

Supplementary

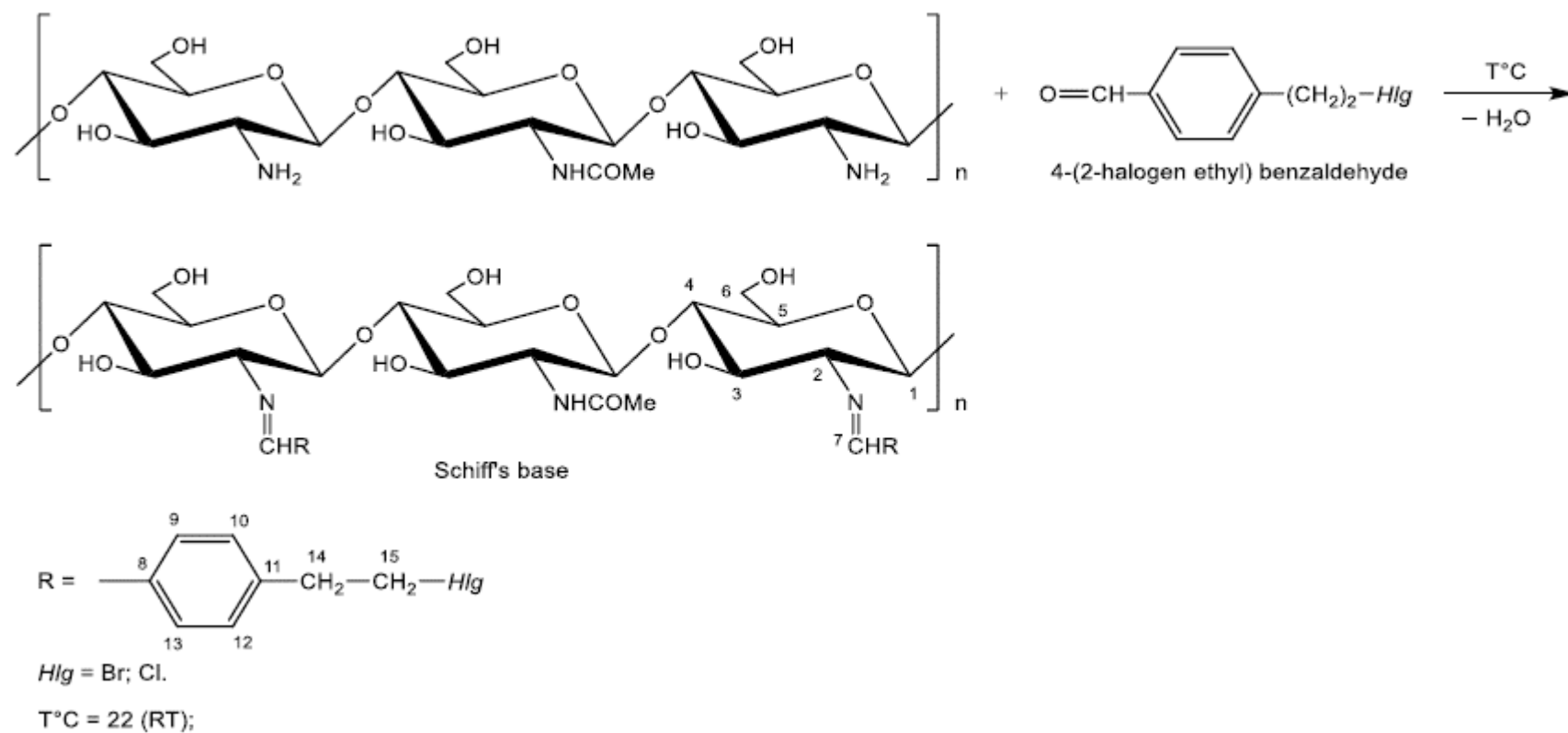


Figure S1. Scheme of the synthesis of CSSB by interaction of CS with 4-(2-halogenethyl)benzaldehyde.

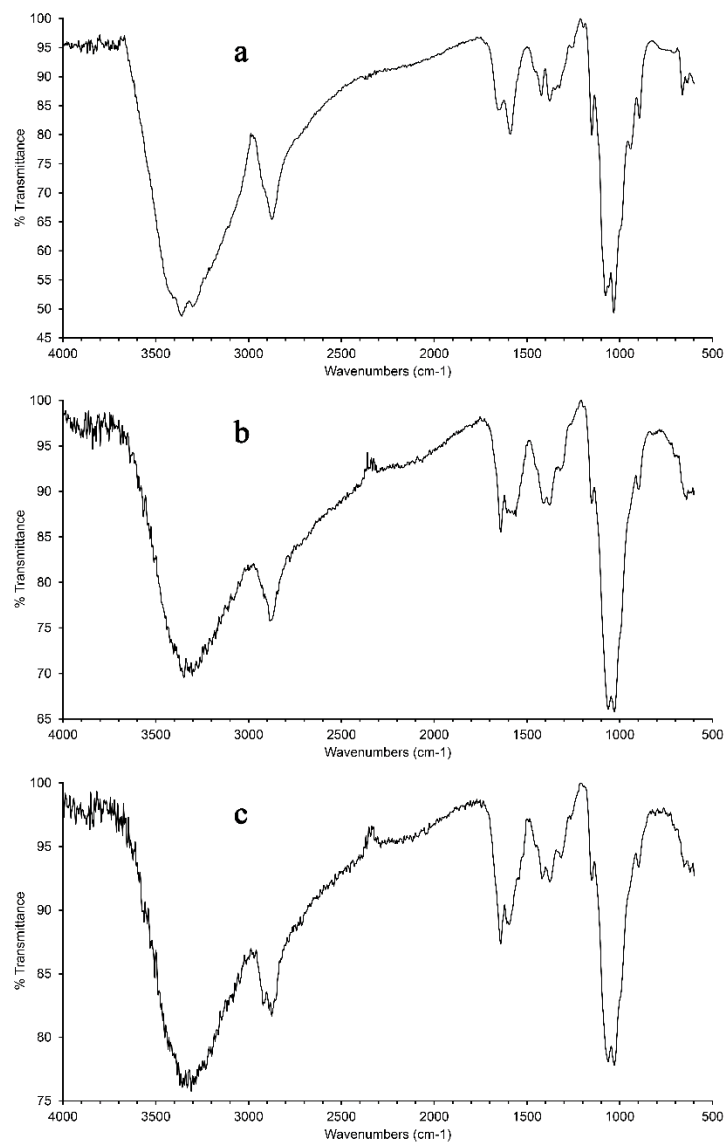


Figure S2. Characterization of the compounds. FTIR spectra of CS (a), CSSB-1 (b) and CSSB-2 (c) samples.

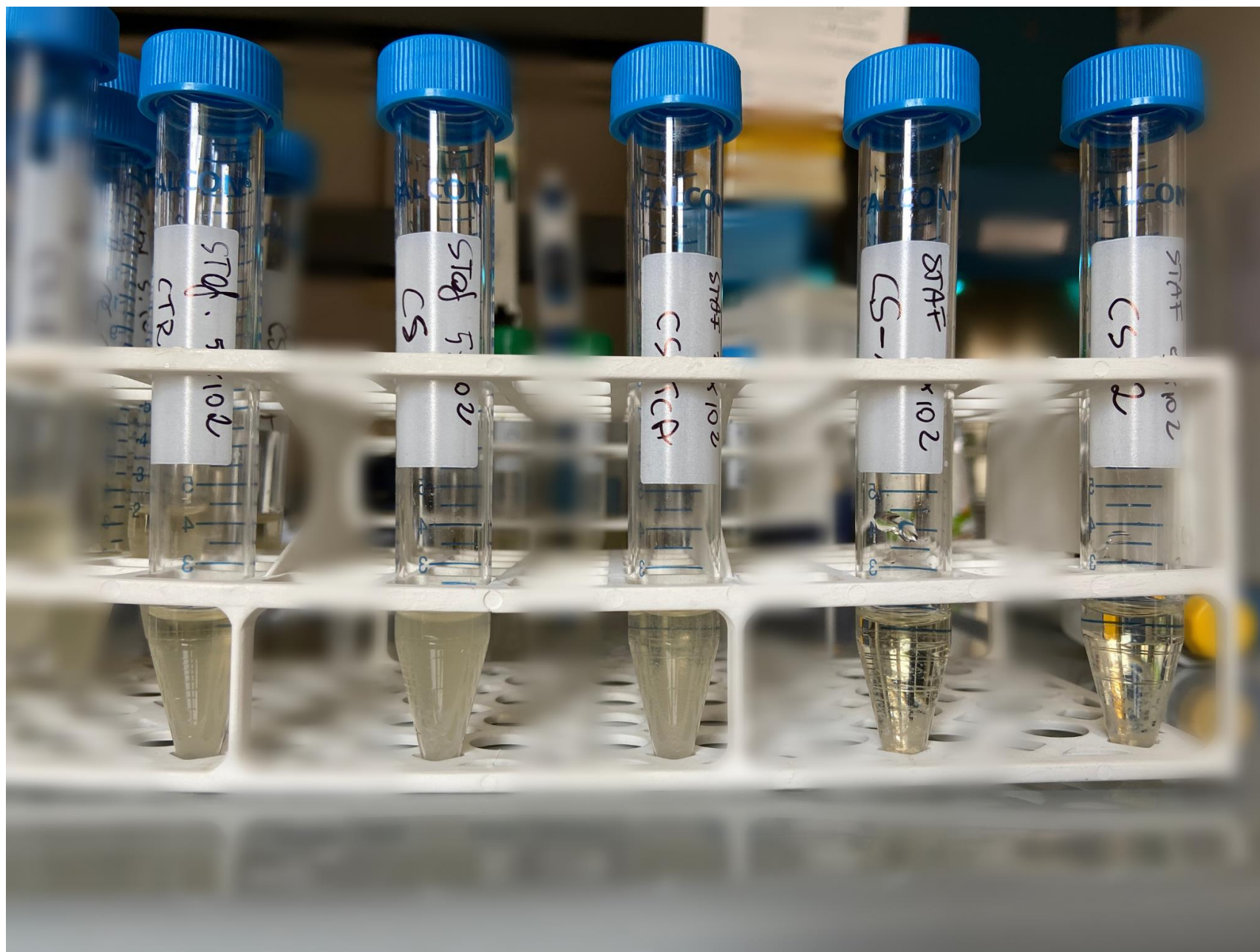


Figure S3. Cultures of *S. aureus* with and without the compounds (CS, CSSB-1, CSSB-2). The picture of overnight cultures of *S. aureus*, untreated (CTR) and treated with CS, CSSB-1(CS-1) and CSSB-2 (CS-2) is shown. The sample labeled as CS-TCA refers to *S. aureus* treated with CS dissolved in trichloroacetic acid (TCA) instead of water. One representative experiment is shown.

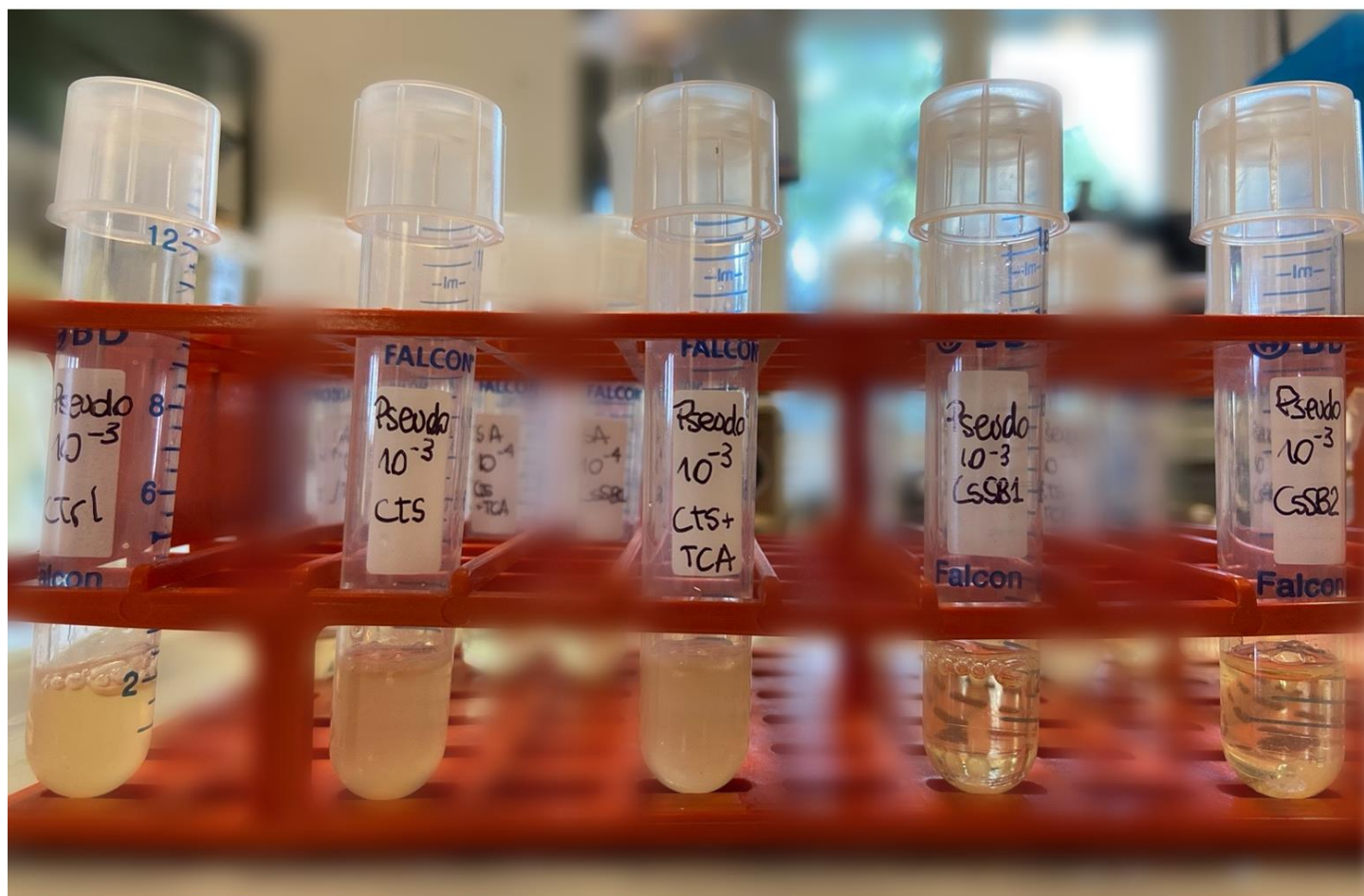


Figure S4. Cultures of *P. aeruginosa* with and without the compounds (CS, CSSB-1, CSSB-2). The picture of overnight cultures of *P. aeruginosa*, untreated (CTRL) and treated with CS (Cts), CSSB-1 and CSSB-2 is shown. The sample labeled as Cts-TCA refers to *P. aeruginosa* treated with CS dissolved in TCA instead of water. One representative experiment is shown.

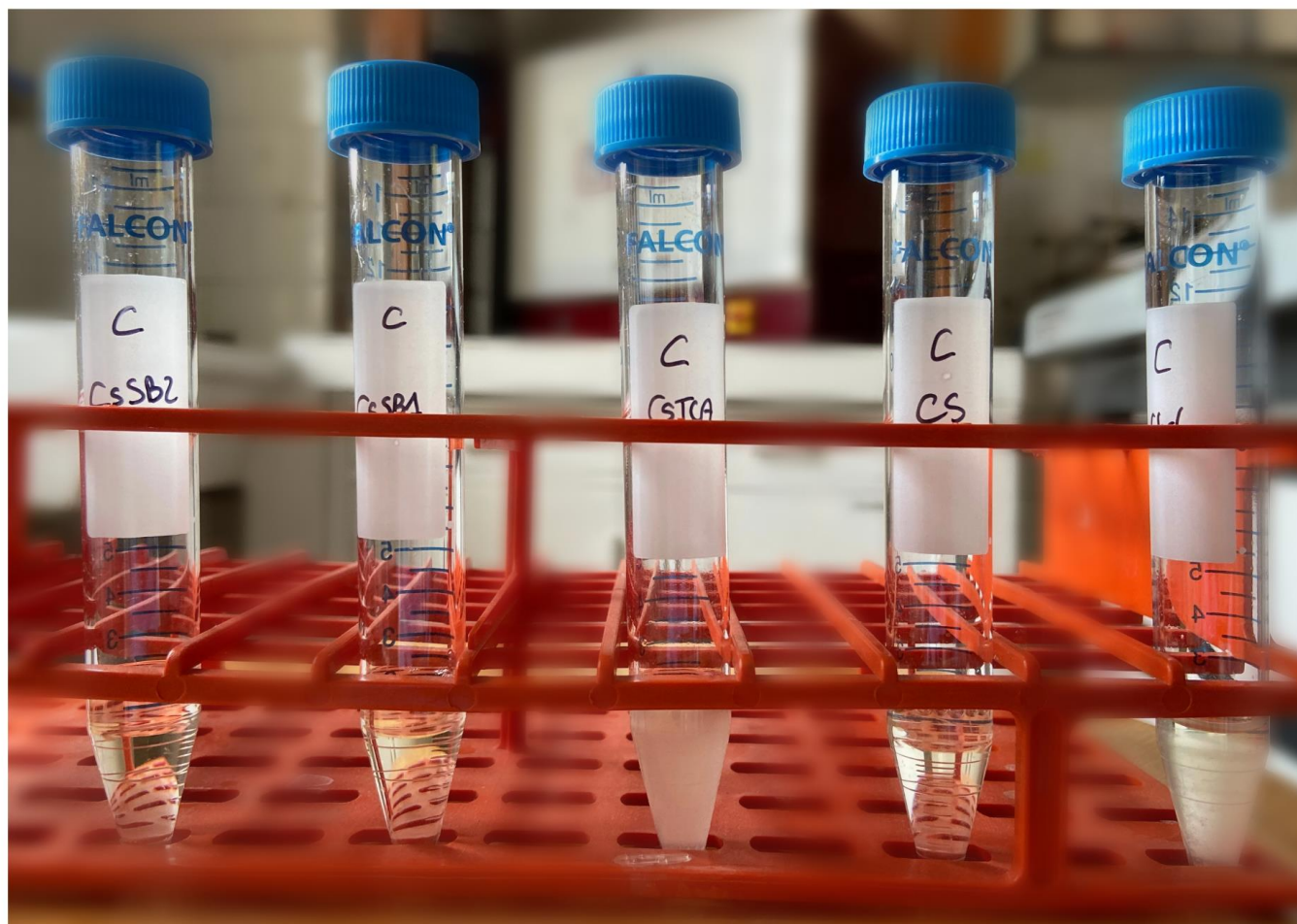


Figure S5. Cultures of *C. albicans* with and without the compounds (CS, CSSB-1, CSSB-2). The picture of overnight cultures of *C. albicans*, untreated (CTRL) and treated with CS, CSSB-1 and CSSB-2 is shown. The sample labeled as CS-TCA refers to *C. albicans* treated with CS dissolved in TCA instead of water. One representative experiment is shown.

Table S1: Effect of CS and CSSBs at different concentrations after 6 hours

Sample	<i>S. aureus</i>						<i>P. aeruginosa</i>						<i>C. albicans</i>					
	CFU/ml (mean \pm SD)			OD ₆₀₀ (mean \pm SD)			CFU/ml (mean \pm SD)			OD ₆₀₀ (mean \pm SD)			CFU/ml (mean \pm SD)			OD ₆₀₀ (mean \pm SD)		
Concentration	0,006 %	0,012 %	0,024 %	0,006 %	0,012 %	0,024 %	0,006 %	0,012 %	0,024 %	0,006 %	0,012 %	0,024 %	0,006 %	0,012 %	0,024 %	0,006 %	0,012 %	0,024 %
CSSB-1	403.66 6 \pm 46.090	64.266 \pm 4.148	0	0,102 \pm 0,003	0,026 \pm 0,004	0	27.700. 000 \pm 89.296	337.33 3 \pm 8.020	0	0,103 \pm 0,006	0,026 \pm 0,006	0	36.333 \pm 4.725	0,5 \pm 0,5	0	0,031 \pm 0,006	0	0
CSSB-2	542.00 0 \pm 163.78 9	75.866 \pm 1.703	0	0,126 \pm 0,002	0,037 \pm 0,004	0	22.666. 666 \pm 67.644	371.66 6 \pm 820	0	0,094 \pm 0,008	0,030 \pm 0,002	0	20.833 \pm 2.466	1 \pm 1	0,666 \pm 0,288	0,027 \pm 0,003	0	0
CS	484.66 6 \pm 142.94 5	248.33 3 \pm 28.431	7 \pm 4	0,128 \pm 0,002	0,093 \pm 0,005	0	30.036. 666 \pm 52915	416.66 6 \pm 35.118	28 \pm 3	0,106 \pm 0,007	0,055 \pm 0,005	0,002 \pm 0,001	63.666 \pm 5.131	0,166 \pm 0,288	0,833 \pm 0,288	0,07 \pm 0,009	0	0
Untreated	761.66 6 \pm 100.04 1	760.00 0 \pm 9.165	762.66 6 \pm 62.681	0,183 \pm 0,005	0,186 \pm 0,010	0,18 \pm 0,008	35.620. 000 \pm 208.166	33.886 .666 \pm 130.91	34.886. 666 \pm 56.862	0,121 \pm 0,010	0,108 \pm 0,010	0,131 \pm 0,013	15.333. 333 \pm 5.131.6 01	29.533. 666 \pm 6.771.5 09	20.233. 333 \pm 3.257.8 11	0,205 \pm 0,005	0,213 \pm 0,059	0,269 \pm 0,034

Table S2: Effect of CS and CSSBs at different concentrations after 18 hours

Sample	<i>S. aureus</i>						<i>P. aeruginosa</i>						<i>C. albicans</i>					
	CFU/ml (mean \pm SD)			OD ₆₀₀ (mean \pm SD)			CFU/ml (mean \pm SD)			OD ₆₀₀ (mean \pm SD)			CFU/ml (mean \pm SD)			OD ₆₀₀ (mean \pm SD)		
Concentration	0,006%	0,012%	0,024%	0,006%	0,012%	0,024%	0,006%	0,012%	0,024%	0,006%	0,012%	0,024%	0,006%	0,012%	0,024%	0,006%	0,012%	0,024%
CSSB-1	1.686.66 \pm 32.145	102.666 \pm 2.516	0	0,201 \pm 0,008	0,084 \pm 0,006	0	32.100.000 \pm 182.482	983.666 \pm 7.505	0	0,251 \pm 0,008	0,047 \pm 0,010	0	93.333 \pm 10.785	0,333 \pm 0,577	0,833 \pm 0,273	0,094 \pm 0,006	0,009 \pm 0,001	0,006 \pm 0,001
CSSB-2	1.829.333 \pm 25.704	123.883 \pm 2.826	0	0,210 \pm 0,009	0,096 \pm 0,002	0	29.400.000 \pm 228.703	721.333 \pm 11.547	0	0,224 \pm 0,008	0,066 \pm 0,005	0	79.666 \pm 1.016	1,5 \pm 0,5	0	0,081 \pm 0,005	0,015 \pm 0,005	0,005 \pm 0,004
CS	3.543.333 \pm 30.550	1.750.333 \pm 71.178	18 \pm 9	0,261 \pm 0,006	0,275 \pm 0,008	0	39.000.000 \pm 235.094	1.971.666 \pm 57.518	74 \pm 3,6	0,283 \pm 0,011	0,125 \pm 0,007	0,004 \pm 0,001	103.000 \pm 5.291	2 \pm 1	9,8 \pm 2,363	0,116 \pm 0,005	0,005 \pm 0,003	0,005 \pm 0,001
Untreated	3.873.333 \pm 93.408	3.440.666 \pm 34.297	3.795.666 \pm 85.165	0,282 \pm 0,012	0,363 \pm 0,007	0,349 \pm 0,009	42.224.666 \pm 209.505	42.546.666 \pm 17.512	42.213.333 \pm 165.702	0,288 \pm 0,005	0,28 \pm 0,014	0,236 \pm 0,085	27.000.000 \pm 3.605.551	35.333.333 \pm 5.507.571	26.066.666 \pm 5.704.676	0,433 \pm 0,015	0,518 \pm 0,157	0,436 \pm 0,026

Table S3: Effect of CS and CSSBs at different concentrations after 24 hours

Sample	<i>S. aureus</i>						<i>P. aeruginosa</i>						<i>C. albicans</i>					
	CFU/ml (mean \pm SD)			OD ₆₀₀ (mean \pm SD)			CFU/ml (mean \pm SD)			OD ₆₀₀ (mean \pm SD)			CFU/ml (mean \pm SD)			OD ₆₀₀ (mean \pm SD)		
Concentration	0,006%	0,012%	0,024%	0,006%	0,012%	0,024%	0,006%	0,012%	0,024%	0,006%	0,012%	0,024%	0,006%	0,012%	0,024%	0,006%	0,012%	0,024%
CSSB-1	13.450. 000 \pm 921.832	128.000 \pm 3.000	0	0,383 \pm 0,007	0,102 \pm 0,010	0,003 \pm 0,001	106.800 .000 \pm 602.771	3.126.6 66 \pm 110.151	0	0,379 \pm 0,012	0,094 \pm 0,008	0	118.000 \pm 11.789	37,833 \pm 33,43	0	0,122 \pm 0,005	0,007 \pm 0,010	0,018 \pm 0,008
CSSB-2	14.803. 333 \pm 110.086	150.466 \pm 11.772	0	0,369 \pm 0,008	0,105 \pm 0,007	0,002 \pm 0,001	97.433. 333 \pm 896.288	3.367.0 00 \pm 98.422	0	0,384 \pm 0,018	0,102 \pm 0,003	0,006 \pm 0,001	112.333 \pm 7.505	2 \pm 1	3,666 \pm 4,041	0,118 \pm 0,002	0,021 \pm 0,004	0,027 \pm 0,012
CS	26.596. 666 \pm 195.533	4.736.6 66 \pm 100.166	28 \pm 36	0,461 \pm 0,006	0,384 \pm 0,007	0,011 \pm 0,008	124.333 .333 \pm 280.555	7.013.3 33 \pm 130.511	90 \pm 5,9	0,397 \pm 0,018	0,228 \pm 0,006	0,010 \pm 0,002	313.666 \pm 13.576	0,666 \pm 0,577	0,333 \pm 0,263	0,197 \pm 0,006	0,017 \pm 0,003	0,003 \pm 0,003
Untreated	54.700. 000 \pm 1.100.0 00	54.500. 000 \pm 1.212.4 36	54.333. 333 \pm 1.000.0 00	0,480 \pm 0,008	0,515 \pm 0,015	0,486 \pm 0,010	236.666 .666 \pm 2.360.5 55	243.700 .000 \pm 1.400.0 00	235.000 .000 \pm 2.646.0 00	0,416 \pm 0,013	0,485 \pm 0,015	0,525 \pm 0,058	53.666. 666 \pm 10.598. 742	85.000. 000 \pm 8.660.2 54	47.100. 000 \pm 4.028.6 47	0,511 \pm 0,018	0,622 \pm 0,096	0,541 \pm 0,046

Table S4. Percentage (%) reduction of CFU/ml versus untreated cells (*S. aureus*)

Sample	6h			18h			24h		
	0.006%	0.012%	0.024%	0.006%	0.012%	0.024%	0.006%	0.012%	0.024%
CSSB-1	47%	92%	100%	56%	97%	100%	75%	100%	100%
CSSB-2	29%	90%	100%	53%	96%	100%	73%	100%	100%
CS	36%	67%	100%	9%	49%	100%	51%	91%	100%

Table S5. Percentage (%) reduction of CFU/ml versus untreated cells (*P. aeruginosa*)

Sample	6h			18h			24h		
	0.006%	0.012%	0.024%	0.006%	0.012%	0.024%	0.006%	0.012%	0.024%
CSSB-1	22%	99%	100%	24%	98%	100%	55%	99%	100%
CSSB-2	36%	99%	100%	30%	98%	100%	59%	99%	100%
CS	16%	99%	100%	8%	95%	100%	47%	97%	100%

Table S6. Percentage (%) reduction of CFU/ml versus untreated cells (*C. albicans*)

Sample	6h			18h			24h		
	0.006%	0.012%	0.024%	0.006%	0.012%	0.024%	0.006%	0.012%	0,024%
CSSB-1	99%	100%	100%	99%	100%	100%	99%	100%	100%
CSSB-2	99%	100%	100%	99%	100%	100%	99%	100%	100%
CS	99%	100%	100%	97%	100%	100%	99%	100%	100%