SUPPLEMENTAL MATERIAL

Decomposition of Growth Curves into Growth Rate and Acceleration: a Novel Procedure to Monitor Bacterial Growth and the Time-Dependent Effect Effect of Antimicrobials

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Table 1S. Summary of growth parameters for *S. sanguinis* exposed to different sub-MIC concentrations of SEEP. These parameters, i.e. lag time (t_0), starting growth rate (γ_0), initial acceleration of the growth (a_0), maximum growth rate (γ_{max}), maximum acceleration (a_{max}) and deceleration (a_{min}) of the growth and the total number of cells at the beginning of the saturation phase (N_s) were directly obtained from the growth, growth rate and acceleration curves determined for each condition.

	Propolis concentration (%)					
	0	**0,003**	**0,006**	**0,012**	**0,020**	**0,050**
t_0 (h)	**4,9** ± 0,5	**5,2** ± 0,6	**5,3** ± 0,6	**7,3** ± 1,3	**7,8** ± 1,1	**10,**7 ± 0,6
γ_0 (10^6 cfu ml^{-1} h^{-1})	**4,2** ± 0,4	**3,4** ± 0,3	**2,7** ± 0,4	**1,6** ± 0,4	**1,2** ± 0,3	**0,9** ± 0,2
a_0 (10^6 cfu ml^{-1} h^{-2})	**2,1** ± 0,3	**1,7** ± 0,3	**1,5** ± 0,2	**1,1** ± 0,3	**0,9** ± 0,5	**0,7** ± 0,4
γ_{max} (10^6 cfu ml^{-1} h^{-1})	**25,2** ± 1,2	**25,6** ± 1,1	**25,1** ± 1,5	**18,9** ± 1,4	**8,1** ± 1,8	**4,8** ± 2,8
t_{max} (h)	**8,3** ± 0,6	**8,7** ± 0,6	**8,8** ± 0,7	**10,0** ± 1,5	**10,5** ± 1,6	**12, 5** ± 0,7
a_{max} (10^6 cfu ml^{-1} h^{-2})	**8,9** ± 1,1	**8,7** ± 1,2	**8,1** ± 1,3	**5,5** ± 1,1	**3,1** ± 0,9	**1,0** ± 0,4
t_{amax} (h)	**7,5** ± 0,5	**7,5** ± 0,5	**7,7** ± 0,6	**8,5** ± 1,1	**9,3** ± 1,2	**11** ± 1,0
a_{min} (10^6 cfu ml^{-1} h^{-2})	**- 8,3** ± 0,7	**- 8,0** ± 0,7	**- 7,4** ± 0,4	**- 6,0** ± 0,9	**-3,3** ± 1,2	**-0,6** ± 0,4
t_{amin} (h)	**9,8** ± 0,5	**10,1** ± 0,7	**10,5** ± 0,8	**11,5** ± 1,1	**12,0** ± 0,7	**14,0** ± 0,7
N_s (10^6)	**97** ± 7	**100** ± 9	**95** ± 12	**72** ± 14	**33** ± 9	**23** ± 8
t_{Ns} **(a = 0)** (h)	**13,0** ± 0,7	**13,5** ± 0,7	**13,5** ± 0,7	**15,0** ± 1,3	**16,0** ± 1,6	**18,0** ± 1,5

Figure 1S. Growth, growth rate and acceleration of the growth for *S. sanguinis* in the absence of propolis. The geometrical lag time (t_0 geometrical) is defined as the point of intersection of the tangent to the growth curve at the exponential phase with the time axis. The physiological lag time (physiological t_0) is determined by the onset of the accelerated growth regime (i.e. a_0).

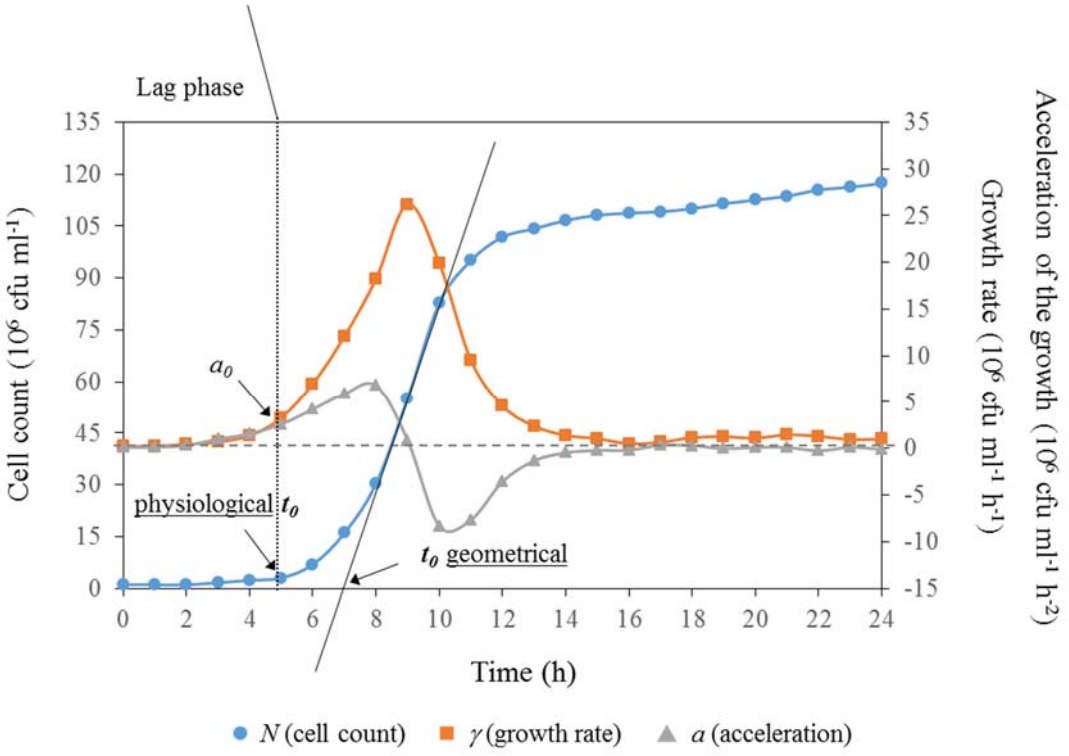

Figure 2S. Lag phase duration (t_0) for cultures of *S. sanguinis* containing the different sub-MIC concentrations of SEEP studied, together with the time points at which the resting growth parameters occurs: γ_{max} (t_{max}); a_{max} (t_{amax}); a_{min} (t_{amin}); N_s (t_{Ns}).

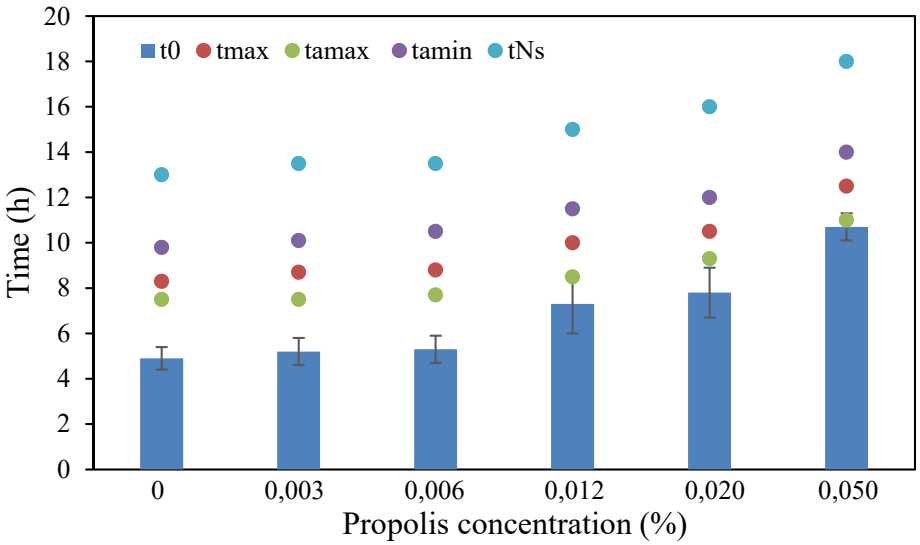

Figure 3S. Relation between the total number of cells at the beginning of the saturation phase (N_s) and the maximum growth rate (γ_{max}) for *S. sanguinis* exposed to different sub-MIC concentrations of SEEP.