

I. INTRODUCTION

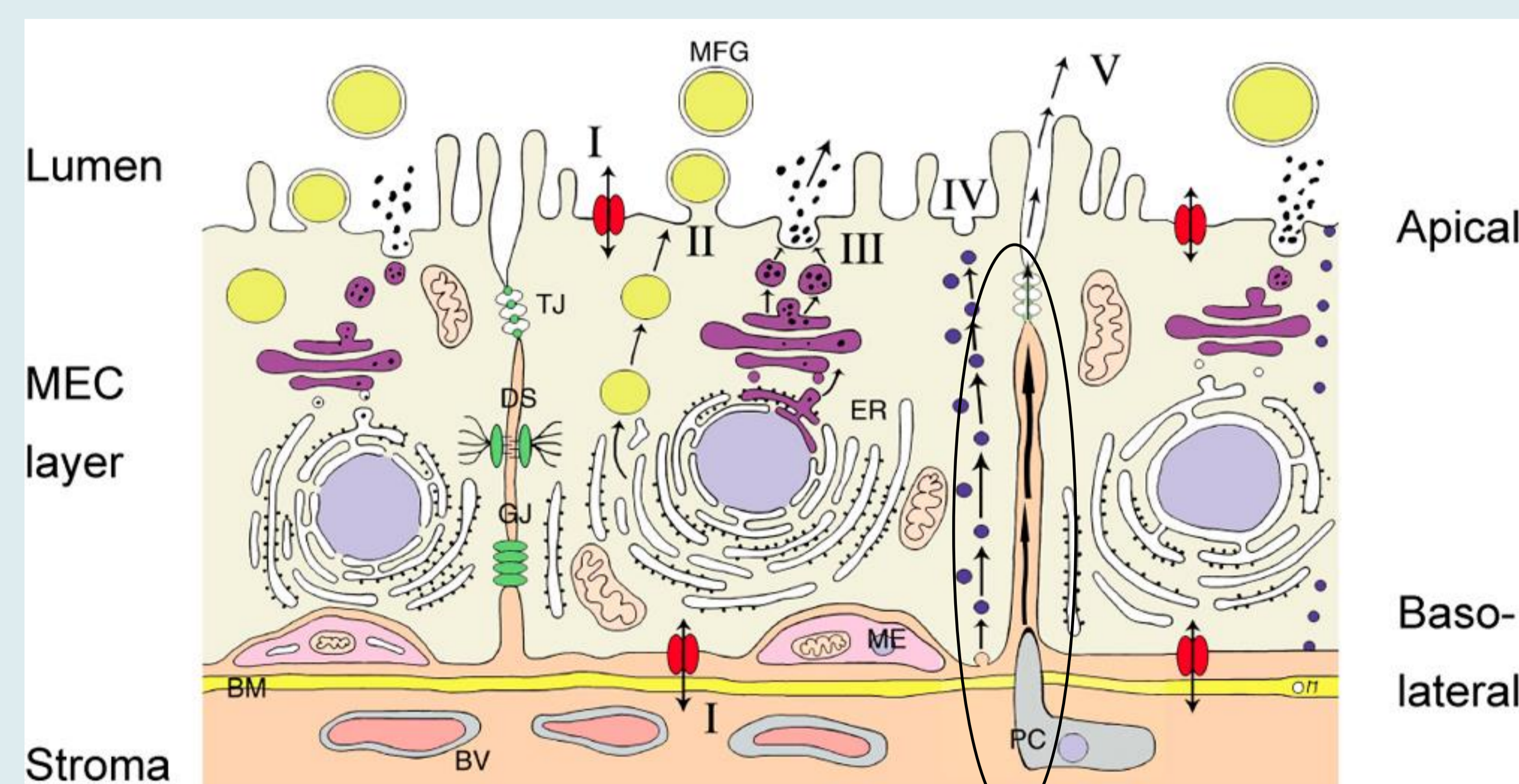
Main breast products, colostrum and milk, differ in their composition and function. Colostrum presents a higher protein content including immunoglobulin A, lactoferrin as well as leukocytes and microorganisms such as *Bifidobacterium*. Colostrum components are originated from the mother's blood due to the opening of the open epithelium route during pregnancy. In contrast, the components of breast milk are derived from their synthesis in the mammary gland when the epithelium is closed by tight junctions and the implementation of the secretory mechanisms take place after birth.

II. OBJECTIVE

The main objective of this review is to understand how the components of breast milk have an effect on the establishment of a correct intestinal microbiota and maturation of the immune system of the newborn.

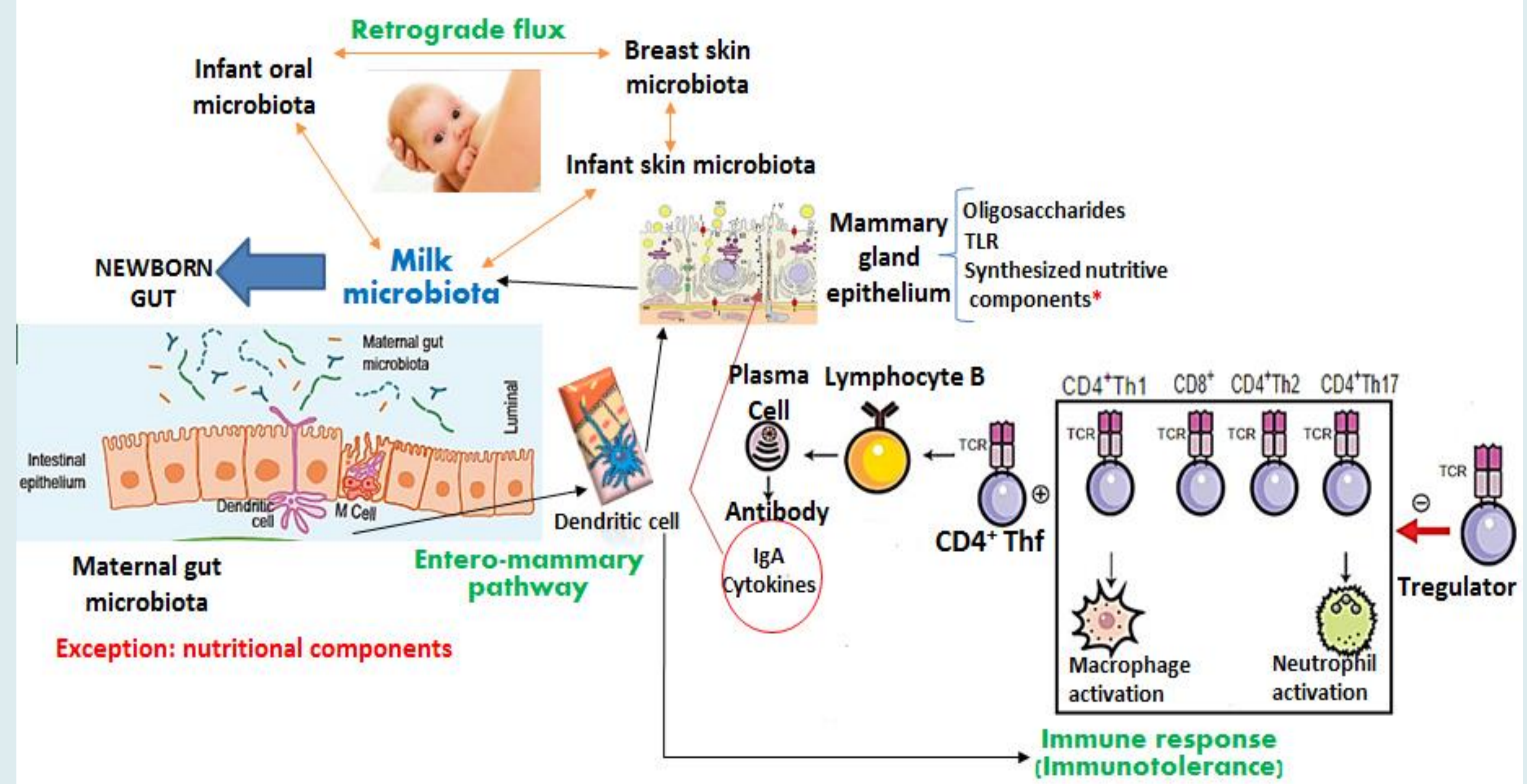
COLOSTRUM AND MILK FORMATION ¹

While colostrum is consequence of paracellular transport during pregnancy (V), milk components are synthesized in the lactocytes.



Colostrum: blood proteins, IgA, leukocytes, etc.

III. NO NUTRITIONAL COMPONENTS OF BREAST MILK AND ITS FUNCTION IN THE ESTABLISHMENT OF INFANT GUT MICROBIOTA



IV. CONCLUSION

Breast milk is essential because it provides nutrients and other essential components to the newborn. Through breast feeding there is a transfer of specific immunoglobulin derived from interaction of the maternal intestinal microbiota and bacteria. Bacteria transferred to the new born are either enteric or skin origin bacteria, which are important because they will induce an immunotolerance response to them. These bacteria can act as a barrier for pathogens. Finally, the oligosaccharides also present in the milk also encourage the establishment of beneficial microbiota. The establishment of adequate microbiota is associated with a lower propensity for immune system diseases in adulthood.

REFERENCES

1. Mcmanaman, J. L. & Neville, M. C. (2003). Mammary physiology and milk secretion. *Advanced Drug Delivery Reviews*, 55, 629–641.