Open Access

The Impact of Gut Microbiota on Immune System Function and Inflammatory Diseases

Kristein Pogliano*

College of Medical and Dental Sciences, University of Birmingham, Birmingham, UK

Abstract

erapeutic interventions and future directions

Materials and Methods

Literature review

Study selection criteria

Data extraction and synthesis

Discussion

Mechanisms of gut microbiota modulation of immune function

Clinical implications and therapeutic strategies

Future directions in research

Conclusion

References

1. Yacyshyn B, Meddings J, Sadowski D, BowenYacyshyn MB (1996) sclerosis patients have peripheral blood CD45RO+ B cells and increased . Dig Dis Sci 41: 2493-2498.
2. Alves de Lima K, Rustenhoven J, Da Mesquita S, Wall M, Salvador AF, et al. Meningeal Î³Î´ T cells regulate anxiety-like behavior via IL-17a signaling in neurons. Nat Immunol 21(11): 1421-1429.
3. Tannock GW, Crichton CM, Savage DC (1987) A method for harvesting non-cultivable flamentous segmented microbes inhabiting the ileum of mice. FEMS Microbiol Ecol 45: 329-332.
4. Xavier RJ, Podolsky DK (2000) How to get along: Friendly microbes in a hostile . Science 289: 1483-1484.
5. Corona AW, Huang Y, O'Connor JC, Dantzer R, Kelley KW, et al. (2010) Fractalkine Receptor (CX3CR1) Deficiency Sensitizes Mice to the Behavioral Changes Induced by Lipopolysaccharide. J Neuroinfammation 17(7): 93.
6. Teitelbaum JE, Walker WA (2002) Nutritional impact of preand probiotics as . Annu. Rev Nutr 22: 107-138.
7. Wykes M, Pombo A, Jenkins C, MacPherson GG (1998) Dendritic cells interact

directly with naïve B lymphocytes to transfer antigen and initiate class switching