PROFILE

IMMUNOPROFILE-DIRECTED STRATIFICATION OF PATIENTS WITH THE AUTOIMMUNE DISORDER THROMBOTIC THROMBOCYTOPENIC PURPURA

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THE PROJECT AT A GLANCE

- **EU Horizon 2020 Marie Curie Skłodowska Action Innovative Training Network (ITN)**. "New skills by means of excellent initial training of researchers" (Directive 2013/743/EU). ***Grant no. 675746***
- **Main Goal:** train creative and innovative researchers to convert knowledge and ideas into products and services for economic and social benefit in the EU
- **Key activities:** excellent and innovative training to early-stage researchers at post-graduate level through interdisciplinary projects, including:
  - ✓ mentoring to transfer knowledge and experience between researchers or doctoral programmes
  - ✓ helping researchers to develop their research career
  - ✓ **involving universities, research infrastructures, businesses, SMEs and other socio-economic groups from different Member States, associated countries and/or third countries**.

Students spend time in Academy and Industry

This will improve career prospects for young post-graduate researchers in both the public and private sectors.

MAPPING PROFILE

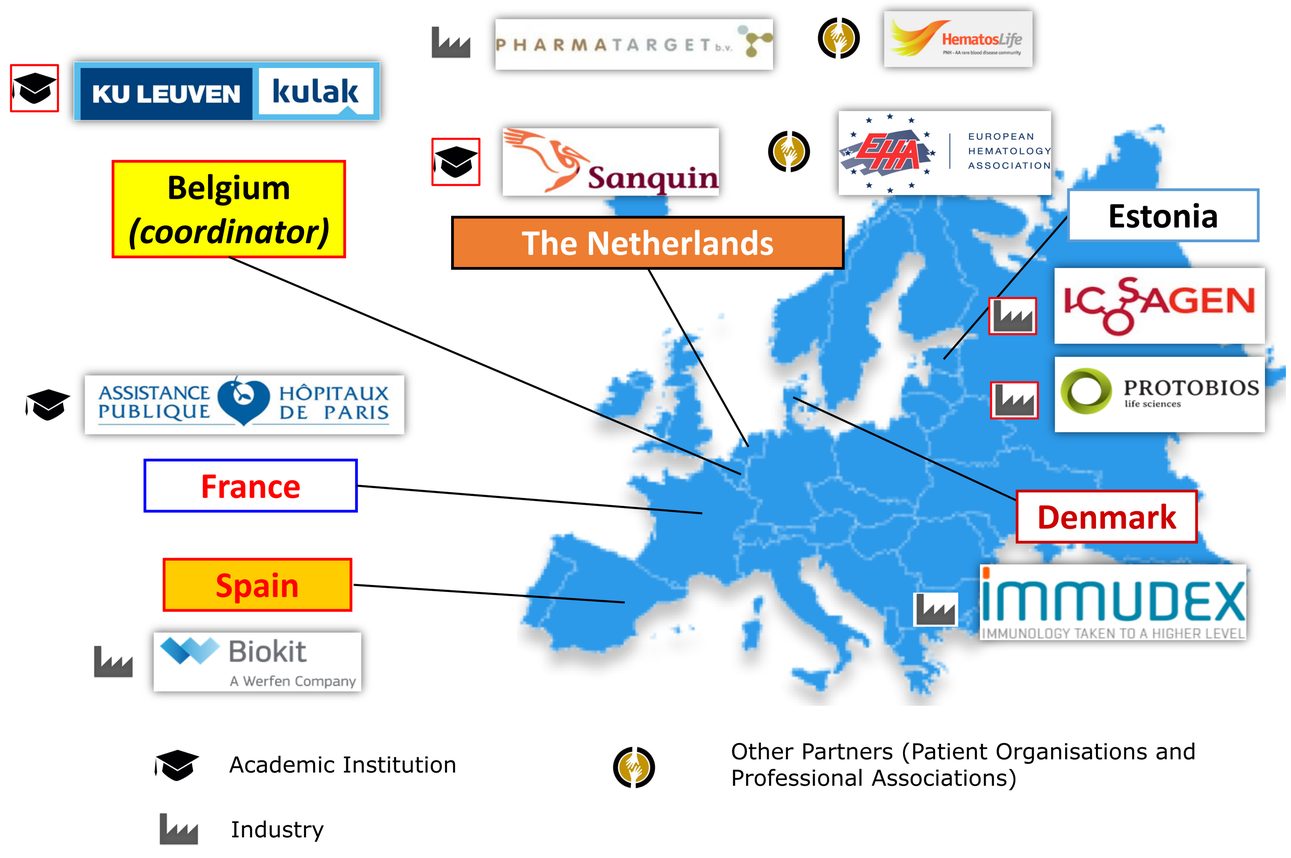

FIGURE 1 – Partner Institutions of the PROFILE project.

WHAT IS AUTOIMMUNE THROMBOTIC THROMBOCYTOPENIC PURPURA (TTP)?

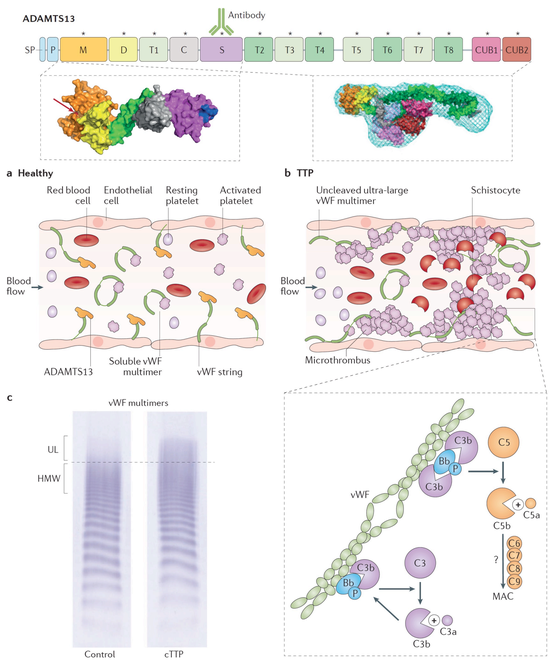

FIGURE 2 – The pathophysiology of Thrombotic Thrombocytopenic Purpura

Figure 2 summarizes the pathophysiology of autoimmune TTP. Autoantibodies attack the von-Willebrand-Factor cleaving protease ADAMTS13, promoting it's inhibition and clearance from circulation. Accumulation of Ultra-Large VWF multimers recruits platelets causing widespread thrombi formation, with organic failure of varying degree. ADAMTS13 activity <10% is specific for TTP. Symptoms are not specific, and signs include Coombs-Negative haemolytic anaemia with schistocytes, elevated LDH and elevated creatinine levels, and severe thrombocytopenia. This is a fatal condition in 90% of cases if untreated.
Current treatments have allowed the mortality of the disease to be reduced to ~20%, a still unacceptably high number, and are highly aggressive.

Once treated, TTP patients suffer from unpredictable relapses. Hence identifying prognostic factors that predict relapse and develop novel treatment therapies are unmet needs.

We are:

- ✓ **also taking part in this endeavor;**
- ✓ **researching new means of performing a quick diagnosis;**
- ✓ **researching ways to make an anticipated prognosis based on the stratification of the patients' immune PROFILE;**
- ✓ **contributing to patients and healthcare professionals education and empowerment.**

References:
Bell et al, NEJM, 1991, Vol 325, pp. 398-403
Coppo, P., Transfus Apher Sci, 2017, Vol 56(1), pp. 52-56
Crowley et al, NEJM, 2018, Vol 378(1), pp. 92-93
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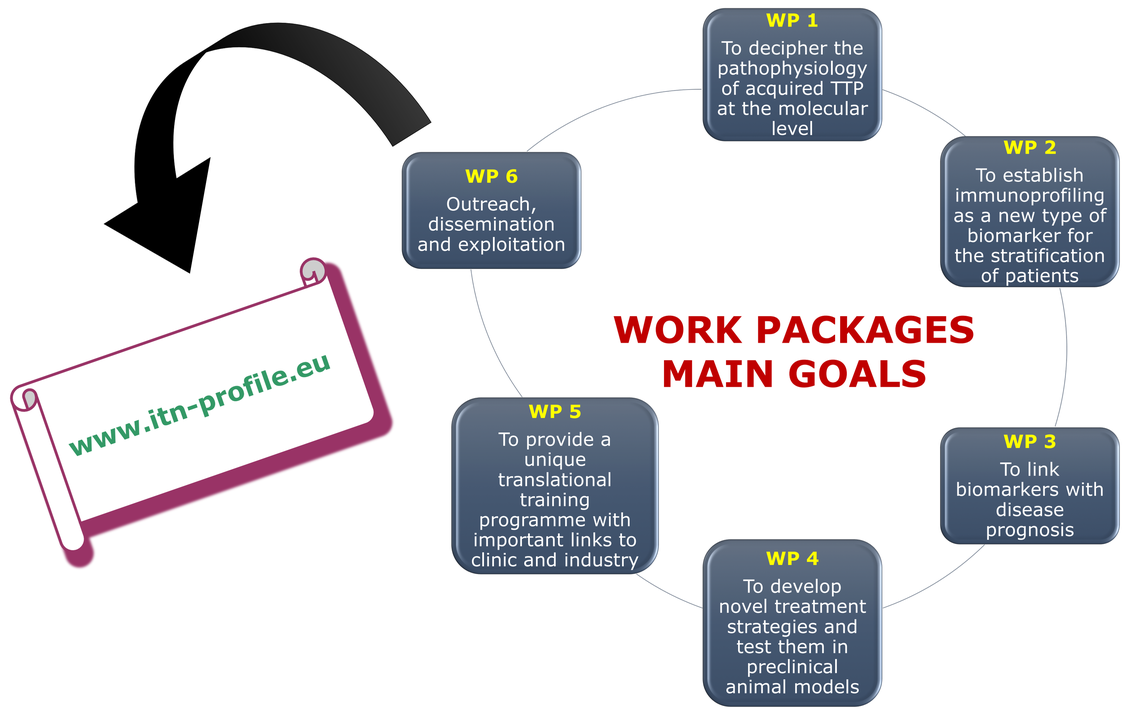
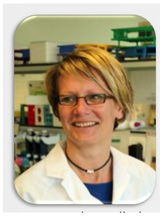


FIGURE 3 – Diagram of PROFILE Work Packages Main Goals.

COORDINATION-MANAGEMENT



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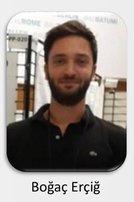

Boğaç Erçiğ

FIGURE 4 – PROFILE staff