

Thomaz F. S. Bastiaanssen

Bioinformatics, Microbiome-Gut-Brain Axis, Theoretical Ecology

Professional Summary

I am a bioinformatician interested in the interplay between the gut microbiome and host mood and mental health. The focus of my research currently lies in understanding microbiome-gut-brain communication from a theoretical ecology/bioinformatics perspective. In particular, I am interested in understanding the role of stability and volatility of the gut microbiome in anxiety and depression and in integrating different types of 'omics data in a biologically interpretable manner. As a bioinformatician, I value clear and easily interpretable analysis of complex data in order to promote interdisciplinary collaboration.

Employment

2021 - now **Postdoctoral Researcher**, *University College Cork*, Cork.
○ Lead bioinformatician for the Cryanlab

Education

2018 - 2021 **PhD**, *University College Cork*, Cork.
○ Thesis Title: Mining the Microbiome for Markers of Microbiota-Gut-Brain Communication and Mental Health
2014 - 2017 **MSc**, *Utrecht University*, Utrecht.
○ Research Trajectory: Molecular and Cellular Life Sciences - Bioinformatics
2010 - 2013 **BSc**, *Utrecht University*, Utrecht.
○ Majored in Biology with a Minor in Art History

Research Skills

Bioinformatics: 16S analysis • Whole genome shotgun analysis • RNAseq analysis • Metabolomics analysis • Microbiome functional inference • Volatility analysis • Multi-omics integration

General Programming: R • tidyverse • R package development • Python • Bash • Server management

Statistics: Experimental design • Data analysis • Generalised linear models • Generalised linear mixed effects models • Principal component analysis • Compositional data analysis

Cork, Republic of Ireland

✉ thomazbastiaanssen@gmail.com

in [thomaz-bastiaanssen-753242b0](#) • [thomazsan](#)

🌐 [thomazbastiaanssen](#)

Publications

Selected first author

- 2021 **Microbiota from young mice counteracts selective age-associated behavioral deficits**, *M Boehme, KE Guzzetta, TFS Bastiaanssen, M Van De Wouw, ...*, *Nature Aging*.
- 2021 **Volatility as a Concept to Understand the Impact of Stress on the Microbiome**, *TFS Bastiaanssen, A Gururajan, M van de Wouw, GM Moloney, NL Ritz, ...*, *Psychoneuroendocrinology*.
- 2020 **Gutted! Unraveling the role of the microbiome in major depressive disorder**, *TFS Bastiaanssen, S Cusotto, MJ Claesson, G Clarke, TG Dinan, ...*, *Harvard Review of Psychiatry*.
- 2019 **Making sense of... the microbiome in psychiatry**, *TFS Bastiaanssen, CSM Cowan, MJ Claesson, TG Dinan, JF Cryan*, *International Journal of Neuropsychopharmacology*.

Selected non-first author

- 2019 **The microbiota-gut-brain axis**, *JF Cryan, KJ O'Riordan, CSM Cowan, KV Sandhu, TFS Bastiaanssen, ...*, *Physiological reviews*.
- 2018 **Social interaction-induced activation of RNA splicing in the amygdala of microbiome-deficient mice**, *RM Stilling, GM Moloney, FJ Ryan, AE Hoban, TFS Bastiaanssen, ...*, *Elife*.
- 2020 **Mid-life microbiota crises: middle age is associated with pervasive neuroimmune alterations that are reversed by targeting the gut microbiome**, *M Boehme, M van de Wouw, TFS Bastiaanssen, L Olavarria-Ramírez, ...*, *Molecular psychiatry*.
- 2019 **Preventing adolescent stress-induced cognitive and microbiome changes by diet**, *G Provensi, SD Schmidt, M Boehme, TFS Bastiaanssen, B Rani, A Costa, ...*, *Proceedings of the National Academy of Sciences*.

Cork, Republic of Ireland

✉ thomazbastiaanssen@gmail.com

in [thomaz-bastiaanssen-753242b0](#) • [thomazsan](#)

🌐 [thomazbastiaanssen](#)