



## **REFRACT** - Repeat protein Function Refinement, Annotation and Classification of Topologies

The REFRACT proposal answers the RISE call, aiming at the promotion of an international and interdisciplinary collaboration on tandem repeat proteins (TRPs) through the sharing of knowledge and expertise between partners via staff exchanges. REFRACT is an international consortium aiming to extend our knowledge on the mechanism of TRP function and evolution, establishing a common classification and best practices. Starting from available state of the art computational tools and databases, which have been mostly developed by REFRACT participants, it aims drive a new level of TRP characterization leveraging the complementary expertise of 7 EU MS and 9 TC institutions in Latin America, with the latter providing useful complementary expertises. This aim will be achieved by the following steps:

- Benchmarking different existing methods and defining their use-cases;
- Coordinating the necessary next steps to analyze TRP roles in biological pathways and organism evolution;
- Providing a detailed description of their mechanism of function, related to their structural properties, that can be of great importance in TRP-related medical research and biotechnological applications;
- Building a unified and commonly accepted TRP classification from sequence and structure as well as characterizing the relationship between the two.

The REFRACT implementation will take advantage of the different expertises, supporting them by a combination of research-centered, training and dissemination activities. The secondment program is designed so that all the participating institutions will be actively involved not only in the production of scientific outcomes, but also be empowered with the responsibility of planning, monitoring and discussing project advancement. The broadest possible dissemination of the results will be achieved through dedicated activities, the propagation of results into ELIXIR core data resources (InterPro, and consequently UniProt) as well as possible industrial exploitation.

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**Find out more:** <https://cordis.europa.eu/project/rcn/219178/factsheet/en>