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Supplementary Materials

Eckol as a Potential Therapeutic against Neurodegenerative Diseases Targeting Dopamine D_3/D_4 Receptors

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Table S1. Experimental conditions for cell-based functional assays.

Assay/Receptor	Source	Stimulus	Incubation	Measured component	Detection method
D_1 (*h*) Dopamine (agonist effect)	Human recombinant (CHO cells)	None (control: 10 μM dopamine)	30 min RT	cAMP	HTRF
D_1 (*h*) Dopamine (antagonist effect)	Human recombinant (CHO cells)	Dopamine (300 nM)	30 min RT	cAMP	HTRF
D_3 (*h*) Dopamine (agonist effect)	Human recombinant (CHO cells)	None (control: 300 nM dopamine)	30 min 37 °C	cAMP	HTRF
D_3 (*h*) Dopamine (antagonist effect)	Human recombinant (CHO cells)	Dopamine (10 nM)	30 min 37 °C	cAMP	HTRF
D_4 (*h*) Dopamine (agonist effect)	Human recombinant (CHO cells)	None (control: 10 μM dopamine)	10 min 37 °C	cAMP	HTRF
D_4 (*h*) Dopamine (antagonist effect)	Human recombinant (CHO cells)	Dopamine (100 nM)	10 min 37 °C	cAMP	HTRF
M_5 (*h*) Muscarinic (agonist effect)	Human recombinant (RBL cells)	None (control: 0.624 μM ACh)	RT	Intracellular $[Ca^{2+}]$	Fluorimetry
M_5 (*h*) Muscarinic (antagonist effect)	Human recombinant (RBL cells)	ACh (10 nM)	RT	Intracellular $[Ca^{2+}]$	Fluorimetry
NK_1 (*h*) Tachykinin (agonist effect)	Human endogenous (U373MG cells)	None (control: 30 nM [Sar^9, $Met(O_2)^{11}$]-SP)	RT	Intracellular $[Ca^{2+}]$	Fluorimetry
NK_1 (*h*) Tachykinin (antagonist effect)	Human endogenous (U373MG cells)	[Sar^9, $Met(O_2)^{11}$]-SP (1 nM)	RT	Intracellular $[Ca^{2+}]$	Fluorimetry
V_{1a} (*h*) Vasopressin / Oxytocin (agonist effect)	Human recombinant (CHO cells)	None (control: 1 μM AVP)	RT	Intracellular $[Ca^{2+}]$	Fluorimetry
V_{1a} (*h*) Vasopressin / Oxytocin (antagonist effect)	Human recombinant (CHO cells)	AVP (10 nM)	RT	Intracellular $[Ca^{2+}]$	Fluorimetry
5-HT_{1A} (*h*) Serotonin (agonist effect)	Human recombinant (BA/F3 cells)	None (control: 2.5 μM serotonin)	RT	Intracellular $[Ca^{2+}]$	Fluorimetry
5-HT_{1A} (*h*) Serotonin (antagonist effect)	Human recombinant (BA/F3 cells)	Serotonin (30 nM)	RT	Intracellular $[Ca^{2+}]$	Fluorimetry

HTRF: Homogeneous time-resolved fluorescence.

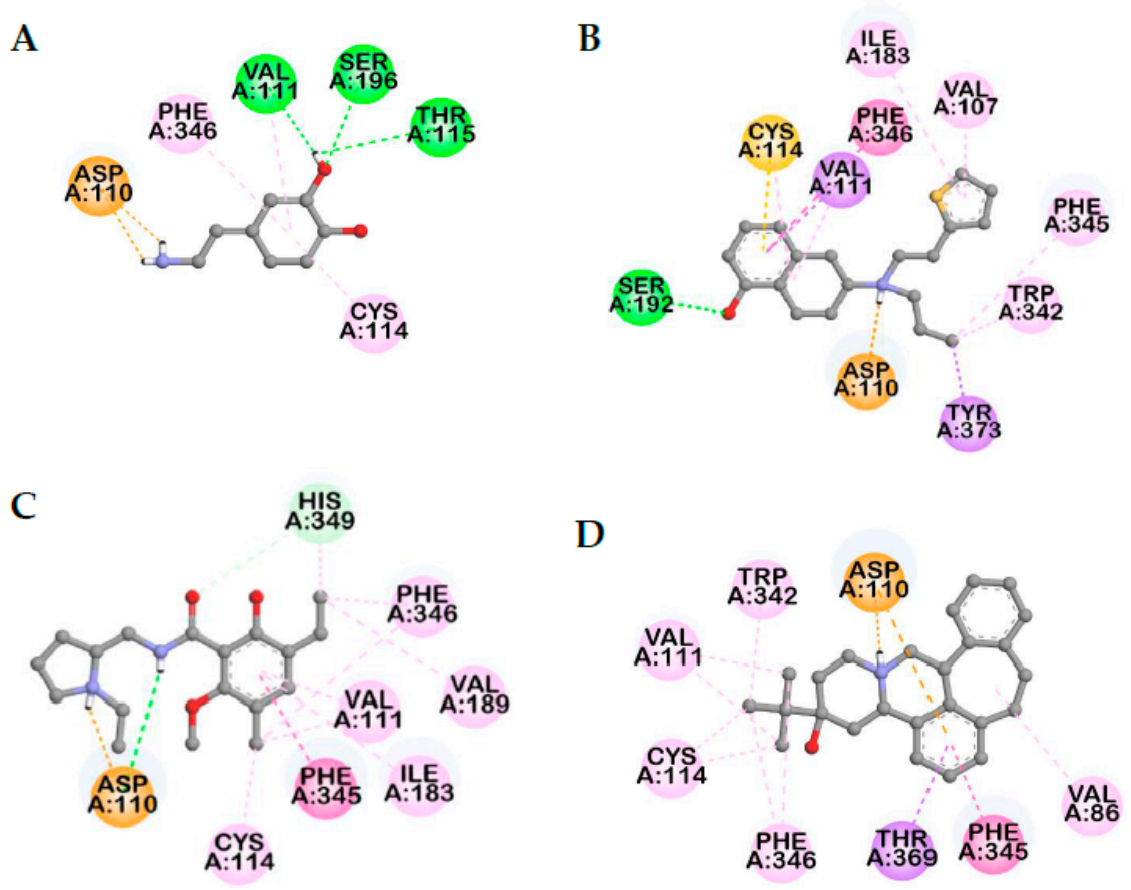

Figure S1. Molecular docking models for D_3R binding with positive controls, dopamine (**A**), reported agonist rotigotine (**B**), reported antagonists eticlopride (**C**) and (+)-butaclamol (**D**).

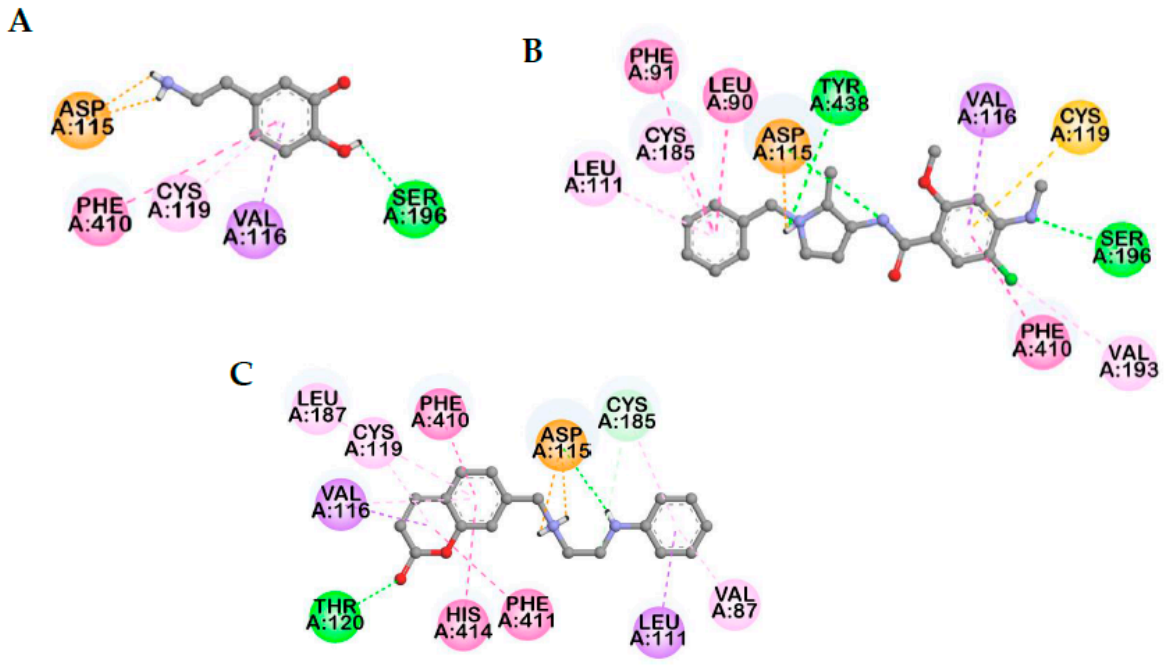

Figure S2. Molecular docking models for D_4R binding with positive controls, dopamine (**A**), reported agonist nemonapride (**B**), and reported antagonist CHEMBL332154 (**C**).