



Introduction :

In the current context of dietary transition, Rubisco (ribulose-1,5-bisphosphate carboxylase/oxygenase), a leaf protein, has an interesting nutritional profile¹ and presents promising functional properties^{2,3}. It is therefore a good alternative to meat proteins.

The introduction of rubisco in popular food as wheat based products will lead to an improvement of their nutritional profile. Nevertheless, the modification of their formulation will lead to quality modification due to modification in wheat protein network.

The purpose of this PhD is to **understand biochemical processes that are modified by rubisco** introduction and their **impact on wheat dough microstructure** (especially protein network) and their **influence on final product properties**.

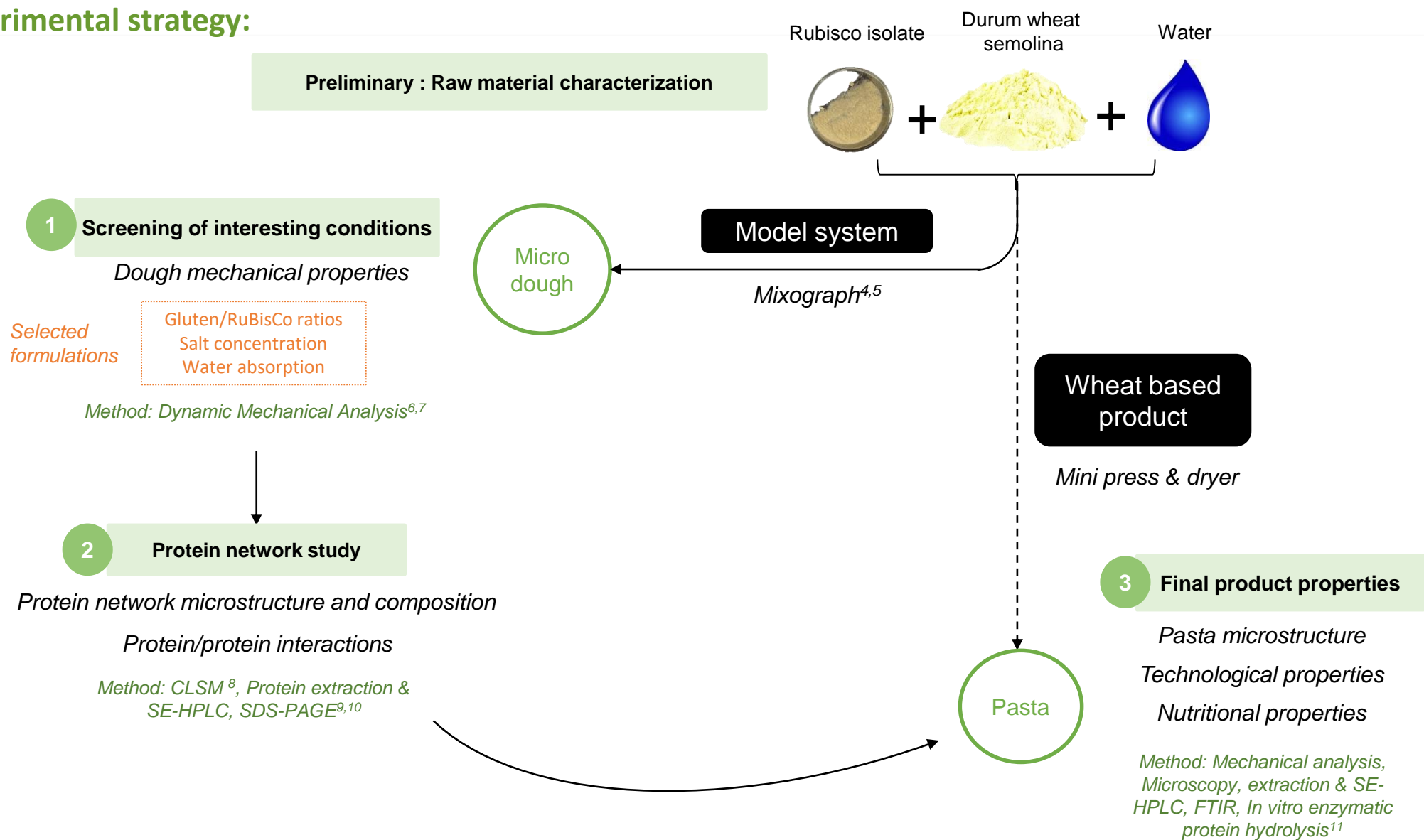
Objectives :

- What modifications in protein network are induced by rubisco enrichment ?
- What is the impact of rubisco enrichment on pasta technological and nutritional properties ?

Hypothesis:

Rubisco introduction leads to gluten network strengthening
It interacts with gluten protein via covalent and/or weak interactions

Experimental strategy:



Expected results:

1. New generic methods for protein network study
2. Formulation and process condition for optimum quality rubisco enriched pastas
3. Nutritional profile and digestibility of rubisco enriched pastas

References

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