

**Tabla 1. Estudios que han examinado los efectos de la EGCG sobre la neurogénesis y/o conducta en modelos de roedores.**

Especie/cepa	Tratamiento	Tiempos de tratamiento	Efecto sobre la neuroanatomía	Efectos sobre conducta o LTP	Referencia	
Ratones transgénicos Dyrk1A	YACTg152F7 mice	Daily green tea infusion (equivalent to administering 0.6–1 mg/day pure EGCG) or daily administration of polyphenon 60 solution (0.8 g/l, Sigma) containing a mixture of polyphenolic compounds. The dose is equivalent to 1.2 mg EGCG per day	From gestation to adulthood	Rescue of brain weight, brain volume and hypothalamus-thalamus volume	Rescue in the NOR test	12
	TgDyrk1A mice	EGCG in drinking water (EGCG concentration: 90 mg/ml for a dose of 2–3 mg per day). EGCG solution was prepared from a green tea leaf extract (Mega Green Tea Extract, Decaffeinated, Life Extension®, USA) standardized to 98% polyphenols with 45% EGCG per capsule	1 month in 21 day-old mice	Normalization of the density of Ki-67 positive cells and the proportion of cells exiting the cell cycle	N.D.	9
	mBACtgDyrk1a mice	Green tea extract solution in drinking water containing 0.25% green tea decaffeinated extract (0.8 mg/ml EGCG) and 0.25% glucose. Green tea extract contained 45% EGCG. Daily EGCG assumption ranged between 120 and 200 mg/kg	4–6 weeks in 3–4 month-old mice	Rescue of spine density in prefrontal cortex pyramidal cells	Rescue of LTP in the prefrontal cortex	13
	TgDyrk1A mice	EGCG in drinking water (EGCG concentration: 90 mg/ml for a dose of 2–3 mg per day). EGCG solution was prepared from a green tea leaf extract [Mega Green Tea Extract, Lightly Caffeinated (0.8% caffeine), Life Extension®, USA] standardized to 98% polyphenols with 45% EGCG per capsule	1 month in 3 month-old mice	N.D.	Rescue in the MWM and NOR tests	17

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	mBACtgDyrk1a	Polyphenon 60 (POL60, Sigma) solution in drinking water (final concentration of POL60: 225 mg/kg/day) containing green tea polyphenols with 27% EGCG, 42% other catechins (EC, ECG, EGC, and GC) with no effect on DYRK1A activity, and 8% caffeine. 1% sucrose was added	4 weeks in 3–4 month-old mice	Rescue of components in GABAergic and glutamatergic pathways in cortex and hippocampus	N.D.	14
	mBACtgDyrk1a	Administration of solid food pellets containing Decaffeinated Mega Green Tea Extract, Life Extension® (contains 45% EGCG and 53% other catechins). Mega Green Tea Extract was produced at a dose corresponding to 60 mg/kg/day EGCG	4 weeks in 3–4 month-old mice	N.D.	Improvement in the rate of spontaneous alternation in the Y-maze test	14
Ratones Ts65Dn	Hippocampal slices from Ts65Dn mice	10 µM pure EGCG (purity ≥95%)	1h prior to the experiment	N.D.	Rescue of LTP in CA1	15
	NPCs from the dentate gyrus of 6–8 week-old Ts65Dn mice	20 µM pure EGCG (purity ≥95%)	24h	Proliferation enhancement and rescue of mitochondrial biogenesis	N.D.	16
	Ts65Dn mice	EGCG in drinking water (EGCG concentration: 90 mg/ml for a dose of 2–3 mg per day). EGCG solution was prepared from a green tea leaf extract [Mega Green Tea Extract, Lightly Caffeinated (0.8% caffeine), Life	1 month in 3 month-old mice	N.D.	Rescue in the MWM and NOR tests	17

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	Extension®, USA] standardized to 98% polyphenols with 45% EGCG per capsule				
Ts65Dn mice	Pure EGCG in drinking water (EGCG concentration: ~100 mg/kg/day; purity ≥95%)	From postnatal day 24 to postnatal day 75	N.D.	No improvement in the radial-arm maze, delayed non-matching-to-place pattern separation tests	19
Ts65Dn mice	Pure EGCG in drinking water in a concentration of 0.124 mg/ml (~20 mg/kg/day; purity ≥95%)	3 or 7 weeks starting from 24 days of age	N.D.	No improvement in the OF, NOR, BB, DMNP or MWM tests	18
Ts65Dn mice	Polyphenon 60 (POL60, Sigma) solution in drinking water (final concentration of POL60: 225 mg/kg/day) containing green tea polyphenols with 27% EGCG, 42% other catechins (EC, ECG, EGC, and GC) with no effect on DYRK1A activity, and 8% caffeine. 1% sucrose was added	6 weeks in 3–4 month-old mice	Rescue of levels in GABAergic and glutaminergic markers in cortex and hippocampus	Rescue in the Y-maze test	14
Ts65Dn mice	Daily injection of pure EGCG (25 mg/kg; purity: ≥95%)	From postnatal day 3 to postnatal day 15	Rescue of proliferation, and cellularity in the dentate gyrus and rescue of connectivity in hippocampus and neocortex at P15. Disappearance of these effects at	No improvement in the Y-maze and MWM tests at P45	20

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			P45			
Ratones Transgénicos APP	APP/PS1 transgenic mice	Daily intragastric administration (pure EGCG concentration: 2 mg/kg; purity ≥95%)	1 month in 9 month-old mice	Attenuation of neuronal apoptosis in the hippocampus; deceleration of Aβ(1–40) plaque formation	Improvement in the PA and MWM tests	29
Ratones normosómicos	C57BL/6J mice	Green tea catechins (purity: 93%; EGCG: 71%; caffeine: 0.3%; Orient Tea Development Co., Ltd) in drinking water at different concentrations: 0.25, 0.5 and 1 g/l	6 months in 14 month-old mice	Prevention of age-related reductions of PSD-95 in the hippocampus. No effect on granule cell density	Improvement in the MWM test at the concentration of green tea catechins of 0.5 and 1g/l; no effect on OF	27
	C57BL/6J mice	Daily administration of pure EGCG (25 mg/kg; purity ≥95%) through oral gavage	1 month in 8 week-old mice	Proliferation enhancement in the dentate gyrus	N.D.	24
	C57BL/6J mice	Daily intraperitoneal injection of pure EGCG (20 mg/kg; purity ≥95%)	2 months in 2 month-old mice	Proliferation enhancement in the dentate gyrus	Improvement in the MWM test	26
	NPCs from the hippocampus of 8–10 week-old C57BL/6J mice	5, 10, 20, 40 μM of pure EGCG (purity ≥95%)	24h	Proliferation enhancement of adult NPCs (10, 20, 40 μM)	N.D.	26

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BALB/cJ mice	Food pellets made with Teavigo® (>90% EGCG, DSM Nutritional Products, Basel, Switzerland). Estimated EGCG dose ~250 mg/kg/day	39 days in 10 week-old mice	No effect on proliferation in the dentate gyrus	No improvement in the CFC test	31	
Ratas	Wistar rats	Green tea in drinking water (EGCG concentration: 299.56 µg/ml) and exercise	3 months and 7 days in 9 month-old rats	N.D.	No improvement in the OF, NOR, IA tests in rats treated with EGCG; improvement in these tests in rats treated with EGCG and exercise	32
	Sprague–Dawley rats	Daily injection of pure EGCG (100 mg/kg; purity ≥95%) in stressed rats	21 days in 8 week-old rats	N.D.	Rescue in the OF and MWM tests	28
	Wistar rats	Green tea catechins, Polyphenon E (63% (-)-epigallocatechin gallate, 11% (-)-epicatechins, 6% (-)-epigallocatechin and 6% (-)-epicatechin gallate) in drinking water	26 weeks in adult rats	Proliferation enhancement in the dentate gyrus	N.D.	25
	SH rats	Daily intraperitoneal injection of pure EGCG (100 mg/kg; purity ≥95%)	28 days in 8 week-old rats	N.D.	Rescue in the OF and MWM tests	30

Abbreviations: BB: Balance Beam; CFC: Contextual Fear Conditioning; DMNP: T-maze delayed non-matching-to-place; EC: epicatechin; ECG: epicatechin gallate; EGC: epigallocatechin; EGCG: epigallocatechin gallate; GC: galocatechin; GTC: green tea catechins; IA: inhibitory avoidance/aversive memory; MWM: Morris Water Maze; OF: Open Field; N.D.: not done; NOR: Novel Object Recognition; NPCs: neural progenitor cells; PA: Passive Avoidance; SH: spontaneously hypertensive