

**Table S3. Spaceflight and motility affect biofilm formation and architecture in mAUM.**

<i>P. aeruginosa</i>	Gravity	Viable cells (10 <sup>6</sup> CFU/mem)	Biomass ( $\mu\text{m}^3/\mu\text{m}^2$ )	Mean thickness ( $\mu\text{m}$ )	Void fraction	Structure
Wild type	Normal gravity	1.0±0.4	3.2±0.5	4.7±0.8	0.30±0.02	Flat
	Spaceflight	2.8±0.3	4.5±0.3	8.1±0.3	0.44±0.03	Column & canopy
$\Delta\text{motABCD}$	Normal gravity	0.4±0.1	3.9±0.4	5.6±0.7	0.28±0.03	Flat
	Spaceflight	4.2±2.4	3.7±0.1	5.2±0.4	0.28±0.05	Flat

All strains were grown in FPAs with solid inserts. Biomass and mean thickness were calculated with COMSTAT software. Void fraction was calculated as described (Equation S1). Results are shown as mean ± SD; N=3.