual Report : Sponsors must submit an annual report to the Agency summarising the status of the development of the medicine
- Additional indication or extension of the existing orphan designation
- Changing the name or address of a sponsor
- Transferring a designation to a new sponsor
- Marketing Authorisation application (+ protocol assistance)
- Maintenance of the orphan designation/Evaluation of orphan similarity: At the time of a MA, sponsors need to submit an application for the maintenance of the OD and an evaluation of orphan similarity

Maintenance of the ODD at the time of the MA application

- Evaluation of Orphan similarity: Sponsors need to submit an evaluation of orphan similarity if needed...
- Review of Orphan designation at the time of MA : Sponsors also need to submit a report on the maintenance of ODD in order to be eligible for the ten-year market exclusivity incentive. Thus, the EMA can assess whether a medicine continues to meet the criteria for maintaining its orphan status in parallel with assessing the MA application.

Conclusion

Is there a limit to the system?

- From a patient perspective left with 95% of rare diseases without authorized treatment options
- Health System: the growing economic burden of orphan diseases not indefinitely sustainable
- Regulations have not adequately managed to support development in areas where the need for medicines is greatest.

EU orphan legislation is currently being revised and is expected to enter into force in the coming years.

OMP regulation in the EU has been largely inspired by the US Orphan Drug Act but the EU can be very complex when it comes to regulation.

Our goal here: to raise your attention to the complexity of the system in EU.

BlueReg
A ➤ PHARMALEX COMPANY

Any questions? Contact-us!

- contact@blue-reg.com
- www.blue-reg.com