

ABSTRACT

This bachelors' thesis focuses on the study of the human large intestine and the variability of its microbial colonization in relation to different environmental conditions. The human large intestine is considered to be a dynamic ecosystem that is populated by a diverse community of microorganisms known as the gut microbiome. The gut microbiome plays a key role in host physiology, influencing digestion, the immune system and energy metabolism. This thesis summarizes the current state of knowledge in the literature regarding the human large intestine and its microbial population, focusing on the adaptation of the intestinal microbiota to different environmental conditions such as diet, antibiotic use and disease occurrence. It also analyses the impact of lifestyle and environmental factors on the gut microbiota, including the effects of stress, physical activity and geographical location. The thesis provides the reader with a comprehensive overview of the gut microbiome and highlights its importance in maintaining human health. The variability of microbial colonization of the gut is a fascinating phenomenon that deserves careful study and understanding. Understanding these processes may contribute to the development of new strategies for maintaining and restoring a healthy gut microbiota that could be used in the prevention and treatment of various diseases associated with the gut and overall health of the host.

KEYWORDS

Large intestine, microbiome, health, immunity, diseases

