# FAMILIES AND PROFESSIONALS UNITED TO TACKLE THE THERAPEUTIC NEEDS OF CONGENITAL DISORDERS OF GLYCOSYLATION

Authors: Pascoal C\*,a,b,c, Francisco Ra,b,c, Brasil Sa,b,c, Marques-da-Silva Db,c, Videira PA,a,c, dos Reis Ferreira V a,b,c.

Affiliations: (a) UCIBIO, Departamento Ciências da Vida, Faculdade de Ciências e Tecnologia, Universidade NOVA de Lisboa, Portugal; (b) Portuguese Association for CDG, Lisboa, Portugal; (c) CDG & Allies – Professionals and Patient Associations International Network (CDG & Allies – PPAIN), Portugal

#### INTRODUCTION

Congenital Disorders of Glycosylation (CDG) are one of the fastest growing groups among the 8000 rare diseases currently known. There are more than 140 reported CDG so far which are caused by mutations in glycosylation-related genes. CDG patients often present multi-systemic phenotypes and high clinical inter and intra heterogeneity.<sup>1</sup>

To overcome the challenges of CDG research (Fig.1), a unique, patient-led, multistakeholder infrastructure to foster investigation and better care in CDG as been created – the CDG & Allies – Professionals and Patient Association International Network (CDG & Allies – PPAIN).

#### ΔΙΜ

Here, we describe how CDG & Allies – PPAIN is fomenting patient-centric research. The exceptional case study of the Glycoimmunology Working Group (WG) is highlighted.

WP1

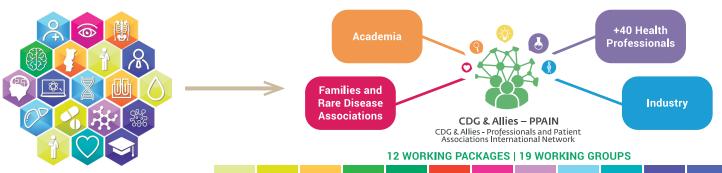
WP2



WP9

Figure 1: Challenges of CDG Research

## **CDG & ALLIES - PPAIN**



Patient needs and priorities identified through Think Thank Methodology<sup>2</sup>

# CASE STUDY: WG CDG & GLYCOIMMUNOLOGY

WP3

FACT: 20% of child mortality in PMM2-CDG (most frequent type) is due to recurrent and severe infection!<sup>3</sup> PATIENTS' NEED: Targeted and effective therapy.

WP4



CDG & Allies-PPAIN is showing that working for and with patients is key to provide better, faster and more focused avenues to therapeutic development.

#### **REFERENCES**

CONCLUSION

### **ACKNOWLEGMENTS**

1- Francisco R et al, The Challenge of CDG Diagnosis, Mol Genet Metab, 2019, 126 (1), 1-5; 2- de Freitas et al, Public and patient involvement in needs assessment and social innovation: a people-centred approach to care and research for congenital disorders of glycosylation, BMC Health Serv Res. 2017, 17:682; 3- Pascoal et al, CDG and immune response: from bedside to bench and back, JIMD. 2020 Jan:43(1):90-124.

This work was supported by CDG&Allies-PPAIN and the Applied Molecular Biosciences Unit - UCIBIO financed by national funds from FCT (UIDB/04378/2020)." The authors Pascoal C (SFRH/BD/138647/2018) and Francisco R (SFRH/BD/124326/2016) were supported by and thank the FCT.





