Metagenomic analysis of antibiotic-induced changes in gut microbiota in a pregnant rat model

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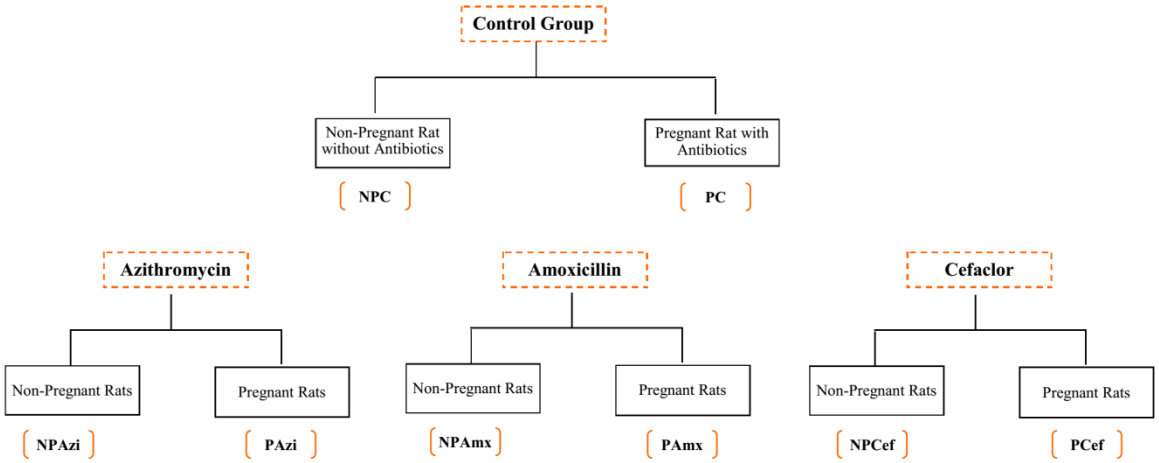

Figure S1: Schematic diagram of experimental model. The alphabets mentioned in brackets represent abbreviations for respective group that used throughout the manuscript. NPC, non-pregnant control; PC, pregnant control; NPAzi, non-pregnant rats exposed to azithromycin; PAzi, pregnant rats exposed to azithromycin; NPAmx, non-pregnant rats exposed to amoxicillin; PAmx, pregnant rats exposed to amoxicillin; NPCef, non-pregnant rats exposed to cefaclor; PCef, pregnant rats exposed to cefaclor

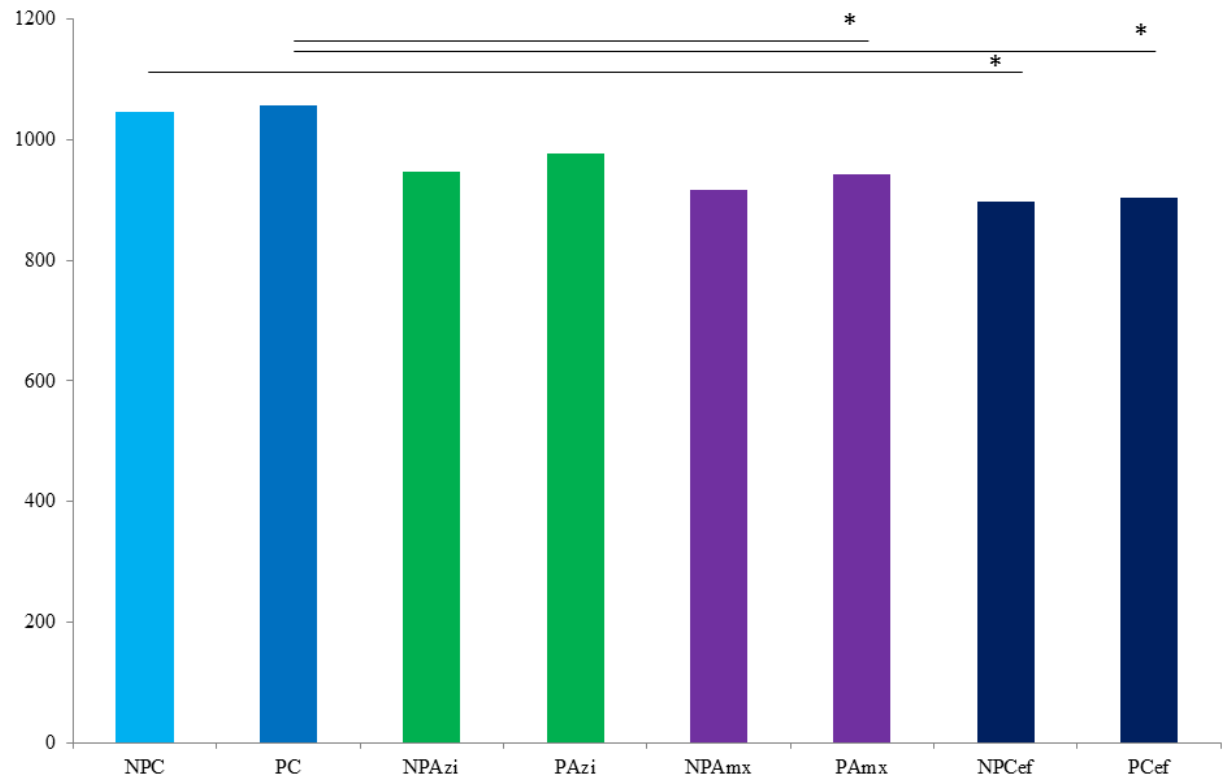

Figure S2: Statistical analysis of OTUs diversity. OTUs count slightly enriched during pregnancy compare to non-pregnant rats. Antibiotics substantially reduced OTUs count. OTUSs diversity significantly decreased in cefaclor treated pregnant (p) and non-pregnant (p) rats in comparison to PC and NPC respectively. The effect of amoxicillin was significant during pregnancy in comparison to PC. The vertical axes is indicating OTUs measure. NPC, non-pregnant control; PC, pregnant control; NPAzi, non-pregnant rats exposed to azithromycin; PAzi, pregnant rats exposed to azithromycin; NPAmx, non-pregnant rats exposed to amoxicillin; PAmx, pregnant rats exposed to amoxicillin; NPCef, non-pregnant rats exposed to cefaclor; PCef, pregnant rats exposed to cefaclor. * Indicates significant $p < 0.05$.

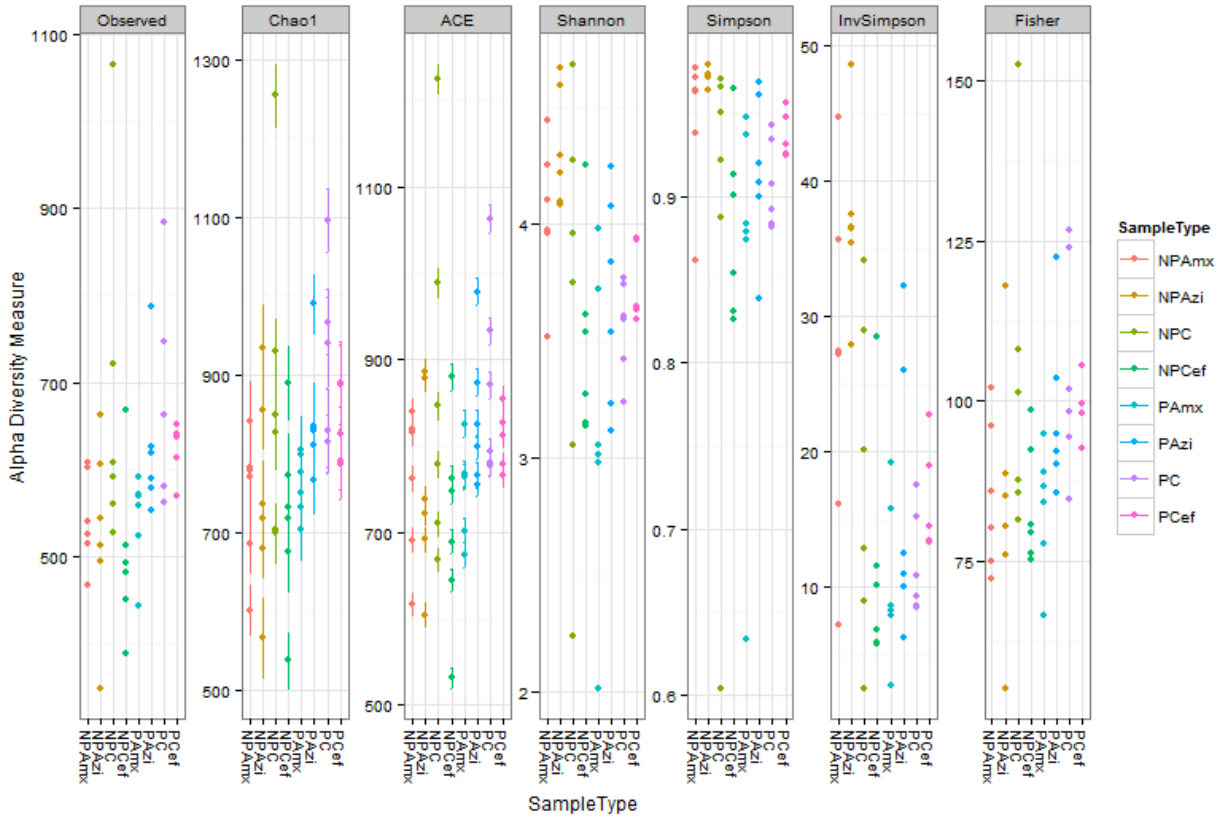

Figure S3: Alpha diversity analysis. NPC, non-pregnant control; PC, pregnant control; NPAzi, non-pregnant rats exposed to azithromycin; PAzi, pregnant rats exposed to azithromycin; NPAmx, non-pregnant rats exposed to amoxicillin; PAmx, pregnant rats exposed to amoxicillin; NPCef, non-pregnant rats exposed to cefaclor; PCef.

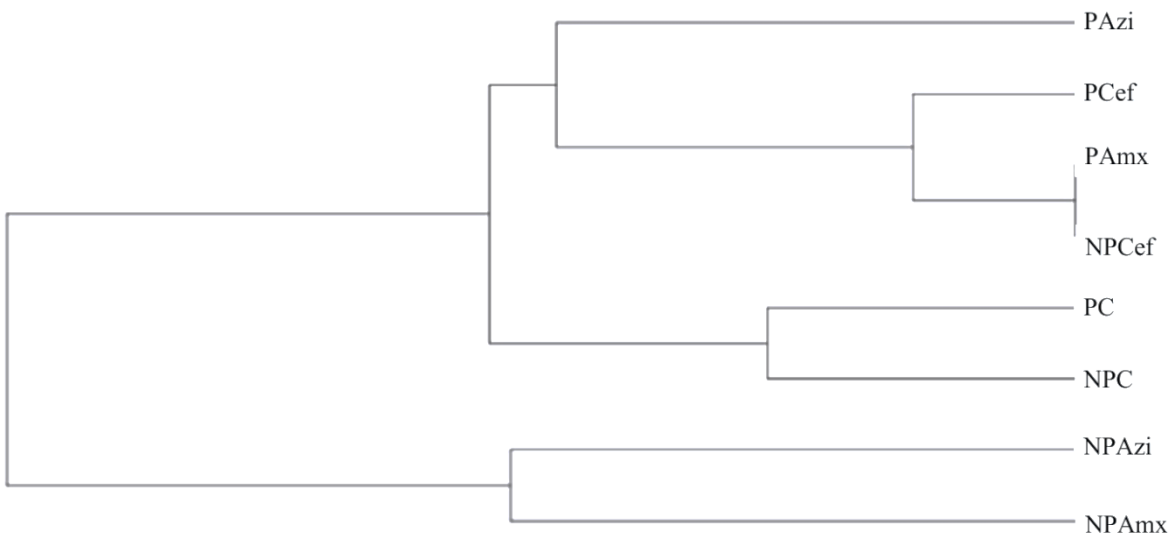

Figure S4: UPGMA distance metric clustering based on taxonomic count. All the groups are cladded in two groups. Comparatively, all the pregnant groups are closely linked except NPCef – which is the most distinct group from the rest non-pregnant groups. NPC, non-pregnant control; PC, pregnant control; NPAzi, non-pregnant rats exposed to azithromycin; PAzi, pregnant rats exposed to azithromycin; NPAmx, non-pregnant rats exposed to amoxicillin; PAmx, pregnant rats exposed to amoxicillin; NPCef, non-pregnant rats exposed to cefaclor; PCef.

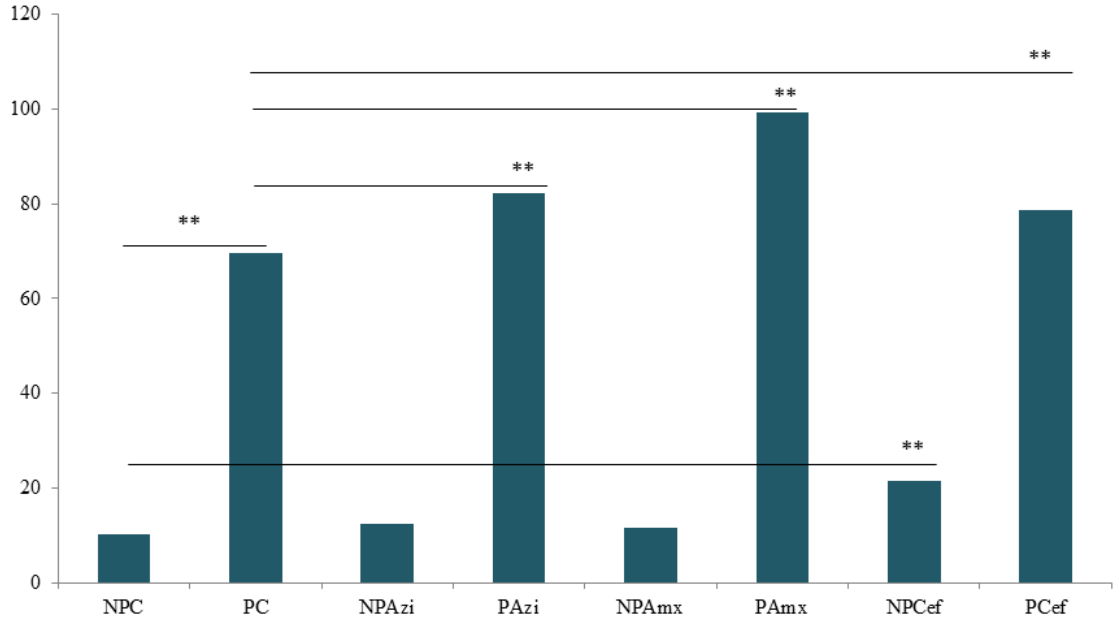

Figure S5: Weight gain in pregnant and non-pregnant rats groups with antibiotic treatments. Statistically, significant weight gain was observed in non-pregnant rats treated with cefaclor, and in pregnant rats treated with azithromycin, amoxicillin and cefaclor compared with their respective controls. * Indicates significant $p < 0.05$. **Highly significant $p \leq 0.01$.