

## *Supplementary Material*

### **Enhancing the resolution of rumen microbial classification from metatranscriptomic data using Kraken and Mothur**

Andre L. A. Neves,<sup>1</sup> Fuyong Li<sup>1</sup>, Bibaswan Ghoshal<sup>1</sup>, Tim McAllister<sup>2</sup> and Le L. Guan<sup>1\*</sup>

<sup>1</sup>Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, AB, Canada

<sup>2</sup>Lethbridge Research Center, Agriculture and Agri-Food Canada, Lethbridge, AB, Canada

**\* Correspondence:**

Dr. Le Luo Guan

[lguan@ualberta.ca](mailto:lguan@ualberta.ca)

#### **1 Supplementary Tables**

Here we present four tables containing a complete list of all bacteria and archaea taxa (separated by taxonomic ranks) classified by Mothur (Supplementary Table 1) or Kraken (Supplementary Table 2), and a direct comparison of bacteria (Supplementary Table 3) and archaea (Supplementary Table 4) obtained from both methods at the genus level across all samples.

In Supplementary Tables 1 and 2, the results (presented in descending order based on relative abundance, mean and standard deviation, SD) are shown in each dataset as follows: a) Taxa names are in Column 1; and b) IDs of rumen samples collected from high- and low-feed conversion rate bulls (H- and L-FCR, respectively) are shown from Column 2 to Column 17 (H-FCR animals: 17ZD4H, 1ZD4H, 2094ZD4H, 29ZD4H, 77D4H, 8ZD4H; and L-FCR animals: 126D4L, 162ZD4L, 20LZD4L, 2ZD4L, 60ZD4L, 91ZD4L).

In Supplementary Tables 3 (bacteria) and 4 (archaea), the results (relative abundance, mean, and SD) are shown for each genus classified by Mothur and Kraken across all samples. Taxa names are found in Column 1 and IDs of rumen samples collected from H- and L-FCR bulls can be found from columns 2 to 32. We assigned “NA” (Not Available) when a given taxon was not identified either by Mothur or Kraken.

Legend for Supplementary Tables 3 and 4:



Mothur



Kraken

Files:

Neves et al., Frontiers Microbiology\_Supplementary Table 1\_Mothur.xlsx

Neves et al., Frontiers Microbiology\_Supplementary Table 2\_Kraken.xlsx

Neves et al., Frontiers Microbiology\_Supplementary Table 3\_Bacteria.xlsx

Neves et al., Frontiers Microbiology\_Supplementary Table 4\_Archaea.xlsx