ORPHANDEV, A PLATFORM TO ACCELERATE THE DEVELOPMENT OF THERAPIES FOR RARE DISEASES

www.orphan-dev.org

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ORPHANDEV, OUR MISSION

Despite attractive legal incentives, and an increasing number of promising orphan designations, orphan drugs development for rare diseases remains a challenge, therapeutic evaluation being the main barrier to overcome.

OrphanDev is an academic platform in the heart of rare diseases, close to the research teams, clinicians, industry professionals and patient organizations. This multidisciplinary team supports all projects from private or public sector, throughout the crucial stages of drug development. It provides its scientific and regulatory expertise in **Orphan Drug Designation and Protocol Assistance Applications**; its logistical and methodological support for **clinical trials in rare diseases** with a specificity in the **patient's recruitment strategy**; and its experience in **national and European calls for projects**.

RARE DISEASES' SPECIFICITIES	DIFFICULTIES FOR PROTOCOL CONCEPTION
Low or ultra low prevalence	How many patients?
Few knowledge on natural evolution Heterogeneous presentations Multiplicity of clinical symptoms	Which patients? Which outcomes?
Chronicity and low evolving diseases	Times of evaluation?
Inexistence of guidelines, diseases orphan of clinical trials	No consensus Which design? [1]

Our structure:

- An academic platform, labeled by F-CRIN
- A link in the chain of a national system with a European opening

Innovation → Conception → Carrying out (working closely with our partner organizations)

The French rare disease infrastructures:
- rare diseases networks (CRMR, CCMR)
- research infrastructures (Inserm, CNRS)
- university-hospital infrastructures (IHU, DHU, RHU, CHU)
- rare diseases platform (Alliance maladies rares, French foundation for rare diseases, Maladies rares info services, AFM Téléthon, Orphanet, Eurordis)
- patients' organizations.

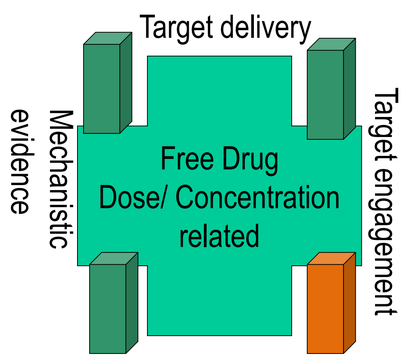
orphan-dev ↔ F-CRIN ↔ ECRIN (European Clinical Research Infrastructure Network)

ORPHANDEV, OUR "KNOW HOW" TO OPTIMIZE CLINICAL TRIALS FOR RARE DISEASES

Protocol conception:

How to translate pre clinical findings into therapeutic evaluation? [2][3]
The pharmacological principles for success [4]

From 3 pilars to 4 cornerstones



- ✓ Dose determination
- ✓ Route of administration
- ✓ Evaluation Criteria

Translatability to clinical efficacy

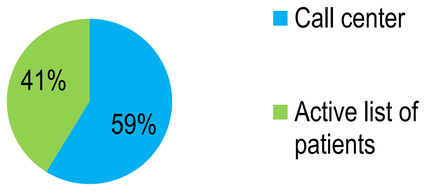
Mechanistic / Pathophysiological approaches

Regulatory approaches
Clinical Efficacy Read out, Biomarkers, Risks

Patient's recruitment strategy:

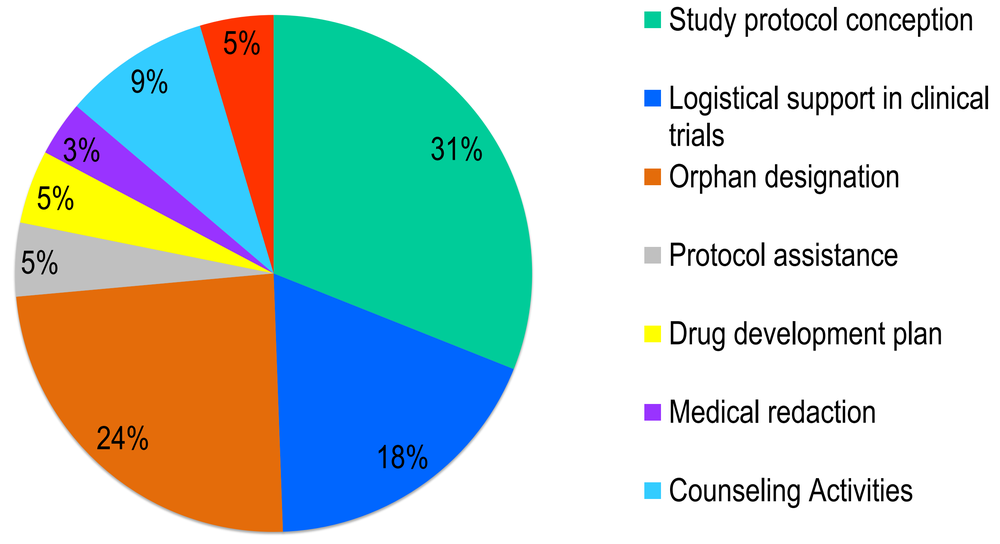
OrphanDev proposes a patient's recruitment strategy in line with the clinical trial's constraints and goals. We set-up and manage communication tools, and pre-screening tools in collaboration with all the investigator sites.

An example of call center contribution in the recruitment of patients



- ✓ Time-saving for investigators
- ✓ Time-saving for patients
- ✓ Reduced the screen failure
- ✓ Respect of the inclusion period and objectives

ORPHANDEV, OUR ACTIVITIES (2011-2015)



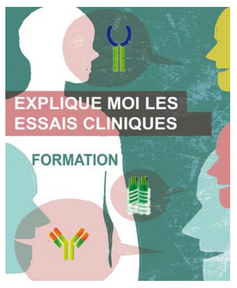
ORPHANDEV, OUR TRAINING COURSES

« Orphan Drug & Rare Disease Seminar »

European meeting between the key players in the area of rare diseases (researchers, clinicians, industry, competent authorities), which aims to encourage a common reflection on the challenges and questions concerning the assessment of orphan drugs.

« Explain me clinical trials »

Destined for patients, in particular those suffering from rare diseases, this training course is organised in partnership with the 'Tous Chercheurs' and 'François Aupetit' (AFA) organizations, and with the counseling of F-CRIN. The aim is to sensibilise patients to therapeutic evaluation by allowing them to better understand drugs development process and clinical trials.



ORPHANDEV, OUR COMMUNICATION TOOLS

Website, newsletters, orphandocs, social networks…

REFERENCES

[1] Cornu C et al , Experimental designs for small randomised clinical trials: an algorithm for choice. Orphanet J Rare Dis. 2013 Mar 25;8:48
[2] Micallef J, [Skip vitro models and animal rights: The characteristics of rare diseases are they a hindrance? Establishing proof of concept in the treatment of rare diseases is there a problem?] La Presse Médicale, Volume 39, Issue 5, Supplement, May 2010, Pages 24-26,
[3] Micallef J. [Methodology and management of clinical trials with small number of patients for rare diseases]. Presse Med. 2012 May;41 Suppl 1:S32-4.
[4] Morgan P, Van Der Graaf PH, Arrowsmith J, Feltner DE, Drummond KS, Wegner CD, Street SD. Can the flow of medicines be improved? Fundamental pharmacokinetic and pharmacological principles toward improving Phase II survival. Drug Discov Today. 2012 May;17(9-10):419-24