Table S3. Alkaloids of medicinal importance produced in transgenic hairy root cultures

Plant species	*A. rhizogenes* strains	Compounds	Biologycal activity	References
Camptotheca acuminata Decne.	*A. tumefaciens* $C_{58}C_1$ (pRi A4)	Camptothecin	Antitumoral	Ni *et al.* (2011)
Peganum harmala L.	15834, TR 105, and LBA	β-Carboline alkaloids	Antiseptic	Zayed (2011)
Ophiorrhiza alata Craib	TISTR 1450	Camptothecin	Anitumoral	Ya-ut *et al.* (2011)
Hyoscyamus muticus L.	A4	Hyoscyamine, scopolamine, and tropine	Antispasmodic, analgesic, and sedative	Dehghan *et al.* (2012)
Physalis ixocarpa Brot.	ATCC 15834 and A4	Hyoscamine, atropine, and scopolamine	Antioxidant	Bergier *et al.* (2012)
Portulaca oleracea L.	ATCC 15834	Dopamine	Analgesic, anti-inflammatory, antifungal, and hypoglycemic	Ahmadi Moghadam *et al.* (2014)
Tribulus terrestris L.	AR15834 and GMI9534	ß-Carboline alkaloids	Anti-inflammatory	Sharifi *et al.* (2014)
Atropa belladona L.	ATCC 15834	Scopolamine	Treatment of parkinson's desease	Habibi *et al.* (2015)
Datura metel L.	A4	Atropine	Anticholinergic and antispasmodic	Shakeran *et al.* (2015)
Catharanthus roseus L.	AR15834 and A4	Catharanthine and ajmalicine	Antihypertensive	Benyammi *et al.* (2016)
Catharanthus roseus L.	K599 +p35SGFPGUS	Vincristine, vinblastine, and catharanthine	Antimicrobial	Hanafy *et al.* (2016)
Papaver orientale L.	ATCC 15834, GM, R1000, and C58C1	Morphinan alkaloids	Analgesic and sedative	Hashemi & Naghavi (2016)
Catharanthus roseus L.	pRiA4	Ajmalicine	Antihypertensive	Thakore *et al.* (2017)
Taxus baccata subsp. *wallichiana*	MTCC 532	Taxol	Anticancerogenic	Sahai & Sinha (2020)
Papaver armeniacum L.	C58C1, ATCC 15834, GM, and R1000	Papaverine, noscapine, thebaine, morphine, and codeine	Sedative and anticancerogenic	Sharifzadeh Naeini *et al.* (2021)
Trigonella foenum-graecum L.	ATCC 11325, ATCC 15834, A4, A7, A13, and K599	Trigonelline	Antidiabetic	Tariverdizadeh *et al.* (2021)

Table S3. (continued)

Plant species	*A. rhizogenes* strains	Compounds	Biologycal activity	References
Taxus× *media* var. *Hicksii* Rehd.	LBA 9402	Paclitaxel	Anticancerogenic	Sykłowska-Baranek *et al.* (2022)
Hyoscyamus muticus L.	A4	Hyoscyamine and hyoscine	Antibacterial	Abdelkawy *et al.* (2023)

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