SUPPLEMENTARY MATERIAL

Peimine, an anti-inflammatory compound from Chinese herbal extracts, modulates muscle-type nicotinic receptors.

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Supplementary Figure 1. Lack of effect of Pm on GABA-elicited currents (I_{GABA}). A. Superimposed I_{GABA} elicited by 1 mM GABA alone (black recording) or together with 100 µM Pm (red trace) in an oocyte previously injected with synaptosomal-enriched rat-brain membranes. Notice that Pm, even at concentrations as high as 100 µM, did not attenuate I_{GABA}. B. Column graph showing the percentage of I_{GABA} in the control (black) and Pm (red) groups. There was not significant differences between both groups (p < 0.05, t-test). Data are from 5 oocytes of 3 donor frogs.
Supp. Table 1. Putative nAChR residues interacting with Pm in the open and the closed conformation, as predicted from molecular docking simulations.

| nAChR State | Domain | Pm Cluster | Binding energy (Kcal/mol) | Residues (subunit name-residue number) |
|-------------|--------|------------|---------------------------|---------------------------------------|
| OPEN        | TMD    | 1          | -10.12                    | β (A258, V261, F262, L265), γ (L265, A266, V269, F270, L273), α (V255, F256, V259, E262, I263), δ (F266, L267, Q270) |
|             |        |            |                           | α(244, L245, I247, S248), β (S250, I253, S254, L257, A258, V261, F262), γ (C262, L265, A266, V269, F270), α (S248, L251, S252, V255), δ (T252, S256, L259) |
|             |        | 2          | -10.57                    | α(219, C222, L223, F225, S226, V229, T230, F233, F234, S236, G243, I246, A247) |
|             |        | 3          | -11.24                    | γ(213, F214, N217, V218, I220, P221, I260, L263, L264, T267), δ (F266, A269, Q270, P273, L277, I281, L286, M290) |
|             |        | 4          | -11.06                    | α(219, C222, L223, F225, S226, V229, T230, F233, F234, S236, G243, I246, A247) |
|             |        | 5          | -10.82                    | (F134, L192, Y221, I222, I225, I226, C229, V230, V272, S276, V285, L286, F288, V289, V292, A446, I445, T446) |
|             |        | 6          | -10.71                    | β (E45, F135, Q185, W186, R215, P217, F219, Y220, I221, T224, V270, T273, S274, V277, P278, I280, D281, Y283, L284), γ (L283) |
|             |        | 7          | -10.68                    | γ (E47, F137, F139, W141, R223, K224, P225, V228, V229, F232, I233, L278, T281, V285, L287, V287, F292, N293, G294, E295, G296, P297, T298) |
|             |        | 8          | -10.56                    | α(219, C222, L223, F225, S226, V229, T230, F233, F234, S236, G243, I246, A247) |
|             |        | 9          | -10.42                    | γ (F137, R223, P225, V228, V229, F232, I233, L267, L278, T281, V285, L287, V291, L292, F294, N295, F296, L297) |
|             |        | 10         | -10.29                    | α(219, C222, L223, F225, S226, V229, T230, F233, F234, S236, G243, I246, A247) |
|             |        |            | -10                      | β (Y220, I221, Y222, T224, P227, L266, K269, V270, L272, T273), γ (L273, Q276, P279, E280, L283) |
|             |        | 11         | -9.87                     | α(217, P212, Y213, F214, N217, L263, S266, T267), δ (F266, A269, Q270, K271, P273, E274, L277, S281, M290) |
|             |        | 12         | -9.3                      | γ (E186, N187, G188, E189, W190, P225, L226, F227), α (V46, N47, Q48, Y127, I130, V132, S269, P272) |
| CLOSED      | TMD    | 1          | -11.2                     | β (A258, V261, F262, L265), γ (L265, A266, V269, F270), α (S248, L251, S252, V255), δ (T252, S256, L259, I263) |
|             |        | 2          | -12.87                    | β (Q185, L218, F219, Y220, V222, Y223), γ (T48, V134, A282, L283, A284, V285, P286, L287, R288, J289, L292, M293, M296) |
|             |        | 3          | -11.49                    | β (F135, Q185, P195, F210, Y220, I221, T224, K227, T273, S274, V277, P278, I279, D280, L281, P283, L284, I287), γ (L283) |
|             |        | 4          | -10.87                    | α(148, W149, T150, Y151, D152, Y159, P160, Y161, I268, P269) |
|             |        | 5          | -10.84                    | α(219, C222, L223, F225, S226, V229, T230, F233, F234, S236, G243, I246, A247) |
|             |        | 6          | -10.75                    | α(219, C222, L223, F225, S226, V229, T230, F233, F234, S236, G243, I246, A247) |
|             |        | 7          | -10.18                    | β (P242, P243, D244, A245, G246, E247, M249, L304, H305, H306, R307, S308, T308, H311, S312, V313, A314, A315, D316, γ (P317, S318) |
|             |        | 8          | -10.17                    | α(137, I210, F214, V215, F218, I219, C222, I224, L264, L273, Y277, M278, F280, T281, S284, G285, V286, R287, L289, F288) |
|             |        | 9          | -10.11                    | α(137, I210, F214, V215, F218, I219, C222, L223, T225, F226, S228, L229, S230, N231, V232, S233, L234, K235, K236) |
|             |        | 10         | -9.61                     | α(171, S217, G174, E175, P211, Y213, V217), δ (E45, E46, V430, J431, V432, A433, G434, R435, I436, γ (P437, S438) |
|             |        | 11         | -11.52                    | α(270, L424, L425, L427, S248, L251), β (D253, S254, L257, A258, V261, F262), γ (C262, L265, A266, V269, F270), α (S248, L251, S252, V255), δ (T252, S256, L259, I263) |
|             |        | 12         | -10.98                    | α(270, L424, L425, L427, S248, L251), β (D253, S254, L257, A258, V261, F262), γ (C262, L265, A266, V269, F270), α (S248, L251, S252, V255), δ (T252, S256, L259, I263) |