

Colonization kinetics and implantation follow-up of the sewage microbiome in an urban wastewater treatment plant

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Table S1. The SM_WWTP physicochemical performances after stabilization. This Table shows the results of the plant’s performance calculated from the daily measurements at the entry and exit of the WWTP over a period of one year immediately after the start up of the plant.

Parameters	Effluent concentration (mg L ⁻¹)	Efficiency (%)
TSS	1.10 ± 0.58	99.7 ± 0.2
COD	13.3 ± 8.6	98.1 ± 1.3
BOD	1.3 ± 1.1	99.6 ± 0.4
TKN	1 ± 0.9	98.8 ± 1.1
N-NH ₄	0.35 ± 0.81	99.3 ± 1.3
NGL	8.49 ± 2.77	88.7 ± 3.8
Total P	0.23 ± 0.32	97.5 ± 3.6

TSS: Total suspended solids; COD: Chemical oxygen demand; BOD; Biochemical oxygen demand; TKN: Total Kjeldahl Nitrogen; N-NH₄: Ammonia nitrogen; NGL: Global Nitrogen (or Total Nitrogen); Total P: Total phosphorus.

Table S2. The ten predominant OTUs over the first period (13-40 days) of the SM_WWTP colonization.

OTU number	Order	Genera	Average (% of reads)
OTU_1	<i>Pseudomonadales</i>	<i>Acinetobacter</i>	13.4 ± 0.06
OTU_3	<i>Caulobacterales</i>	<i>Phenylobacterium</i>	5.7 ± 0.03
OTU_5	<i>Burkholderiales</i>	<i>Acidovorax</i>	4.2 ± 0.02
OTU_4	<i>Xanthomonadales</i>	<i>Stenotrophomonas</i>	4.0 ± 0.02
OTU_9	<i>Burkholderiales</i>	<i>Aquabacterium</i>	3.2 ± 0.03
OTU_10	<i>Flavobacteriales</i>	<i>Flavobacterium</i>	3.0 ± 0.03
OTU_27	<i>Caulobacterales</i>	<i>Brevundimonas</i>	2.5 ± 0.01
OTU_42	<i>Pseudomonadales</i>	<i>Acinetobacter</i>	2.3 ± 0.02
OTU_20	<i>Pseudomonadales</i>	<i>Pseudomonas</i>	2.3 ± 0.02
OTU_18	<i>Xanthomonadales</i>	<i>Stenotrophomonas</i>	1.8 ± 0.01

Table S3. The ten predominant OTUs over the second period (40-133 days) of the SM_WWTP colonization.

OTU number	Order	Genera	Average (% of reads)
OTU_11	<i>Xanthomonadales</i>	<i>Thermomonas</i>	13.8 ± 2.10
OTU_83	<i>Competibacterales</i>	Candidatus Competibacter	2.9 ± 0.08
OTU_74	<i>Xanthomonadales</i>	<i>Arenimonas</i>	2.0 ± 0.47
OTU_1	<i>Pseudomonadales</i>	<i>Acinetobacter</i>	2.2 ± 0.41
OTU_108	<i>Flavobacteriales</i>	Unknown genus	1.9 ± 0.84
OTU_152	<i>Microtrichiales</i>	Unknown genus	1.6 ± 0.46
OTU_43	<i>Burkholderiales</i>	Multi-affiliation	1.4 ± 0.06
OTU_142	Flavobacteriales	Unknown genus	1.3 ± 0.47
OTU_84	<i>Xanthomonadales</i>	<i>Pseudoxanthomonas</i>	1.3 ± 0.13
OTU_191	<i>Clostridiales</i>	<i>Christensenellaceae</i> R-7 group	1.1 ± 0.28

Table S4. The ten predominant OTUs over the third period (133-236 days) of SM_WWTP colonization.

OTU number	Order	Genera	Average (% of reads)
OTU_2	<i>Xanthomonadales</i>	PLTA13	6.5 ± 2.55
OTU_6	<i>Chitinophagales</i>	Unknown genus	2.7 ± 1.03
OTU_7	<i>Xanthomonadales</i>	<i>Dokdonella</i>	2.3 ± 1.10
OTU_22	<i>Chitinophagales</i>	<i>Terrimonas</i>	2.1 ± 2.04
OTU_15	<i>Chloroflexi</i>	unknown genus	1.8 ± 1.13
OTU_13	<i>Chitinophagales</i>	<i>Terrimonas</i>	1.7 ± 1.95
OTU_12	<i>Chitinophagales</i>	<i>Ferrugibacter</i>	1.5 ± 1.71
OTU_14	<i>Acidobacteriales</i>	Multi-affiliation	1.5 ± 0.79
OTU_19	<i>Rhodobacterales</i>	Multi-affiliation	1.3 ± 0.85
OTU_8	<i>Rhodocyclales</i>	<i>Thauera</i>	1.2 ± 0.56