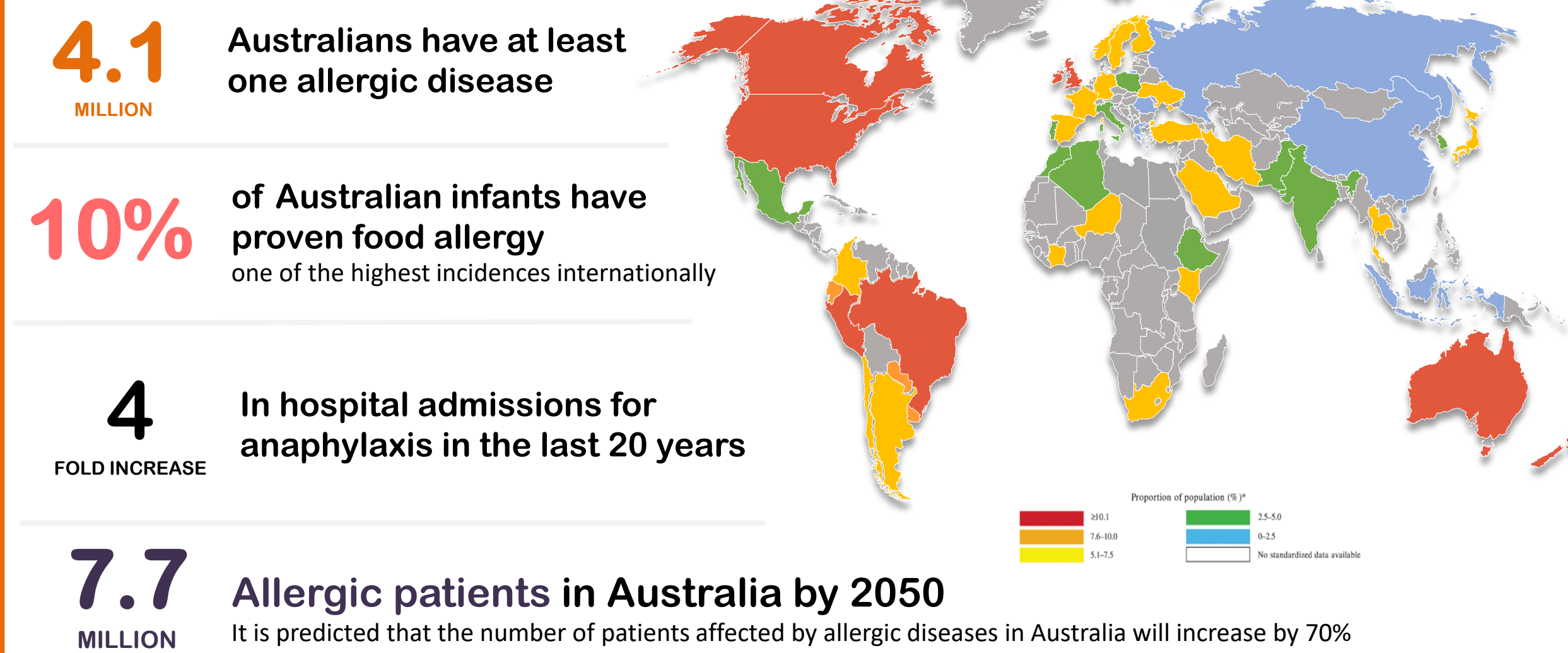


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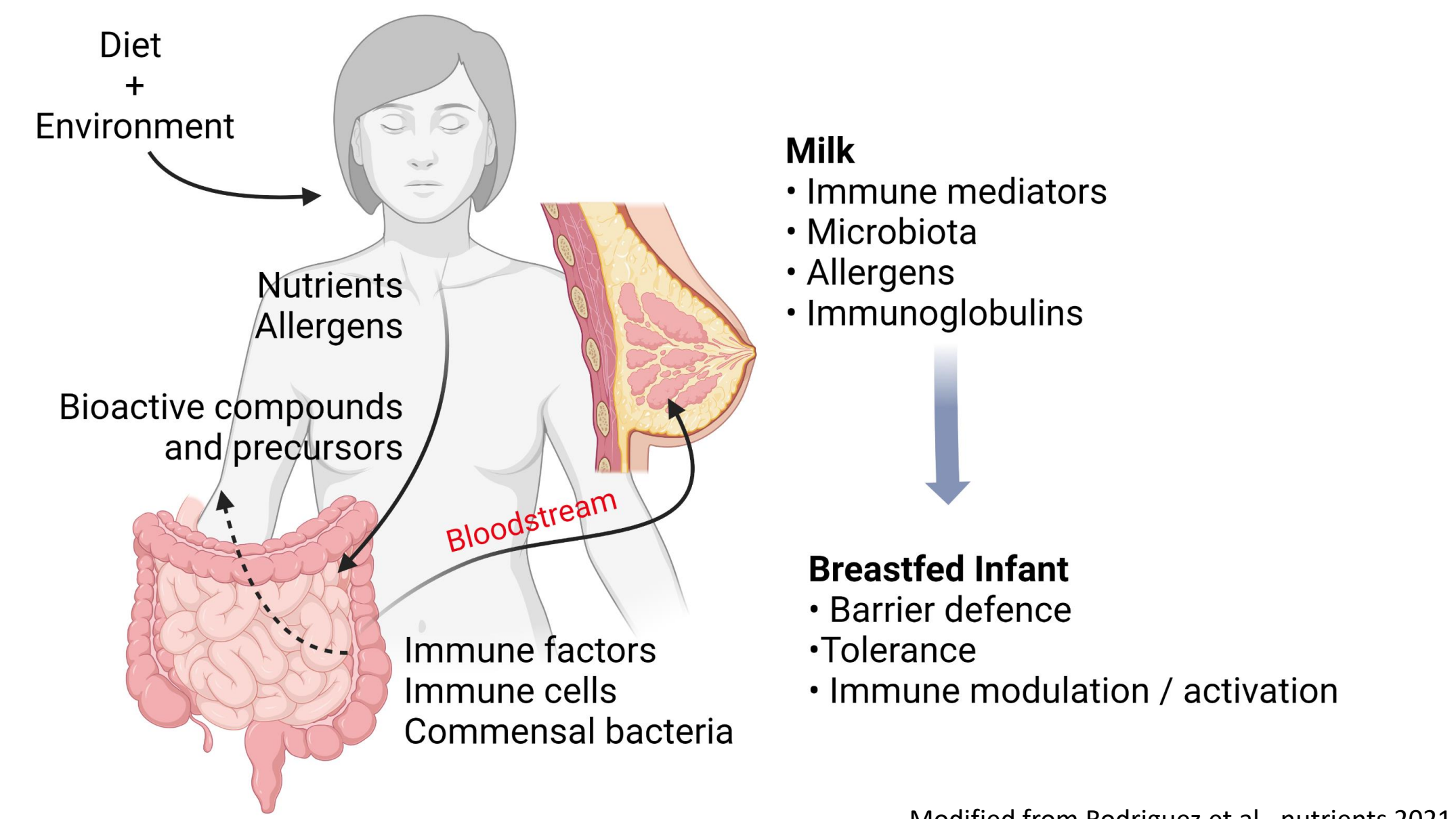
<sup>1</sup>School of Medicine-UWA and <sup>2</sup>Telethon Kids Institute

### Allergy is a public health issue

Strategies to prevent allergy need to start early in life

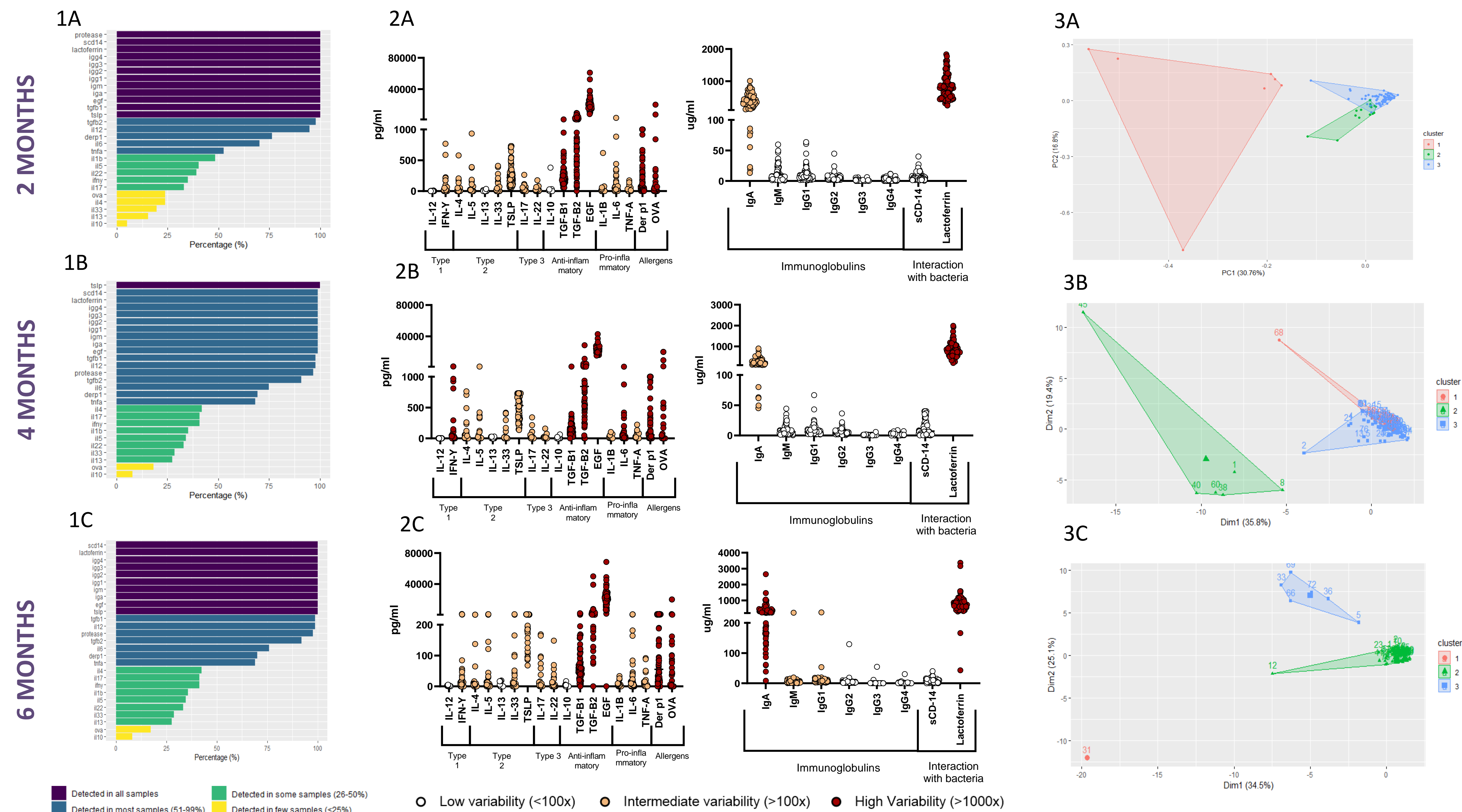


### Maternal gut plays an important role to shape a personalized breastmilk composition



Can we modulate breastmilk composition for a more "protective" profile and improve allergy prevention?

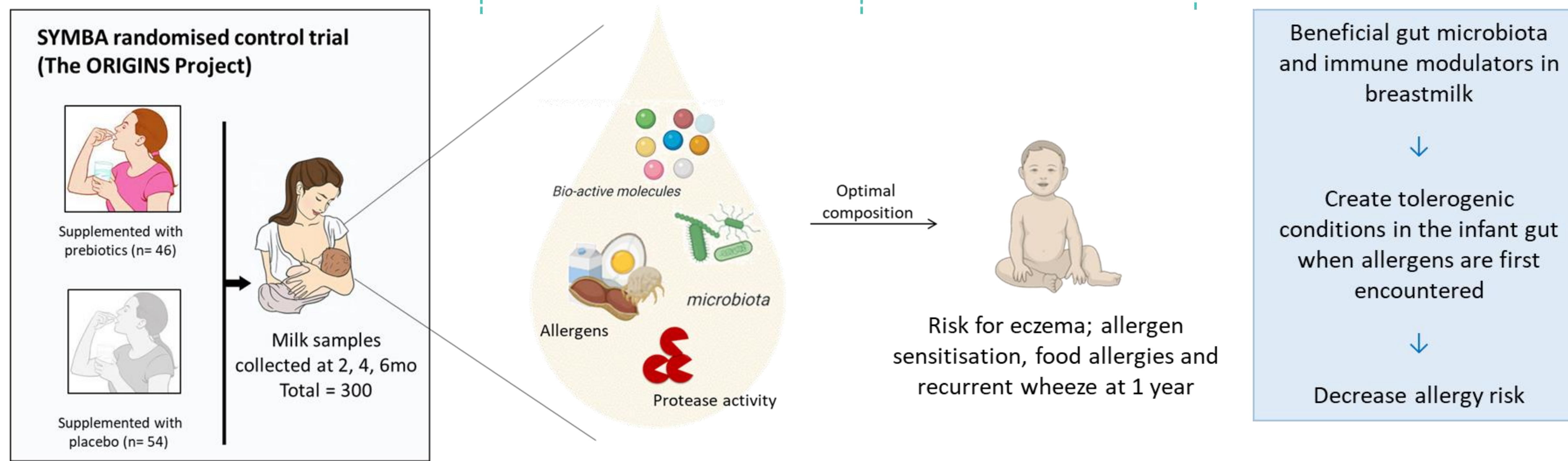
### Our preliminary findings (primary outcome)



**Legend:** Data shows the analytes quantification in breastmilk of 100 mothers, collected at 2 (A) 4 (B) and 6 (C) months. Figure 1(A-C) shows percentage of milk samples with detectable analyte; Figure 2(A-C) shows the levels and variability of bioactive compounds in human milk; Figure 3(A-C) shows cluster analysis of 26 milk bioactive factors.

### Investigate if maternal prebiotic fibre supplementation changes breastmilk profile and reduce food allergy in children

Methodology | Primary outcome | Secondary outcome | Hypothesis



### Conclusion

- Although there is a common "core" breastmilk composition with some factors detected at all stages of lactation in 100% of women (Figure 1A-C), we observed a substantial variation in some compounds (Figure 2A-C).
- We identified 3 different types of milk profiles at 2 months of lactation and 2 different types of milk profiles at 4, 6 months (Figure 3A-C).
- Future analysis and the unblinding of the samples will reveal the effect of prebiotic supplementation on breastmilk profiles and child allergic outcomes.