

Article

Production of Satratoxin G and H is Tightly Linked to Sporulation in *Stachybotrys chartarum*

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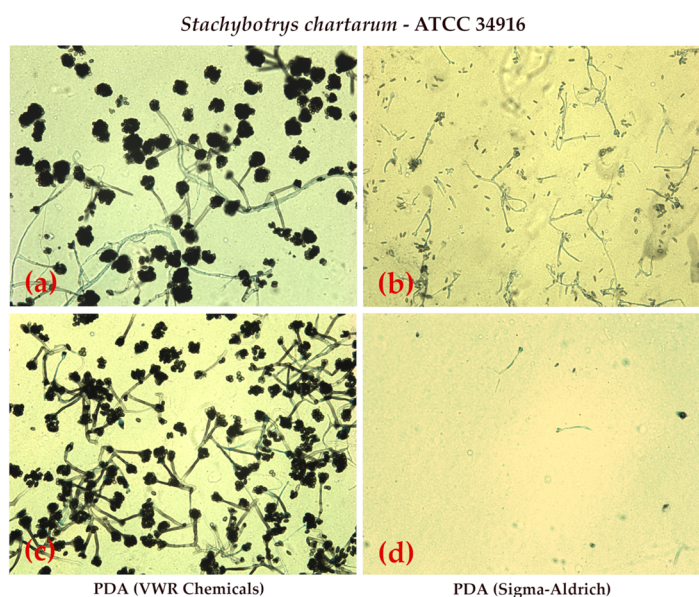


Figure S1. Microscopy (light microscopy, 200x, lactophenol blue staining) of *S. chartarum* genotype S strain ATCC 34916 as three-point (a and b) and one-point (c and d) culture shows the significantly reduced spore production on PDA-S (b and d) and thinner mycelium compared to the high rate of sporulation with well-grown mycelium on PDA-V (a and c).

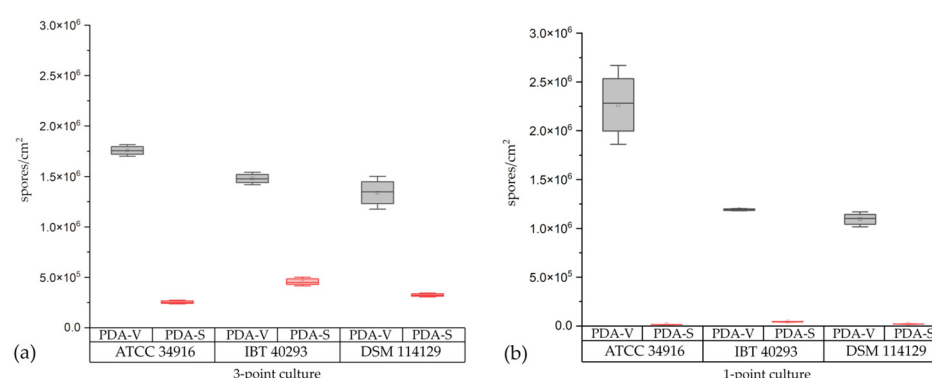


Figure S2. Spore count per cm² of *S. chartarum* genotype S strains (ATCC 34916, IBT 40293, and DSM 114129) on PDA-V (gray box plots) and PDA-S (red box plots) harvested from the nutrition media shown in Figure 1 (a: three-point cultures, b: one-point cultures).

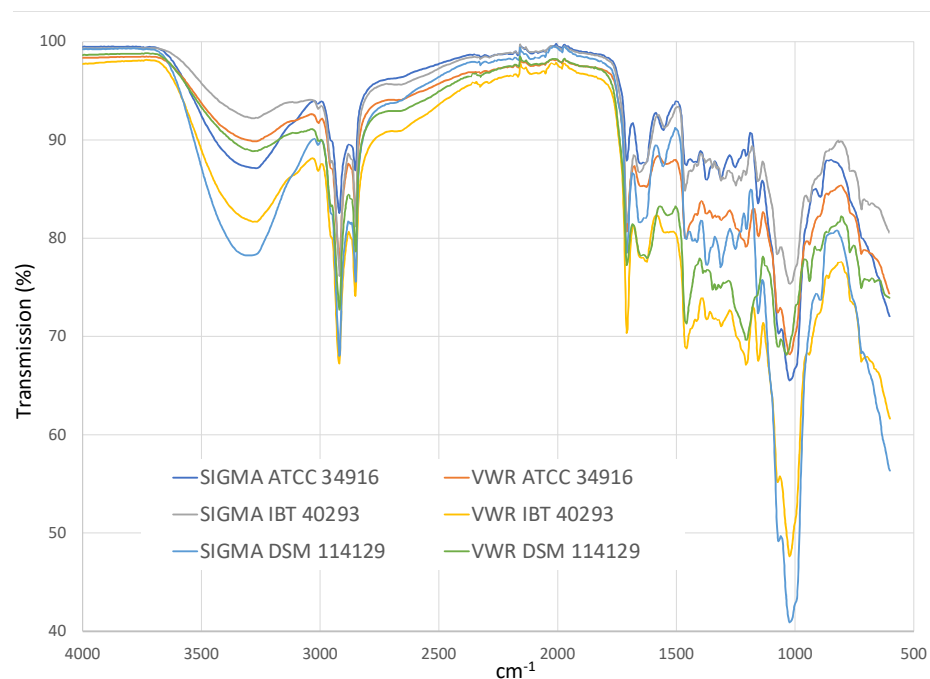


Figure S3. ATR-IR spectra of melanin extracted from *S. chartarum* genotype S strains (ATCC 34916: dark blue and orange, IBT 40293: gray and yellow, DSM 114129: light blue and green) grown on PDA-V and PDA-S (raw data can be found in Table S1).

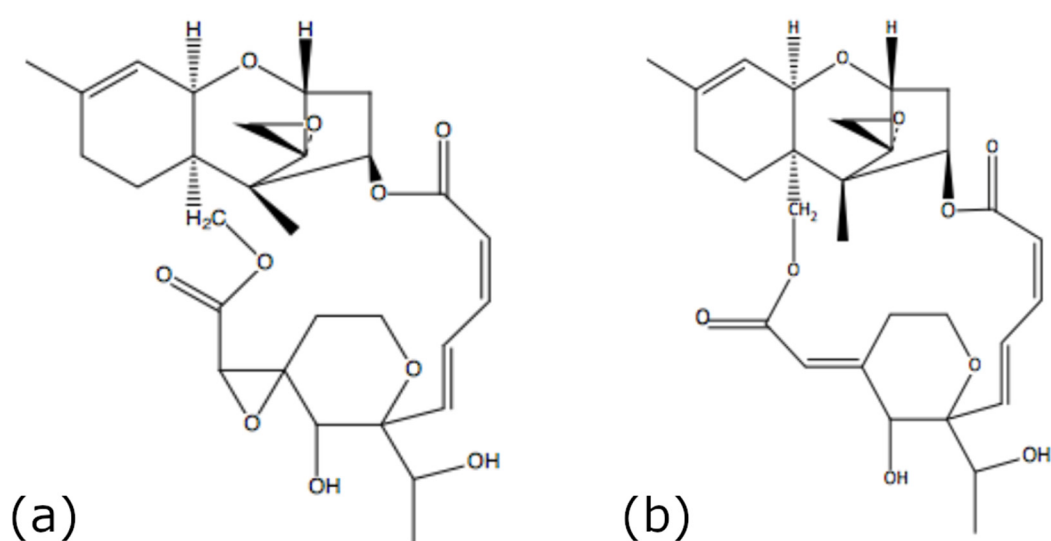


Figure S4. The chemical structures of the macrocyclic trichothecenes satratoxin G (a) and satratoxin H (b) produced by *S. chartarum* genotype S strains (Ulrich 2016).

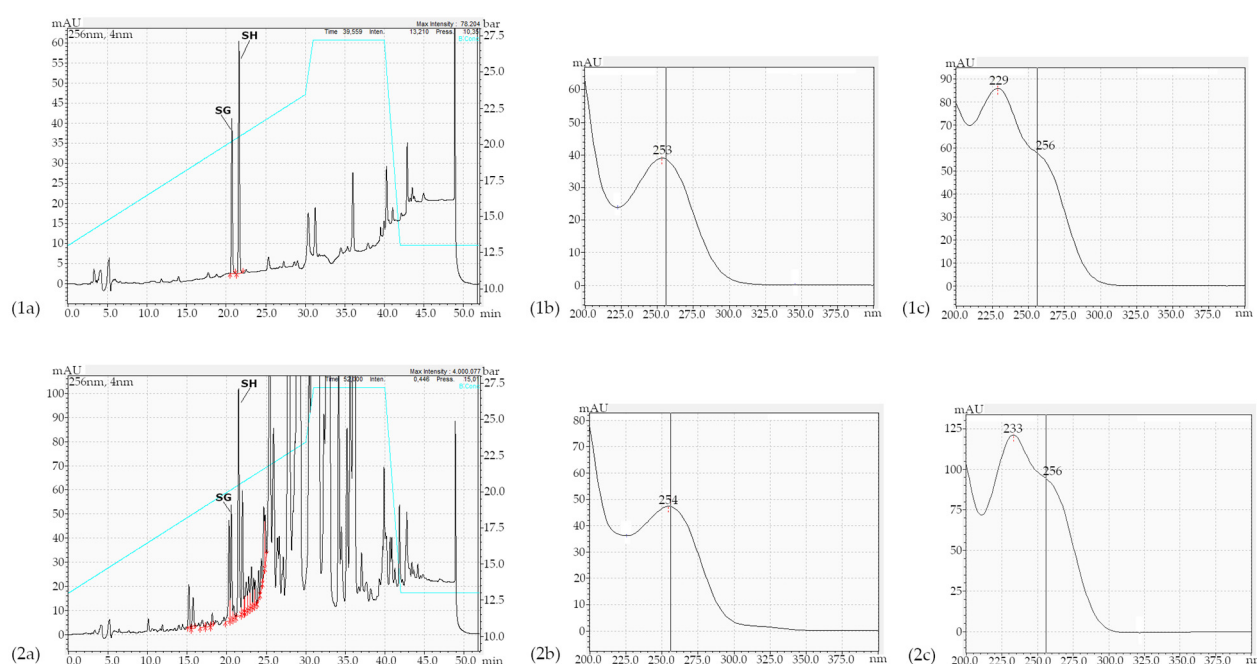


Figure S5. The HPLC chromatograms recorded at 256 nm of satratoxin G (SG) with a retention time (RT) of 20.73 min and satratoxin H (SH) with a RT of 21.62 min diluted in methanol (standard solution) at a concentration of 10.0 µg/mL (1a) with the corresponding UV spectra for SG (1b) and SH (1c) and the detected satratoxin G (15.6 µg/mL, RT: 20.60 min) and satratoxin H (22.9 µg/mL, RT: 21.60 min) in a toxin extract of *S. chartarum* genotype S strain ATCC 34916 grown on PDA-V as a three-point culture (2a) with the corresponding UV spectra for SG (2b) and SH (2c).

Table S2. Parameters describing colonies of ATCC 34916, IBT 40293, and DSM 114129 on PDA-V and PDA-S were used to determine the spore count after 21 days of growth (3-point cultures & 1-point cultures).

	Colony area		Spore count	
	cm ²	spores/Agar Plate	spores/cm ²	
ATCC 34916				
PDA-V	51.1 ± 0.5	8.992 × 10 ⁷ ± 2.765 × 10 ⁶	1.758 × 10 ⁶ ± 3.817 × 10 ⁴	
3-point culture				
IBT 40293				
PDA-V	49.1 ± 2.1	7.275 × 10 ⁷ ± 5.019 × 10 ⁶	1.480 × 10 ⁶ ± 4.135 × 10 ⁴	
3-point culture				
DSM 114129				
PDA-V	46.1 ± 0.8	6.183 × 10 ⁷ ± 6.010 × 10 ⁶	1.339 × 10 ⁶ ± 1.085 × 10 ⁵	
3-point culture				
ATCC 34916				
PDA-S	36.1 ± 1.1	9.167 × 10 ⁶ ± 2.566 × 10 ⁵	2.544 × 10 ⁵ ± 1.244 × 10 ⁴	
3-point culture				
IBT 40293				
PDA-S	38.0 ± 2.7	1.735 × 10 ⁷ ± 1.083 × 10 ⁶	4.572 × 10 ⁵ ± 2.892 × 10 ⁴	
3-point culture				
DSM 114129				
PDA-S	34.4 ± 0.2	1.118 × 10 ⁷ ± 4.752 × 10 ⁵	3.248 × 10 ⁵ ± 1.278 × 10 ⁴	
3-point culture				
ATCC 34916				
PDA-V	17.3 ± 0.4	3.933 × 10 ⁷ ± 5.150 × 10 ⁶	2.265 × 10 ⁶ ± 2.689 × 10 ⁵	
1-point culture				
IBT 40293	20.8 ± 0.4	2.483 × 10 ⁷ ± 6.292 × 10 ⁵	1.192 × 10 ⁶ ± 7.351 × 10 ³	

PDA-V				
1-point culture				
DSM 114129				
PDA-V	16.0 ± 0.2	$1.750 \times 10^7 \pm 1.000 \times 10^6$	$1.092 \times 10^6 \pm 5.099 \times 10^4$	
1-point culture				
ATCC 34916				
PDA-S	9.2 ± 0.3	$1.344 \times 10^5 \pm 5.079 \times 10^3$	$1.466 \times 10^4 \pm 6.075 \times 10^2$	
1-point culture				
IBT 40293				
PDA-S	6.5 ± 0.3	$2.808 \times 10^5 \pm 2.504 \times 10^4$	$4.297 \times 10^4 \pm 1.658 \times 10^3$	
1-point culture				
DSM 114129				
PDA-S	8.8 ± 0.3	$1.755 \times 10^5 \pm 7.013 \times 10^3$	$1.991 \times 10^4 \pm 6.816 \times 10^2$	
1-point culture				