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Susana Ribes, Mélanie Genot, Laurent Aubry, Pau Talens, Véronique Santé-Lhoutellier, Marie-Agnès Peyron

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QuaPA, UNH, and DTA Teams

^{1,2} Susana Ribes*

¹ Mélany Genot

¹ Laurent Aubry

² Pau Talens

¹ Véronique Santé-Lhoutellier

³ Marie-Agnès Peyron

Consequences of oral deficiencies on intestinal bioaccessibility of nutrients in elderly

¹ INRAE, QuaPA UR 370, BPM, F-63122 Saint Genès Champanelle, France

² DTA, Universitat Politècnica de València, Camino de Vera s/n, 46022 Valencia, Spain

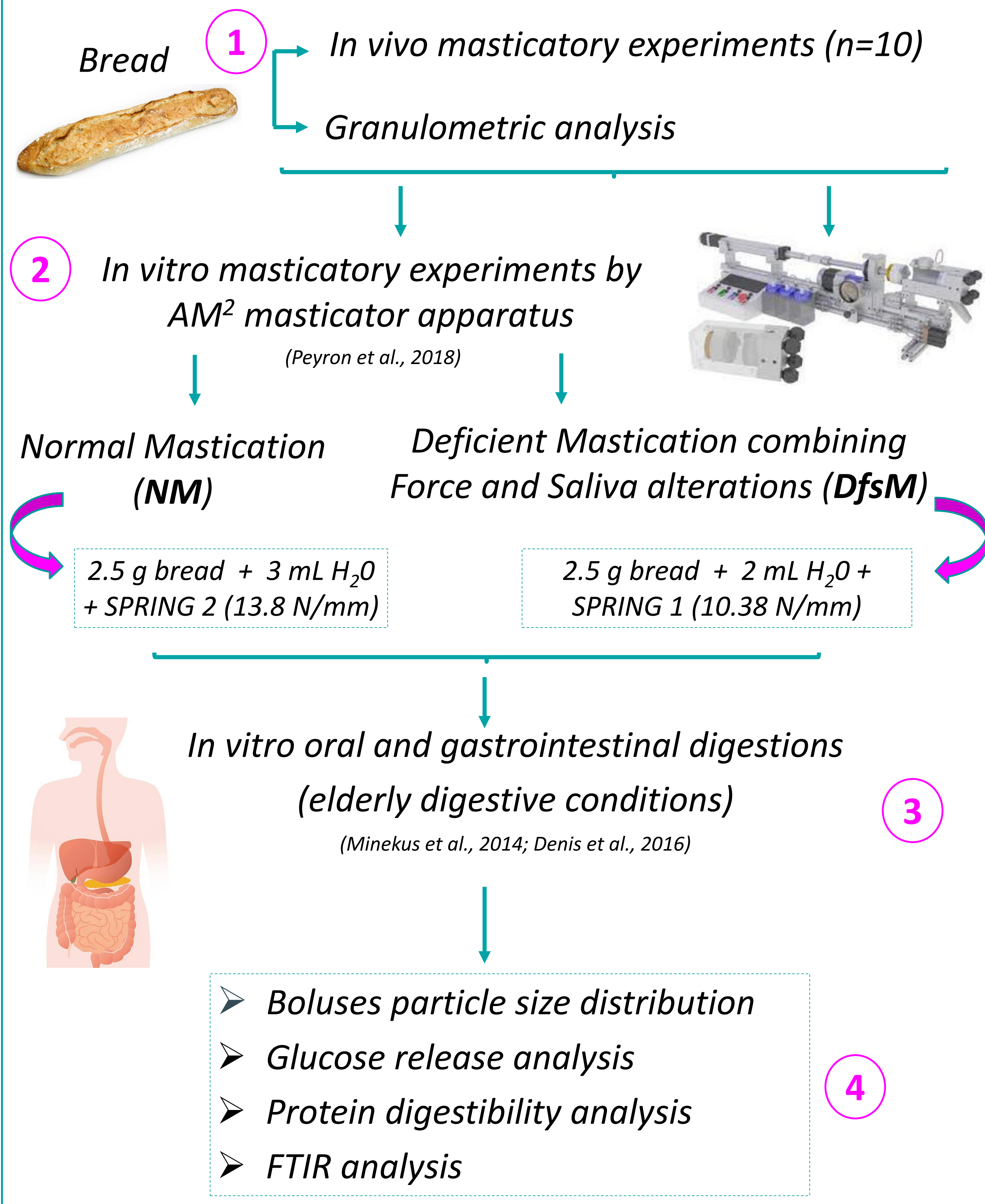
³ Université Clermont Auvergne, INRAE, UNH, F-63000, Clermont-Ferrand, France

*susana.ribes-llop-oliag@inrae.fr

1. BACKGROUND

Food transformation starts during mastication, which combined with salivation, reduces particle size and form swallowable boluses. In elderly, oral functions are modified by changes in muscular force or saliva production, among others, providing an inadequate food fragmentation potentially impacting on oral and gastrointestinal digestions. **This work aimed to evaluate the consequences of oral deficiencies on glucose release and protein digestibility of bread.**

2. MATERIALS AND METHODS



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3. RESULTS

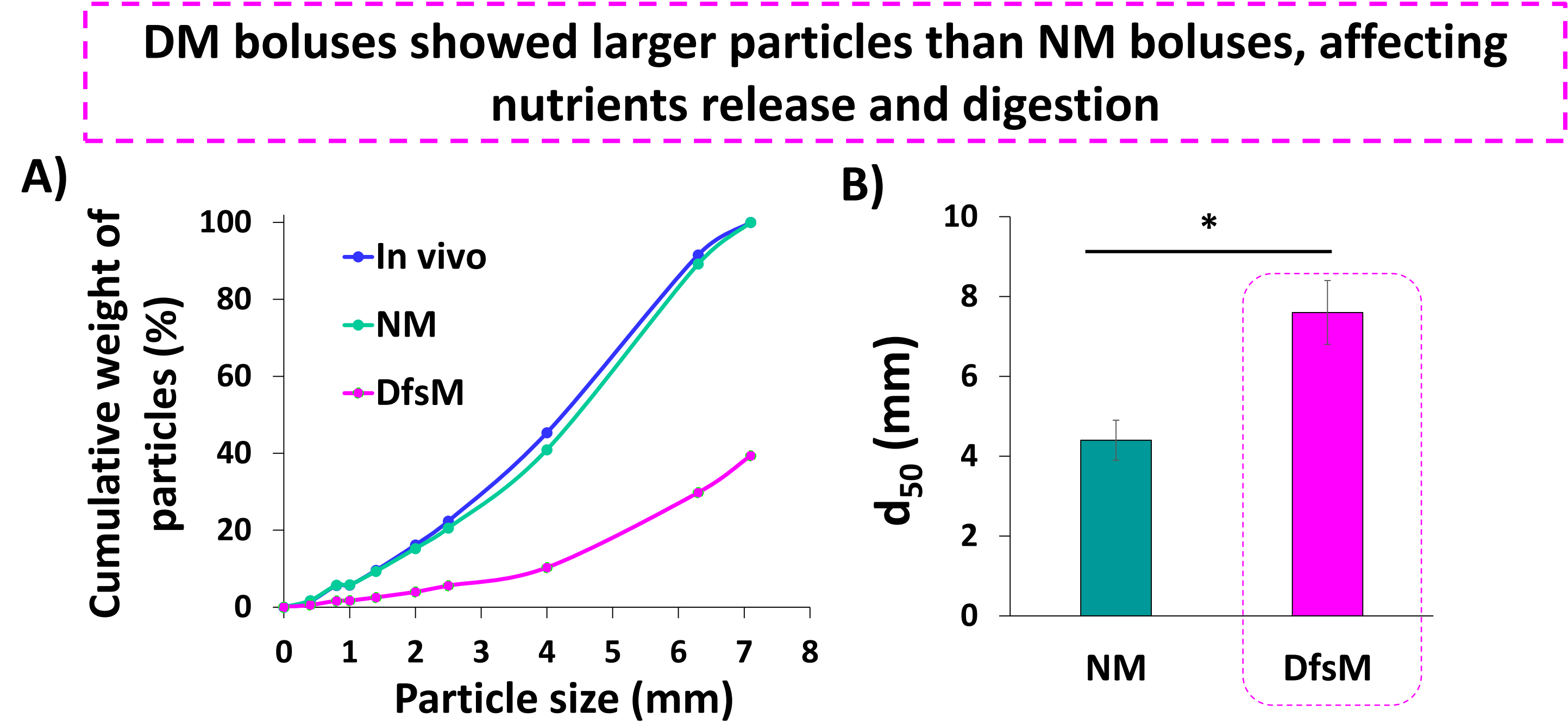


Figure 1. Particle size distribution curves of *in vivo* and *in vitro* boluses (A) and median particle size values expressed as d_{50} in mm (B).

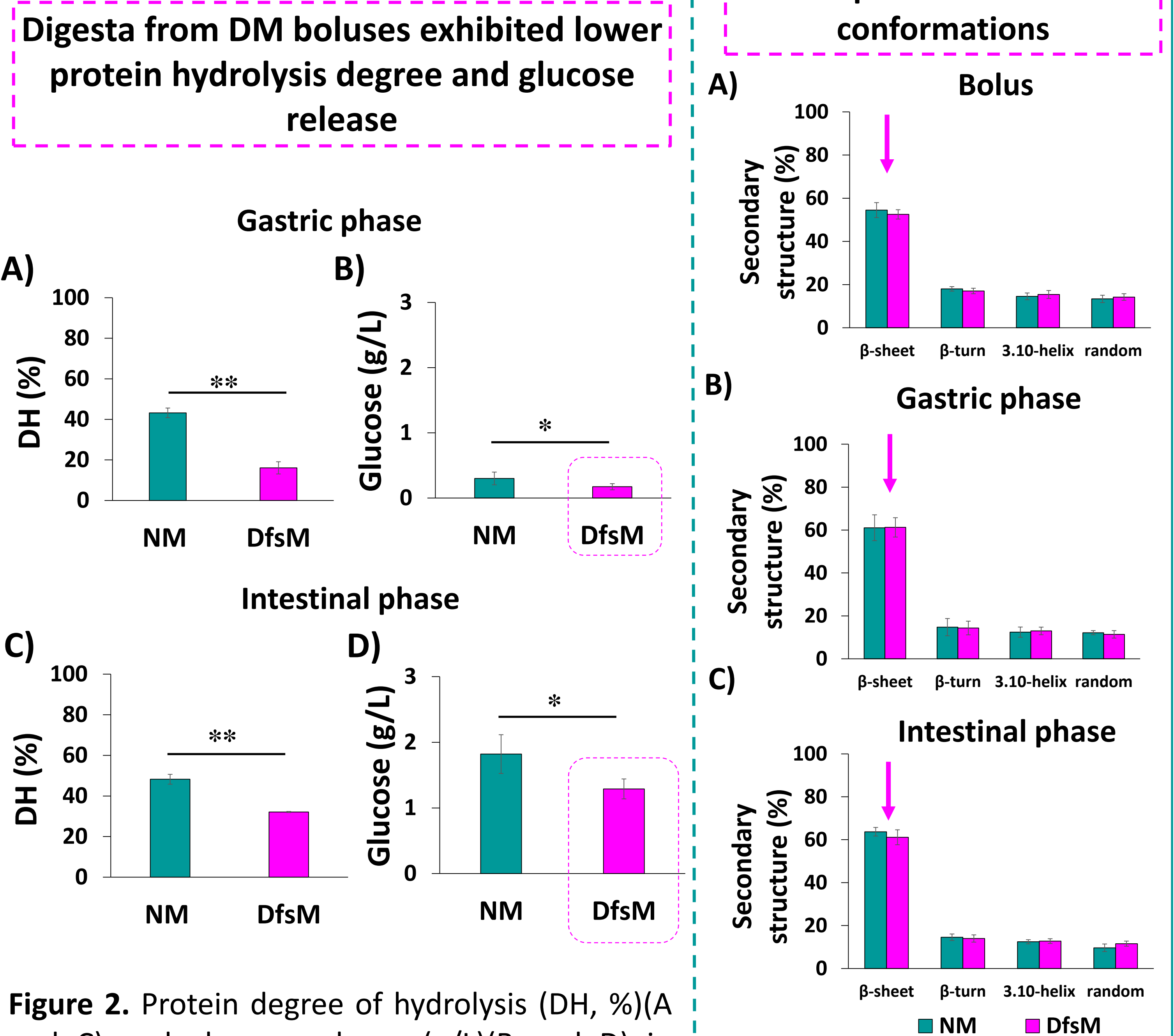


Figure 2. Protein degree of hydrolysis (DH, %)(A and C) and glucose release (g/L)(B and D) in gastric and intestinal phases.

Figure 3. FTIR analysis results of bolus (A) and gastric (B) and intestinal phases (C).

4. CONCLUSION

This work demonstrates the impact of oral deficiencies on nutrients bioaccessibility and stresses the importance of designing foods for elderly.

References

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