



# DEFERIPRONE EVALUATION IN PAEDIATRICS



DEEP project: focus on paediatric patients empowerment

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## SEVENTH FRAMEWORK

### PROGRAMME

**THEME [HEALTH.2010.4.2-1] [Off-Patent Medicines for Children.**

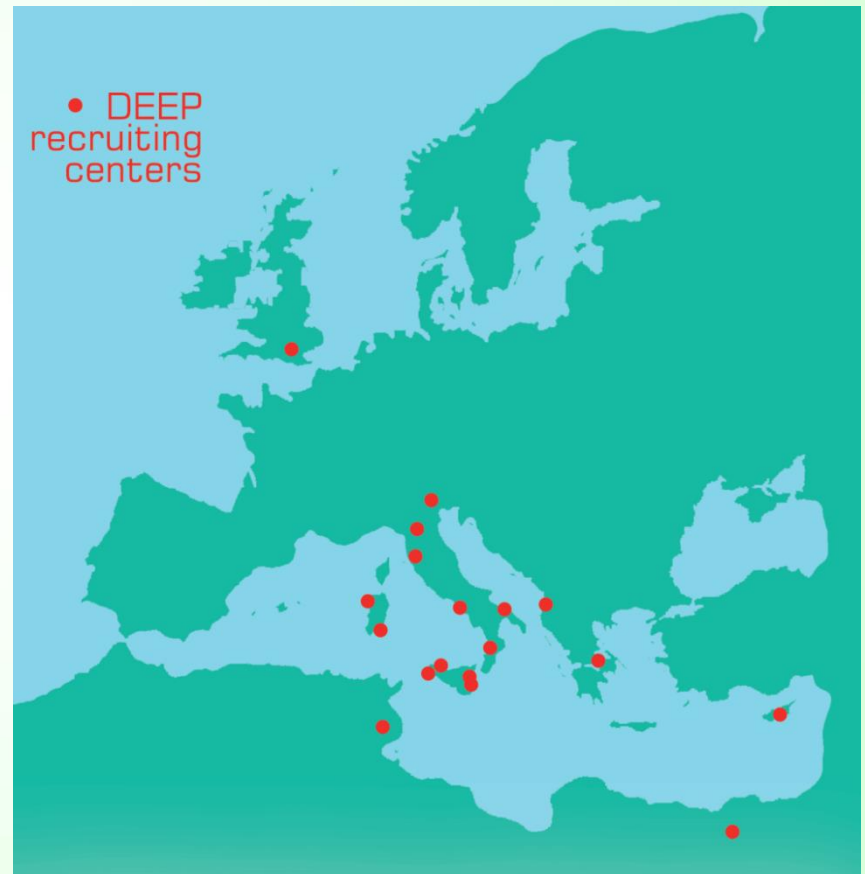
**FP7-HEALTH-2010-single-stage]**

Grant agreement for: Collaborative project\*

A large researchers-driven Network included centres from :

- EU: Cyprus, Greece, Italy, UK
- non-EU: Albania, Egypt, Tunisia
- commercial development of the drug (Apopharma-Apotex)

**Congenital Haemoglobinopathies including  
Thalassemia and Sickle Cell Disease: the  
more frequent congenital anaemias whose  
cradle is the Mediterranean**





## DEFERIPRONE (DEEP) EXPECTED ADVANCEMENT

**Objective** to perform paediatric studies on *deferiprone* and to develop a new liquid formulation specific for the paediatric population

### Project contents:

**New Liquid Formulation: Partnership with Apopharma**

### 2 Clinical Trails:

-PK trial providing dose definition (DEEP-1)

-efficacy-safety multicentre, controlled, active comparator trial (DEEP-2)

2 post marketing studies

long-term safety non-interventional study (DEEP-3)

pharmacoeconomic study

**A new Marketing Authorization (PUMA)**

DEFERIPRONE EVALUATION IN PAEDIATRICS - FP7 PROJECT - SP1 - COOPERATION HEALTH-F4-2010-261483



# BACKGROUND

- The need to actively involve children in the decision-making process related to a clinical trial is part of the updating guideline '*Ethical considerations for clinical trials on medicinal products conducted with minors*' prepared by the European Commission and the Paediatric Committee within the Regulation EU 536/2014.
- It is universally established that written communication, combined with verbal interaction, may enhance children's understanding of their participation in a clinical research (Ungar et al 2006).
- The contents and styles of documents addressed to children are elements that largely influence their understanding of written documents.
- It has been also demonstrated that the use of pictures, following appropriate recommendations, improves the quality of communication, especially for patients with very low literacy skills (Houts et al 2006).



# Paediatric Patient Empowerment- What we have done?

## ➤ DETAILED AGE-APPROPRIATE INFORMATION

3 booklets adapted to the participants' capacity of understanding have been prepared for three different age ranges:

- pre-school children aged less than 6 years;
- school-age children aged 6-10 years;
- children/adolescents aged 11-17 years).





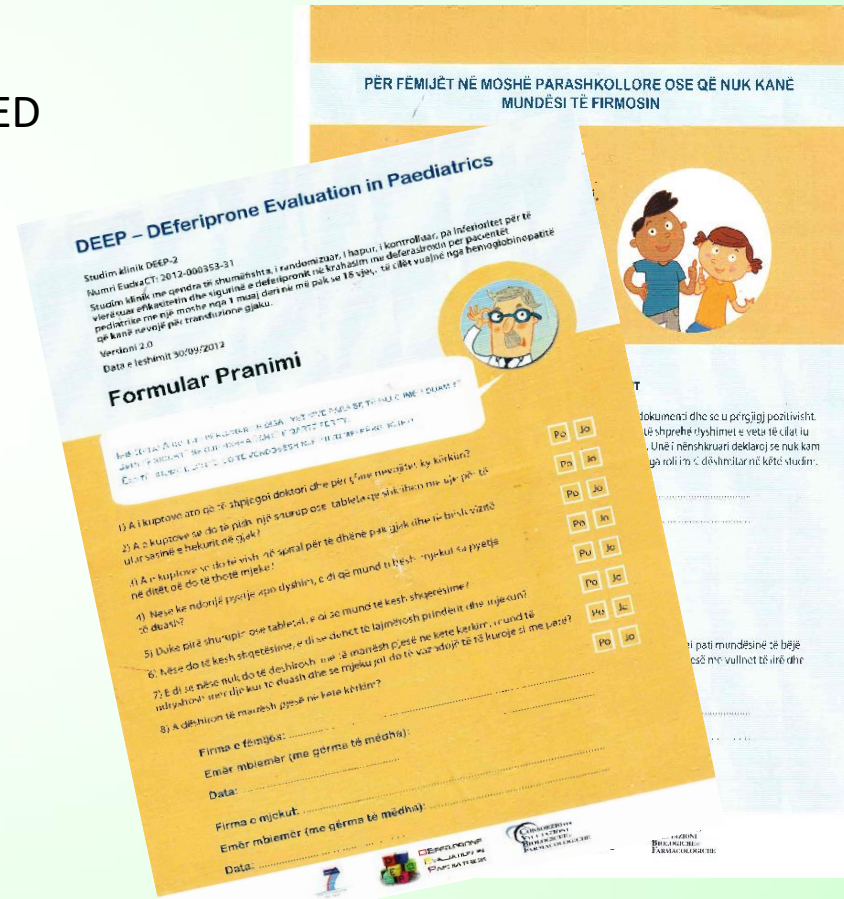
# Paediatric Patient Empowerment- What we have done?

## ➤ POSSIBILITY FOR YOUNG PATIENT TO EXPRESS THEIR EXPLICIT WISH

TWO AD HOC ASSENT FORM HAVE BEEN PREPARED

- children aged 6-10 year
- Adolescents between 11-17 years

*(it has been assumed that children < 6 years old were entitled to receive trail information while they were not required to give consent)*





# Paediatric Patient Empowerment- What we have done?

## ➤ QuBo study

Quality evaluation of the informative **booklets** for patients involved in the DEEP-2 trial”

***A SURVEY ADDRESSED TO ALL THE PAEDIATRIC PATIENTS PARTICIPATING IN THE CONSENT/ASSENT PROCESS***

## Objectives:

- To evaluate how effective the booklet is in communicating key elements of the study, and the understanding of the disease and therapy.
- To assess the acceptance and likability of the booklet by pediatric patients



# QuBo study tools

- Two age-tailored questionnaires :
  - A questionnaire addressed to patients aged  $\geq 6$  -  $< 11$  years
  - A questionnaire addressed to patients aged  $\geq 11$  -  $< 18$  years
- For each questionnaire **two main areas of interest** have been identified and related items have been developed:sdd
  - **Acceptance and Likability of the booklet**: the child/adolescent is asked to give an opinion about the length of the text and some graphic aspects, particularly concerning text formatting and drawings.
  - **Comprehension and Knowledge**: the child/adolescent is asked to answer some questions about DEEP-2 study.





# Where we did QuBo?

- In Albania :  
UHC Tirana and Lushnja centers,  
on 4 and 9 patients aged 6-10 and 11-18 yrs respectively
- In Italy :  
Padua centre on 5 patients (3 aged 6-10 and 2 aged 11-18 years)  
Palermo centre on 3 patients aged 11-18 years.

Consorzio per Valutazioni Biologiche e Farmacologiche - Protocol No: QuBo  
Quality evaluation of the informative booklets for patients invc (QuBo)

5.1 Questionnaire addressed to paediatric patients enrolled in QuBo  
ID\_CODE: A- \_\_\_\_\_

**1. QUESTIONNAIRES**

DEEP-2 Deferiprone Evaluation in Paediatrics

Hello boys and girls! Do you want to help us to understand better booklet?

If you have read the booklet, please answer this short question help us to get the information we need to be sure the booklet i can do to improve it. Nobody will give you a mark for your an want, you can decide at any moment to not answer the questic only your age, not name and surname. You can ask for any que gave you the questionnaire.

Do you want to participate? YES NO

Cross (X) for your answer. Are you ready? Let's GO!

How old are you? \_\_\_\_\_

1. The booklet was: (please cross one)

a. Easy to read	YES	A
b. Nice	YES	A
c. Boring	YES	A
d. Too long	YES	A

2. Did you like the drawings? (please cross one)

YES  A

3. Did the drawings help you understand what Dr. Ironless means? YES  A

4. Did you learn something new from the booklet about?

a. What are Anemias?	YES	A
b. Why you need transfusions?	YES	A
c. What medicines take the iron away?	YES	A

5. Red blood cells are in the body and they carry oxygen. (Cross (X) your answer)

TRUE  FAI

6. When red blood cells are sick (anaemic) to feel better You have to eat a lot

TRUE  F

Consorzio per Valutazioni Biologiche e Farmacologiche - Protocol No: QuBo

5.1 Questionnaire addressed to paediatric patients enrolled in QuBo aged 11-17 years old  
ID\_CODE: B- \_\_\_\_\_

6.2 If yes, about?

- How blood and r
- What transfusioi
- Why iron builds
- Iron overload tr
- The aims of the
- The different s

7. A possible side ef overload. Antibiotic

8. The study uses d remove iron overk

9. The study nee deferiprone and de ensure they work v

10. Two times per group take the syr

11. Who will deci deferiprone or dr

12. Can a patier

13. What is the

Thanks again

Consorzio per Valutazioni Biologiche e Farmacologiche - Protocol No: QuBo  
DEEP-2 Deferiprone Evaluation in Paediatrics

5.1 Questionnaire addressed to paediatric patients enrolled in QuBo aged 11-17 years old  
ID\_CODE: B- \_\_\_\_\_

Hi guys and girls! We need your help to evaluate the DEEP-2 MISSION IRONBUST booklet. If you have read the booklet, please answer this short questionnaire. Nobody will give you a mark for your answer and, if you do not want, you can decide any moment to not answer the questions. Please, write down only your age, not name and surname. You can ask for any question to the doctor that gave you the questionnaire.

Do you want to participate? YES NO

Mark your answer with an X. Thank you for your help!

How old are you? \_\_\_\_\_

1. What did you think about the booklet? (please mark one for each adjective)

YES	A little bit	NO
YES	A little bit	NO
YES	A little bit	NO
YES, a few	Yes, many	NO

2. Were there words you didn't understand?

YES	A little bit	NO
YES	A little bit	NO
YES	A little bit	NO

3. How did you find the content of the booklet? (Please mark one for each question)

- Easy to understand
- Flat
- Stimulating

4. How were the font sizes?

- Just right
- Too small
- Confusing

5. The designs in the booklet were:

please mark one for each question

- Interesting.
- Funny.
- Useful.
- Boring.

YES	A little bit	NO
YES	A little bit	NO
YES	A little bit	NO

6.3 Did the booklet provide you with useful information about?

YES	A little bit	NO
YES	A little bit	NO
YES	A little bit	NO



# QuBo study Result

The use of informative booklets in DEEP-2 trial has been appreciated by children and adolescents and has favoured the understanding and participation of children in the clinical trial.

## ***General recommendation***

*It has highlighted the need to consider children and families' active participation as a fundamental step to reach consensus and compliance to treatments.*



# Paediatric Patient Empowerment- What should be done??

- The EU Clinical Trials Regulation 536/2014 (Article 37) requires sponsors to provide **summary results** of clinical trials in a format understandable to **laypersons**.
- Our main priorities:

## **Prepare LAY SUMMARY OF RESULTS**

To reach and inform a large target audience, especially the

***Lay community, about the results achieved by the DEEP project.***



# WHY IT IS IMPORTANT LAY SUMMARY?

- Play a significant role in most research grant applications and can also be useful in supporting wider public engagement with research.
- Increasing the relevance of the research
- Increasing recruitment to clinical research
- Improving the design of the research to address ethical concerns, improve the research tools and make it easier for the people taking part
- Improving the quality of the data and its interpretation
- Making it more likely that the findings of the research will be used to make a difference to service users' lives.



# What should be written in the ***LAY SUMMARY*** of ***DEEP trials***

➤ An introduction of :

- what is iron overload,
- what is iron chelation therapy,
- **which iron chelators are available on the market** that are aimed to grasp onto iron atoms like a pair of microscopic claws and then excrete them in the urine;
- **why it has been decided to investigate deferiprone.**





# What should be written in the ***LAY SUMMARY*** of ***DEEP trials***

- **A brief description of the three clinical studies and their results.**
- **DEEP-1** is a study of the pharmacokinetics of deferiprone in children under the age of six.
- **DEEP-2** is a study aimed to compare the efficacy and safety of deferiprone and deferasirox in paediatric patients.
- **DEEP-3** is a long-term safety study in paediatric patients, where the researchers have collected information on the adverse effects of deferiprone in a group of paediatric patients who began taking the drug before the age of 18. The purpose of the study was to ensure that the drug can be used safely in this patient population for many years.



# What should be written in the ***LAY SUMMARY*** of ***DEEP*** trials

- **A map indicating the recruitment sites and the number of enrolled patients** to show to patients the number and the origin of all the children enrolled in the study.



# Writing style...

- Factual and objective summary
- Short sentences
- Positive phrasing
- Not promotional content
- Simple and understandable language to ensure ease of reading by parents and by children.
- Use of graphics, pictures to help understanding of written documents and to improve the quality of communication.

**\*The Lay Summary should be prepared in the 6 languages of the Project**

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# A 'participatory design' methodology

*Children cannot be excluded by the reception of the summary results in a format understandable to them.*

Children do have the right to know in advance which medicines they need and why, they should be allowed to express their own views, granted the right to participate in the decision-making process concerning their own health and also know the results achieved thanks to their participation in the research.

## Important!

As the summary will be addressed to patients and parents, it is important to consider involvement of **Young People Advisory Groups (YPAGs)** including patients and non patient and parents in the development and/or review of the summary to assess comprehension and the value of the information provided.



# To this aim

- the existing “Young Persons Advisory Groups (YPAGs)”, or similar groups, both patients and non patients may be involved in the preparation of the final documents.
- The document has been promoted by the TEDDY Network Boards (Scientific Coordinating Committee and Strategic Planning Board) on behalf of TEDDY Network coordinated by CVBF



# Thank you!!!

