That Gut Feeling: Identifying the Gut Microbiota in Different Groups of Children

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The purpose of my project was to find the difference between the bacteria in atopic children compared to children who are considered healthy. I obtained 6 participants that were considered healthy. This group is displaced as group B. 10 participants with atopic symptoms were placed as group A. I was able to obtain stool samples every other week for three weeks. With each stool sample collected, I performed a serial dilution to help count the colonies on each plated sample. I was able to see the pro dominated organism in each dilution, as well as separating each organism to see the different types of organisms on each plate. I isolated different types of bacteria on each plate given, preformed a gram stain, and ran a VITEK to obtain a probability of the organism being tested. Organisms that were not identified in the VITEK were isolated again and put through more tests. The results support my hypothesis, due to the fact that by observation group B had more of a variety of bacteria growing on their plate. Unique organisms were found on group A plates compared to the normal flora seen mostly in group B. From my conclusion, additional questions arose. Why is there unique bacteria found between the groups? Why does group A's bacteria show an unbalanced gut? Being able to answer these questions can lead to new ways for creating medicine, as well as being able to understand why this disease exists, and where it comes from.

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