

Volatile organic compounds analysis in the context of gastrointestinal health and disease

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STELLINGEN

behorende bij het proefschrift

Volatile Organic Compounds Analysis in the context of Gastrointestinal Health and Disease

Agnieszka Lidia Baranska, Maastricht, 29 November 2021

1. *A set of 16 volatiles has the potential to diagnose and monitor IBS. (This thesis)*
2. *External factors should be taken into account when using volatilomics as base for diagnosing disease. (This thesis)*
3. *Exhaled VOCs will be affected by the host microbiota either through influencing host metabolism, or by producing/metabolising VOCs themselves, depending on the microbiota composition and the availability of substrates. (This thesis)*
4. *Further investigations of the influence of certain exposures, treatments, and co-incubations of human cells in in-vitro set up, by headspace analysis, will provide insight in the endogenous origin of VOCs in the human body. (This thesis)*
5. *Lack of external validation, non-reproducibility of the results within different cohorts and between studies, uncertainty with the identification compounds and its relationship with biological interpretation are still some of the same challenges we face today.*
6. *Assessing GI health and disease with an untargeted metabolomic approach provides opportunity to capture the totality of factors affecting gut health status.*
7. *As in life, also in breath science, there's time to accept imperfections and focus on finding relevant information beyond noisy background.*
8. *Bringing in a level of standardisation, will improve collaboration and knowledge sharing and further increase chances for collective success in the breath field and ultimate gain for humanity.*
9. *To me this is not the end, it's not even the beginning of the end, but it might be the end of the beginning. (Modified from Winston Churchill)*
10. *If you want to see a rainbow you have to learn to see the rain. (Paulo Coelho)*
11. *Courage is not the absence of fear, but the capacity to act despite our fears. (John McCain)*