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(54) Title: TWO COMPETING GUILDS AS CORE MICROBIOME SIGNATURE FOR HUMAN DISEASES

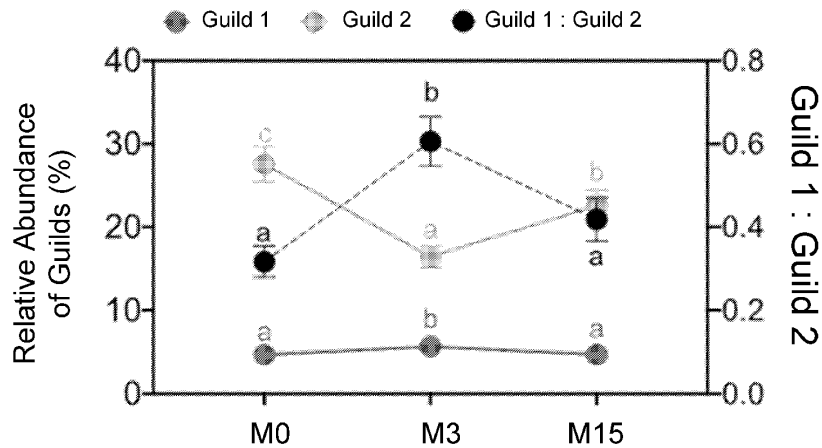


FIG. 7A

(57) Abstract: Methods and systems for determining a disease state by obtaining a first plurality of nucleic acid sequences for genomic DNA from a sample from the gut of a subject. Determine, from the nucleic acid sequences a first plurality of genomic abundance values for a first plurality of gut bacteria and a second plurality of genomic abundance values for a second plurality of at least 20 species of gut bacteria. Apply a model to at least the first plurality of genomic abundance values and the second plurality of genomic abundance values, or one or more combinations thereof, thereby determining the disease state of the subject as an output of the model.

[Continued on next page]

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