



**Figure S4.** Heatmap with the effect of the application of oats, earthworms (*Eisenia fetida* (Savigny, 1826)) or oats plus earthworms on the relative abundance of bacterial phyla and 50 most abundant genera compared to the unamended soil (% relative abundance of the different bacterial groups). a) Phyla and b) Genera. Non parametric analysis with \*  $p < 0.05$  and  $p > 0.01$ , \*\*  $p \leq 0.01$  and  $p > 0.001$ , and \*\*\*  $p \leq 0.001$ . The bacterial genera were grouped according to the bacterial phyla, class or order they belonged to. The relative abundance of the bacterial groups (%) is given in the unamended soil (Unamended), while the changes in the relative abundance in soil amended with oats, earthworms or oats + earthworms is given as the ratio of (the relative abundance in the oats, earthworms or oats + earthworms amended soil) – (the relative abundance in unamended soil)/ (the relative abundance in the oats, earthworms or oats + earthworms amended soil). A red square means that the relative abundance of the bacterial group decreased and a blue square that it increased compared to the unamended soil.