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Diagnosis and treatment of bloodstream infection (BSI) will greatly bene t from sensitive and exhaustive molecular methods to detect bacterial DNA in blood, such as quantitative PCR (qPCR) and metagenomics sequencing. Such approaches are already studied with the aim of reducing the turnaround time and increasing the sensitivity of the microbiota detection in suspected BSI. However, this type of molecular diagnosis is greatly complicated by the presence of human DNA and PCR inhibitors in blood, as well as bacterial DNA contaminants present in the environment, reagents and consumables which dramatically hamper the signal to noise ratio of qPCR and sequencing pipelines. In the course of our investigations into the role of tissue microbiota in cardiometabolic diseases we developed speci c optimized pipelines of qPCR and 16S targete metagenomic sequencing to analyze blood bacterial DNA, despite the technical di culties associated with this sample type. Using these molecular tools we have demonstrated the existence of a highly diversi ed blood micro biome in healthy human donors and shown the association between changes in the blood microbiome and liver brosis in obese patients. ese assays were primarily designed to analyze bacterial DNA in blood and tissue of healthy donors and patients with no infectious disease, and therefore their signal to noise ratios are high and they are also capable of detecting BSI in patients with hig sensitivity and at early stages of infection.

Biography

Benjamin Lelouvier received his PhD in Cellular and Molecular Neurobiology from the University Pierre et Marie Curie, Paris VI, France, in 2007. After a Postdoctoral Fellowship at the National Institutes of Health (USA), he joined Vaiomer in 2012. As cellular and molecular biology Group Leader and Head of biomarkers discovery, KH GHYHORSHG ZLWK KLV JURXS WKH PROHFXODU WRROV 6 T3&5 DQG 6 PHWDJHQRPLFV VHTXHQFLQ EHFRPLQJ &KLHI 6FLHQWL¿F 2I¿FHU RI 9DLRPHU LQ 7KH VWXG\ RI WLVVXH DQG EORRG PLFURELRWD IRU WKH GHYHORSPHQW RI ELRPDUNHUV DQG WKHUDSHXWLFV LQ WKH ¿HOGV RI FDUGLRPHWDEROLF GL

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