

Article

Biotechnological approaches on two high CBD and CBG *Cannabis sativa* L. (Cannabaceae) varieties: In vitro regeneration and phytochemical consistency evaluation of micropropagated plants using quantitative $^1\text{H-NMR}$

Kostas Ioannidis ^{1,*}, Evangelos Dadiotis ², Vangelis Mitsis ³, Eleni Melliou ² and Prokopios Magiatis ²

¹ Laboratory of Sylviculture, Forest Genetics and Biotechnology, Institute of Mediterranean and Forest Ecosystems, Hellenic Agricultural Organization “Demeter”, Ilissia, 11528 Athens, Greece

² Department of Pharmacognosy and Natural Products Chemistry, Faculty of Pharmacy, National and Kapodistrian University of Athens, Panepistimiopolis Zografou, 15771 Athens, Greece; vaggdad@gmail.com (E.D.); emelliou@pharm.uoa.gr (E.M.); magiatis@pharm.uoa.gr (P.M.)

³ Ekati Alchemy Lab SL, 08180 Barcelona, Spain; ekatimed@gmail.com

* Correspondence: ioko@fria.gr; Tel.: +30-210-7783-750

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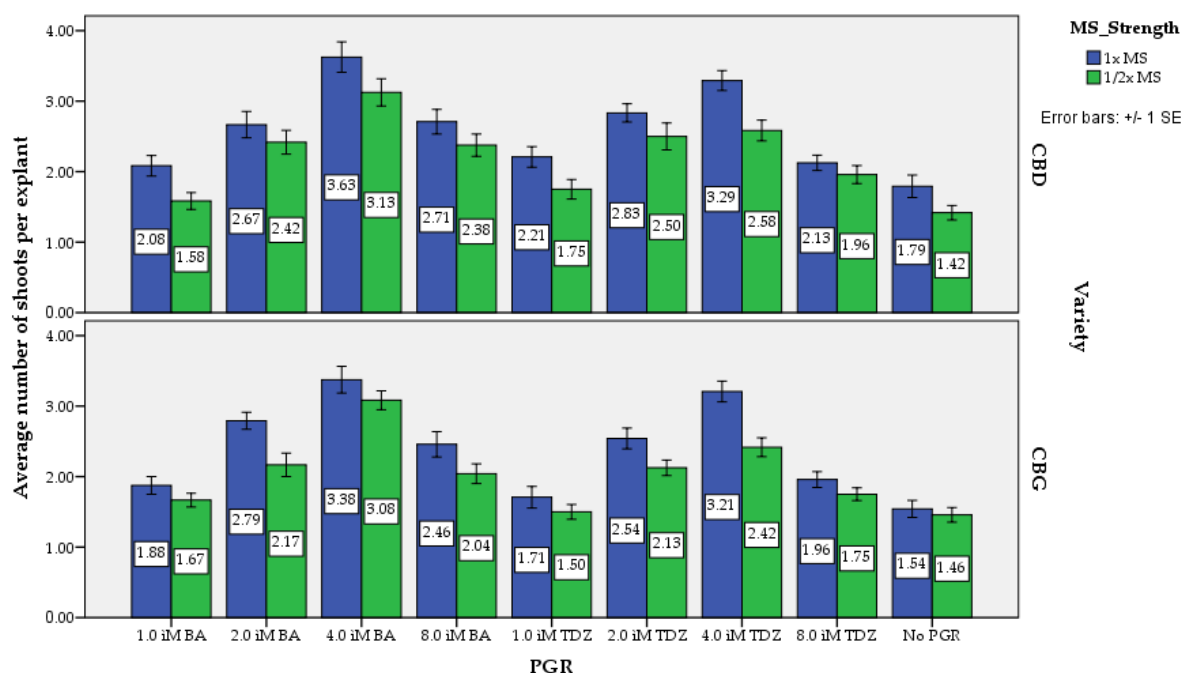


Figure S1. The effect of medium strength and plant growth regulators' concentration on the average number of shoots per explant of the high CBD and CBG *Cannabis sativa* varieties.

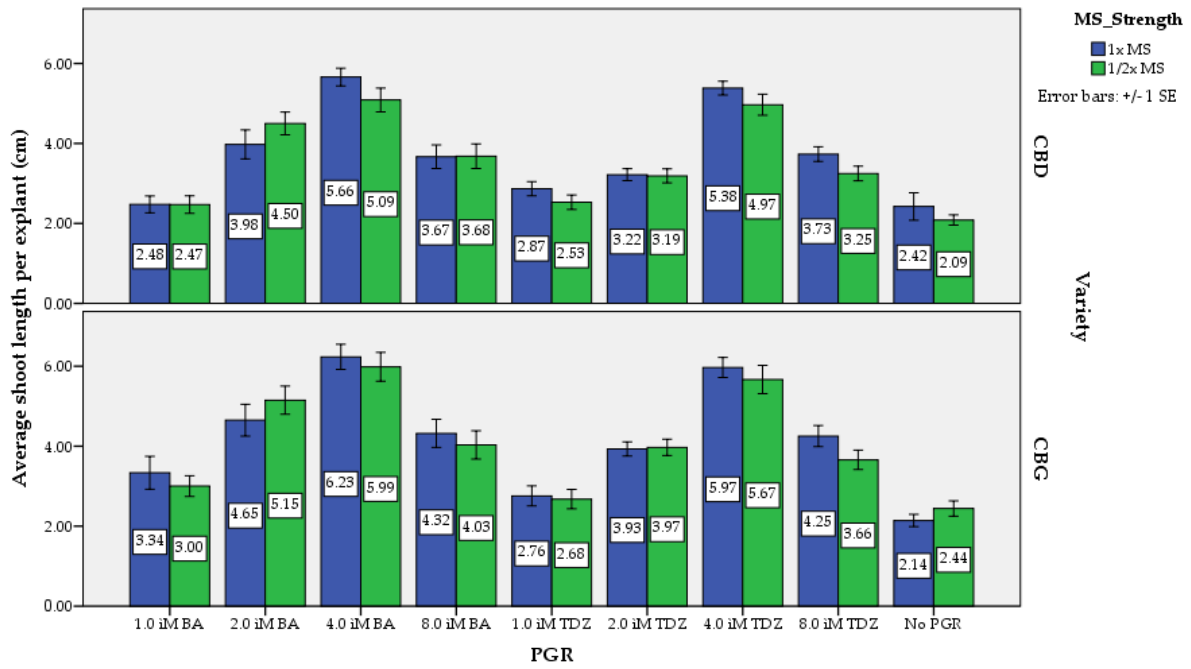


Figure S2. The effect of medium strength and plant growth regulators' concentration on the average length (cm) of shoots per explant of the high CBD and CBG *Cannabis sativa* varieties.

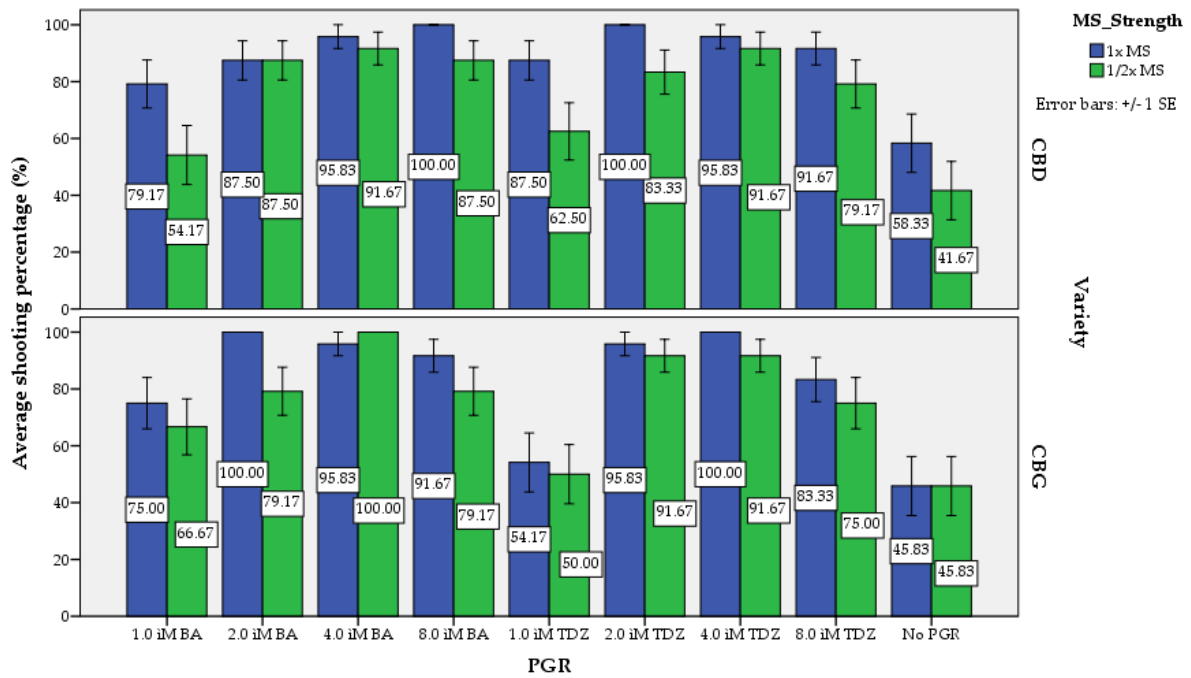


Figure S3. The effect of medium strength and plant growth regulators' concentration on the shoot formation percentage (%) of the high CBD and CBG *Cannabis sativa* varieties.

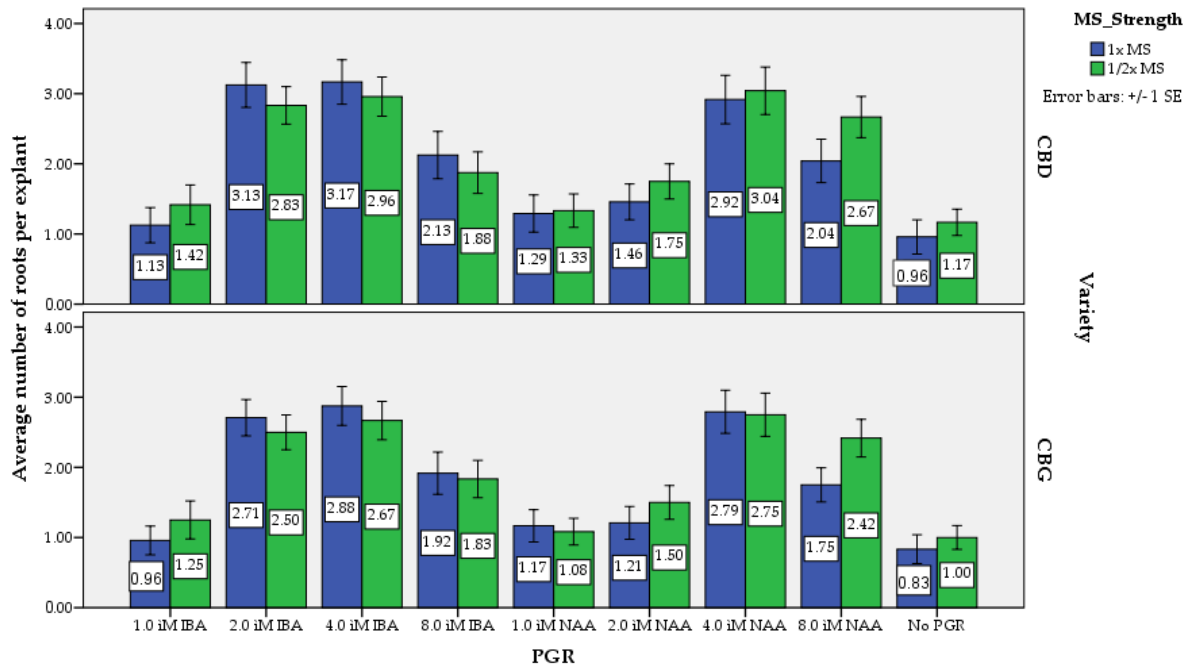


Figure S4. The effect of medium strength and plant growth regulators' concentration on the average number of roots per shoot of the high CBD and CBG *Cannabis sativa* varieties.

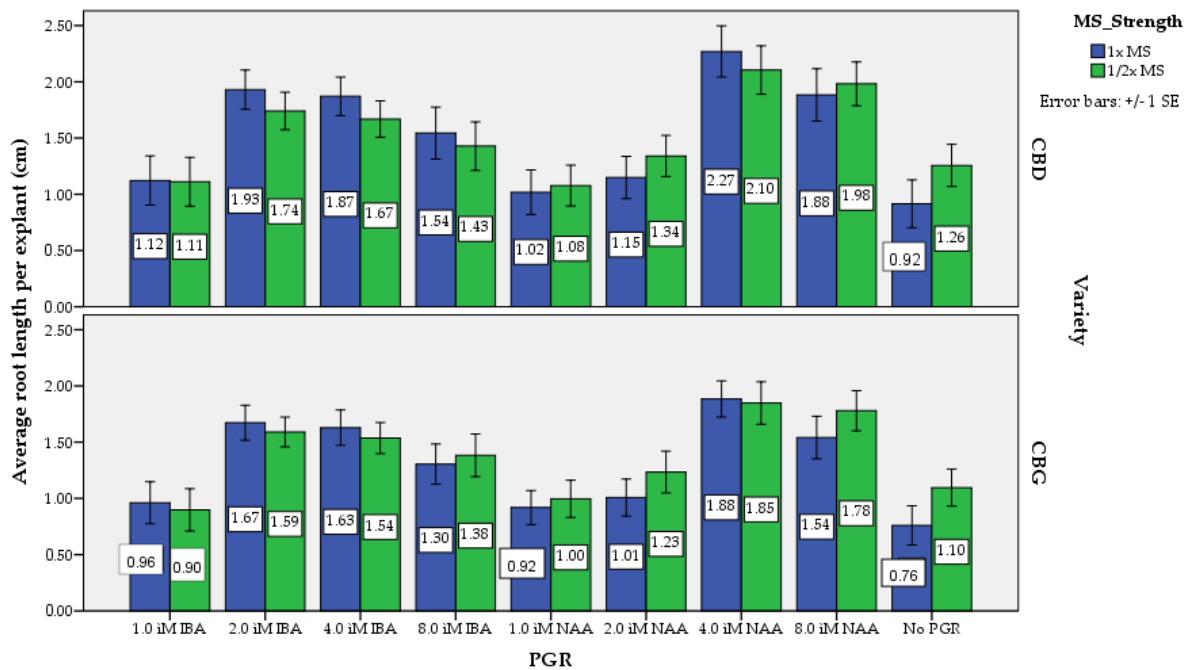


Figure S5. The effect of medium strength and plant growth regulators' concentration on the average length (cm) of roots per shoot of the high CBD and CBG *Cannabis sativa* varieties.

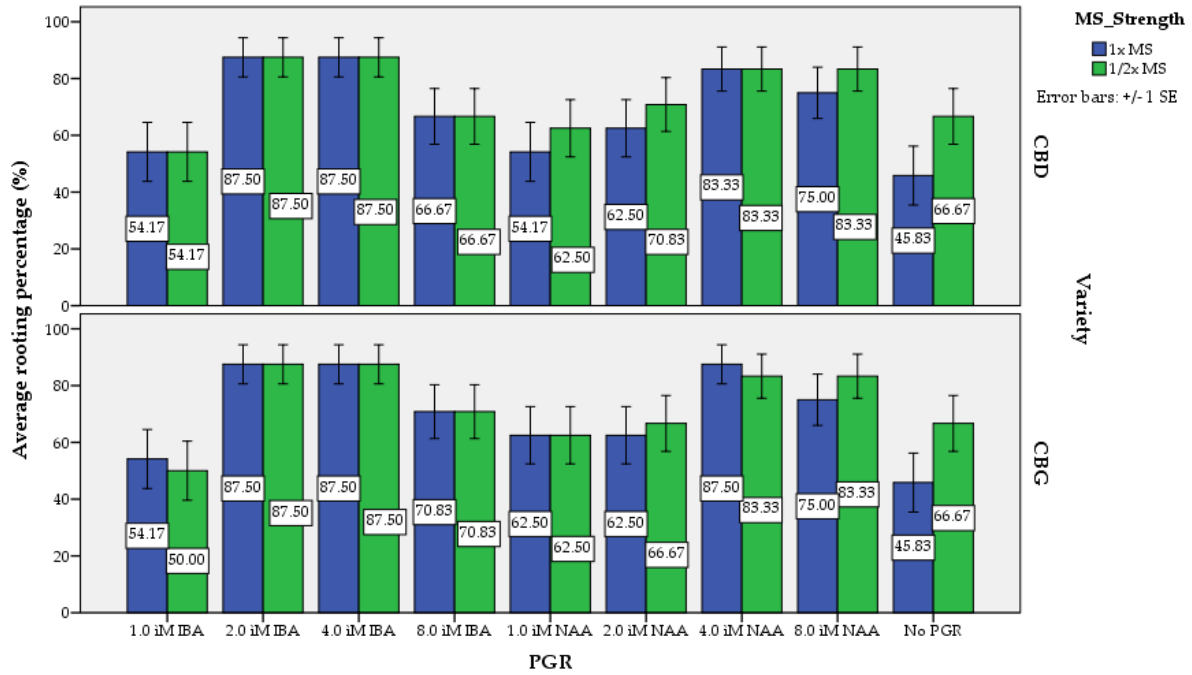


Figure S6. The effect of medium strength and plant growth regulators' concentration on the rooting.

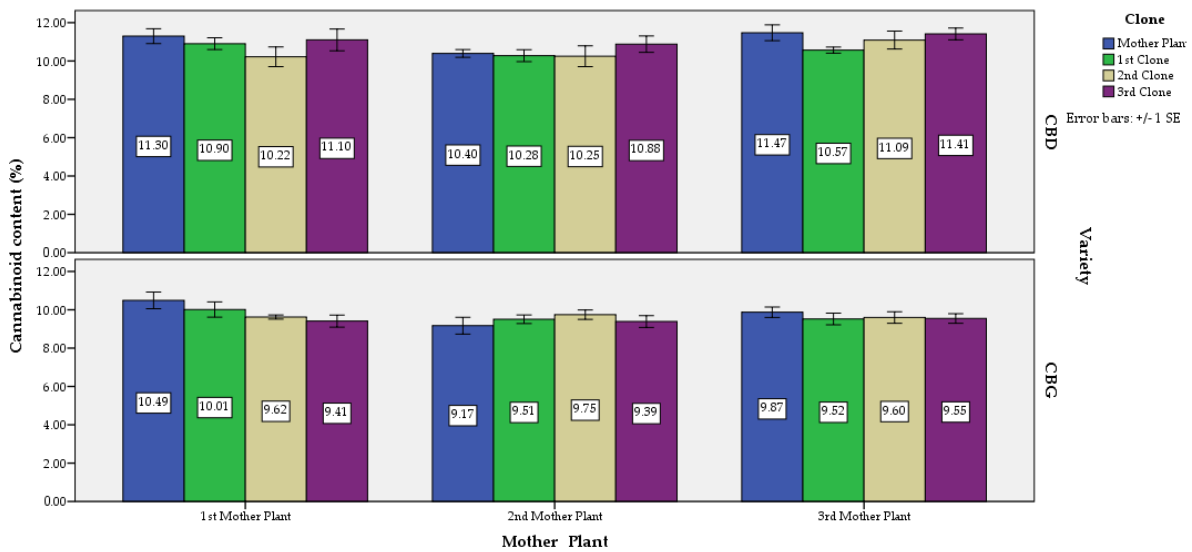


Figure S7. The CBD+CBDA and CBG+CBGA content (%) of the field grown mother plants and their clones of the two high CBD and CBG *Cannabis sativa* varieties.

Table S1. CBD+CBDA and CBG+CBGA content (%) of the field grown mother plants and their clones at different developmental stages of the two high CBD and CBG *Cannabis sativa* varieties (Data represent average \pm standard deviation).

Variety	Mother Plant (%)	Clone	Stage 1 (%)	Stage 2 (%)	Stage 3 (%)	Clone Mean at Maturity
CBD + CBDA	11.30 \pm 0.67	1	2.71 \pm 0.35	5.39 \pm 0.11	10.90 \pm 0.54	10.74 \pm 0.46
		2	2.64 \pm 0.06	5.18 \pm 0.37	10.22 \pm 0.89	
		3	3.04 \pm 0.08	5.24 \pm 0.28	11.10 \pm 0.98	
	10.40 \pm 0.35	1	2.99 \pm 0.38	5.37 \pm 0.45	10.28 \pm 0.54	10.47 \pm 0.36
		2	2.54 \pm 0.24	5.86 \pm 0.23	10.25 \pm 0.94	
		3	3.25 \pm 0.21	5.73 \pm 0.27	10.88 \pm 0.74	

	11.47 ± 0.72	1	3.00 ± 0.26	5.07 ± 0.30	10.57 ± 0.28	
		2	2.93 ± 0.25	6.14 ± 0.48	11.09 ± 0.81	11.02 ± 0.43
		3	2.59 ± 0.22	5.72 ± 0.42	11.41 ± 0.53	
	10.49 ± 0.75	1	3.11 ± 0.11	5.87 ± 0.44	10.01 ± 0.69	
		2	3.06 ± 0.95	6.01 ± 0.58	9.62 ± 0.19	9.68 ± 0.30
		3	2.47 ± 0.61	5.98 ± 0.65	9.41 ± 0.55	
CBG + CBGA	9.17 ± 0.76	1	2.96 ± 0.49	6.02 ± 0.61	9.51 ± 0.38	
		2	2.73 ± 0.65	5.47 ± 0.38	9.75 ± 0.42	9.54 ± 0.18
		3	3.22 ± 0.47	5.13 ± 0.63	9.39 ± 0.54	
9.87 ± 0.47	1	2.94 ± 0.15	5.84 ± 0.34	9.52 ± 0.52		
	2	2.40 ± 0.45	5.95 ± 0.57	9.60 ± 0.51	9.55 ± 0.04	
	3	2.99 ± 0.59	5.48 ± 0.60	9.55 ± 0.43		

CBD: cannabidiol, CBDA: cannabidiolic acid, CBG: cannabigerol and CBGA: cannabigerolic acid