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Léa Roch, Coffi Belmys Cakpo, Catherine Deborde, Mickael Maucourt,
Thierry Berton, Stéphane Bernillon, Stéphanie Arrivault, Marie-Hélène
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Primary metabolism investigation of fleshy fruit species using ¹H-NMR profiling

L. Roch¹, C. B. Cakpo², C. Deborde^{1,3}, M. Maucourt^{1,3}, T. Berton^{1,3}, S. Bernillon^{1,3}, S. Arrivault⁴, M-H. Andrieu¹, B. Beauvoit¹, S. Colombié¹, A. Clavé¹, P. Ballias^{1,3}, C. Bénard^{1,3}, G. Vercambre², M. Génard², Z. Dai⁵, Y. Gibon^{1,3}, A. Moing^{1,3}

¹ UMR1332 Biologie du Fruit et Pathologie, INRA, Univ. Bordeaux

³ Plateforme Métabolome Bordeaux, CGFB, MetaboHUB,

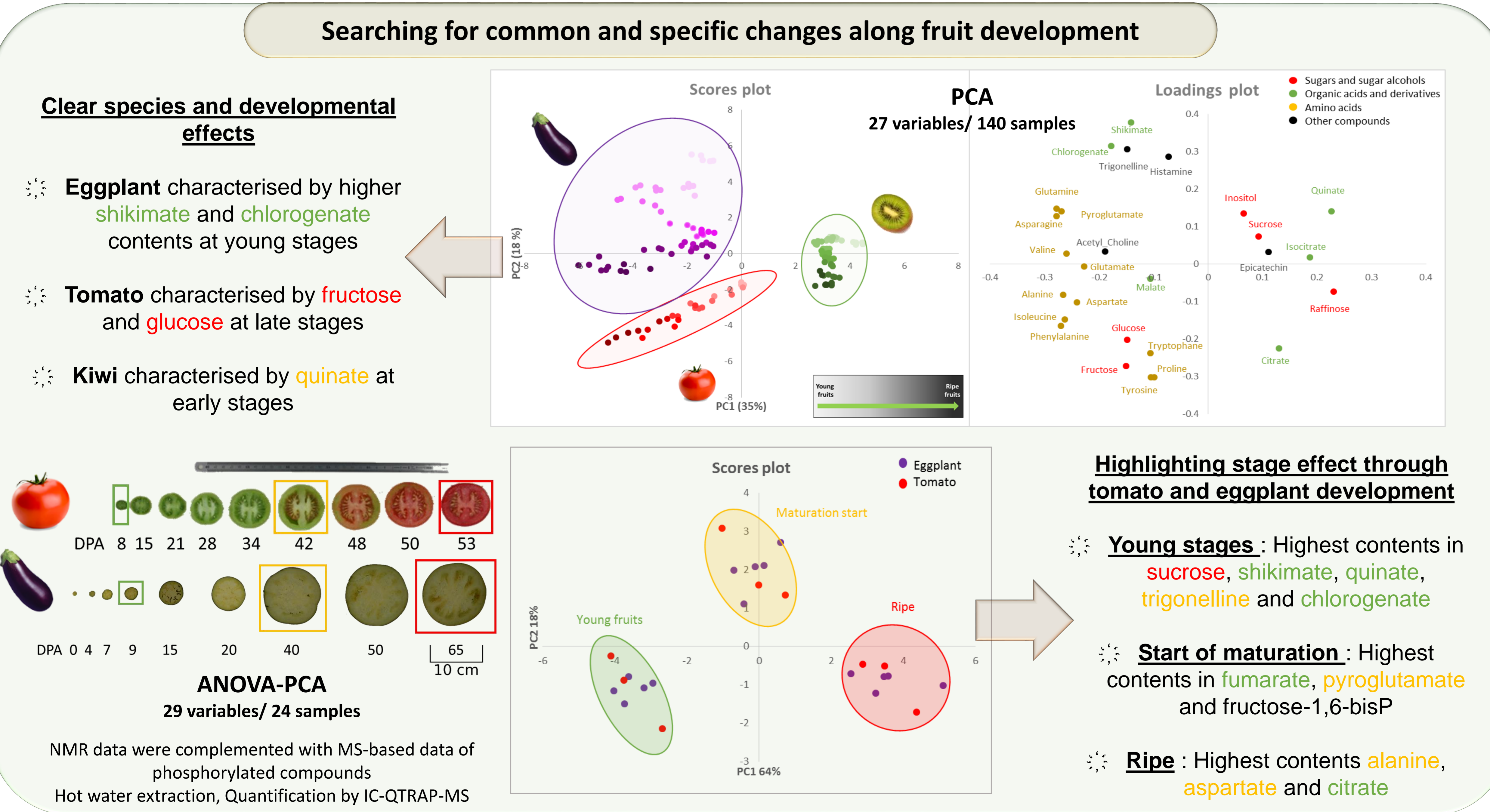
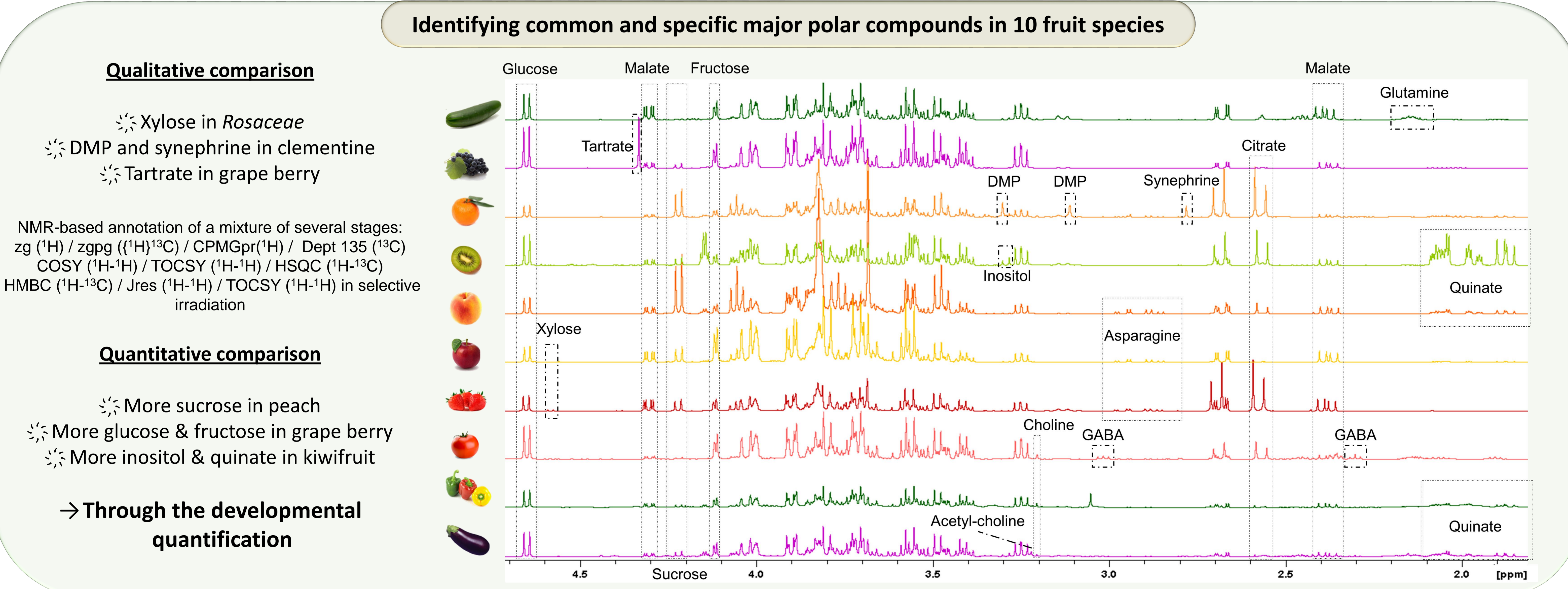
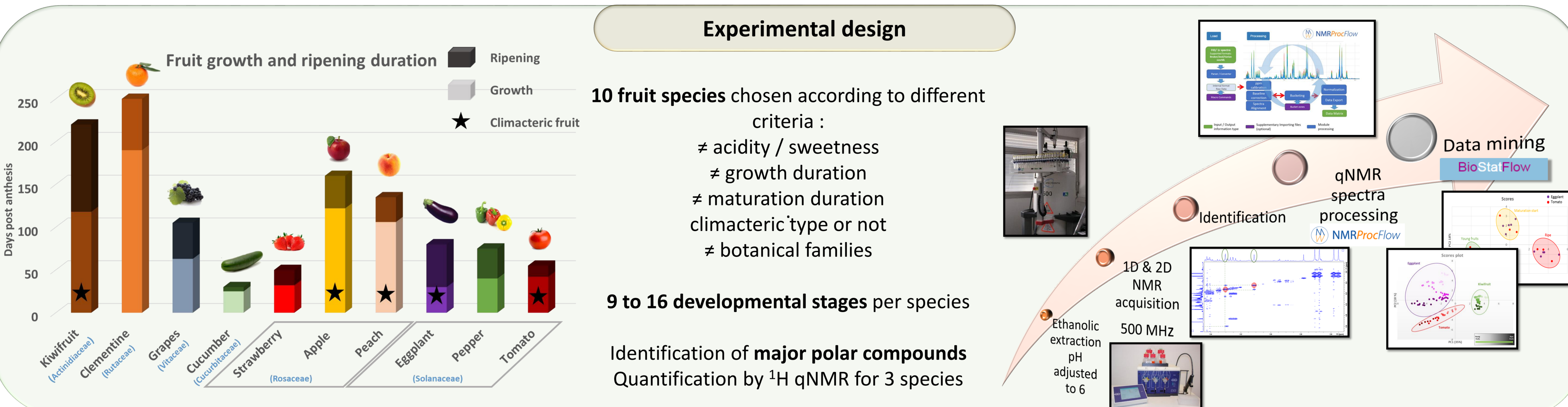
⁵ UMR1287 Ecophysiologie & Génomique Fonctionnelle de la Vigne, INRA, Univ. Bordeaux, Centre INRA Bordeaux, 33140 Villenave d'Ornon, France

² UR1115 Plantes et Systèmes de culture Horticoles, INRA, 84914 Avignon, France

⁴ Max-Planck-Institut für Molekulare Pflanzenphysiologie, 14476 Potsdam-Golm, Germany

Context of study

Fruits are crucial for human nutrition and they have a prominent place in the economic market. To continue to improve fruit quality and yield it is important to have a better understanding of the mechanisms involved in its development. In our study, ten fleshy fruit species, differing for fruit growth dynamics, ripening climacteric status, maturation duration, phloem-transported sugars and starch storage level, were investigated during their development. We focused on primary metabolism which provides energy and biosynthetic precursors to support fruit growth and ripening, and is essential for fruit quality.



Conclusion & Perspectives

NMR allowed **identifying** the major polar compounds in fruit species and to **discriminate** them through quantification

Analyses of **cell walls** and **enzymatic capacities** will complement our data set

Metabolic models will be parameterized with absolute quantification data to reveal **common** and **species-specific regulations of primary metabolism** during fruit development

References

Jacob et al., *Metabolomics*, 2017