

## Supplemental Material

### Statistical Data analysis

Table S1 shows the two tests performed, both the confidence intervals and the hypothesis test. As can be seen, the explants that are significantly different from the lower limit are in the A explants, for both Tapón aguanoso and Copena VI genotypes, which belong to the white and red LED lights. This means that there was a significant change in the growth of callus, roots and shoots in the explants. The difference from the value reported in both tests can be observed. In the C explants, a significant difference was observed only in Copena VI, as poor callus growth was observed in them. In the F explants, only the Tapón aguanoso explant is considered significant, since the white light contributed to the formation of shoots and callus but did not form roots. A clear trend can be observed that white and red LED light has an effect on the formation of shoots but does not contribute to the formation of callus.

**Table S1.** Hypothesis testing performed with a 95% confidence level

Explant		Confidence interval			Hypothesis with confidence intervals			Hypothesis with value p		
Cactus	Genotype	Callus	Shoot	Roots	Callus	Shoot	Roots	Callus	Shoot	Roots
	Type	confidence interval	confidence interval	confidence interval				0.05	0.05	0.05
A	Tapón	(1.273<1.4<1.527) 0.95	(1.192<1.7<2.208) 0.95	(4.307<8.5<12.69) 0.95	HA: is not rejected	HA: is not rejected	HA: is not rejected	HA: is not rejected	HA: is not rejected	HA: is not rejected
	Copena VI	(1.033<1.2<1.367) 0.95	(1.23<2.4<3.570) 0.95	(3.336<7.6<11.86) 0.95	HA: is not rejected	HA: is not rejected	HA: is not rejected	HA: is not rejected	HA: is not rejected	HA: is not rejected
B	Tapón	There was no influence on explant growth in callus, shoots, and roots.								
	Copena VI	The explant did not develop callus, shoots and roots.								
C	Tapón	(0.185<0.5<0.814) 0.95	(1.07<1.7<2.329) 0.95	(1.767<4.6<7.433) 0.95	H0. is not rejected	H0. is not rejected	H0. is not rejected	H0: is not rejected	H0: is not rejected	H0: is not rejected
	Copena VI	(0.515<0.7<0.884) 0.95	(0.33<0.7<1.069) 0.95	(2.676<7.3<11.92) 0.95	HA: is not rejected	HA: is not rejected	HA: is not rejected	HA: is not rejected	HA: is not rejected	HA: is not rejected
D	Tapón		(-0.145<0.6<1.345) 0.95	(7.058<8.3<9.542) 0.95		H0. is not rejected	H0. is not rejected	No callus formation	H0: is not rejected	H0: is not rejected
	Copena VI		(-0.048<0.2<0.448) 0.95	(-1.133<1.6<4.332) 0.95		H0. is not rejected	H0. is not rejected	Absent	H0: is not rejected	H0: is not rejected
E	Tapón	(-3.452<4.0<11.45) 0.95	(-0.069<0.8<1.669) 0.95		H0. is not rejected	H0. is not rejected		H0: is not rejected	H0: is not rejected	No roots formation

F	Copen a VI	(0.3<0.3<0.3) 0.95	(0.7<0.7<0.7) 0.95	H0. is not rejected	H0. is not rejected	standard deviation equal to 0	standard deviation equal to 0	Absent	
	Tapón	(1.225<4.0<6.77 4) 0.95	(0.323<0.6<0.877 ) 0.95	HA: is not rejected	HA: is not rejected	HA: is not rejected	HA: is not rejected	No roots formation	
	Copen a VI		(0.7<0.7<0.7 ) 0.95		H0. is not rejected	Absent	standard deviation equal to 0	Absent	
G	Tapón					Present	No effect in shoots and roots.		
	Copen a VI					Active	No present in shoots and roots.		
	Tapón					Active	No effect shoots and roots.		
H	Copen a VI					Present	No present in shoots and roots.		
	Tapón								
	Copen a VI								
I	Tapón		(1.107<2.1<3.093 ) 0.95	(2.465<4.7<6. 934 ) 0.95	H0. is not rejected	H0. is not rejected	Light	H0: is not rejected	H0: is not rejected
	Copen a VI		(1.905<2.0<2.095 ) 0.95	(- 4.266<5.6<15. 46 ) 0.95	H0. is not rejected	H0. is not rejected	Light	H0: is not rejected	H0: is not rejected
	Tapón		(0.104<0.8<1.495 ) 0.95		H0. is not rejected		Light	H0: is not rejected	Abscent
J	Copen a VI		(0.177<0.4<0.622 ) 0.95		H0. is not rejected		Light	H0: is not rejected	No present
	Tapón		(0.386<1.5<2.613 ) 0.95	(6.657<17.<27 .34 ) 0.95	H0. is not rejected	H0. is not rejected	No effect	H0: is not rejected	H0: is not rejected
	Copen a VI		(0.591<1.8<3.009 ) 0.95	(- 1.48<13.<27.4 8 ) 0.95	H0. is not rejected	H0. is not rejected	No present	H0: is not rejected	H0: is not rejected
K	Tapón								
	Copen a VI								
	Tapón								

L	Tapón	(1.7<1.7<1.7 ) 0.95	H0. is not rejected	No present	Very small	standard deviation equal to 0
	Copen a VI	(- 12.574<2.7<17 .97 ) 0.95	H0. is not rejected	No effect	Too small	H0: is not rejected
M	Tapón			Occurrence	No present	No effect
	Copen a VI			Presence	No effect	Abscent

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