

Supplementary Files

Pharmacological Inhibition of Spleen Tyrosine Kinase Suppressed Neuroinflammation and Cognitive Dysfunction in LPS-induced Neurodegeneration Model

Min Woo Kim ^{1,†}, Kyonghwan Choe ^{1,2,†}, Jun Sung Park ^{1,†}, Hyeon Jin Lee ¹, Min Hwa Kang ¹, Riaz Ahmad ¹ and Myeong Ok Kim ^{1,3,*}

¹ Division of Life Sciences and Applied Life Science (BK 21 Four), College of Natural Science, Gyeongsang National University, Jinju 52828, Korea; mwkim0322@gnu.ac.kr (M.W.K.); k.choe@maastrichtuniversity.nl (K.C.); jsp@gnu.ac.kr (J.S.P.); lhj4912@gnu.ac.kr (H.J.L.); kmh1020@gnu.ac.kr (M.H.K.); riazk0499@gnu.ac.kr (R.A.)

² Department of Psychiatry and Neuropsychology, School for Mental Health and Neuroscience (MHeNs), Maastricht University, Maastricht 6229ER, The Netherlands

³ Alz-Dementia Korea Co., Jinju 52828, Korea

* Correspondence: mokim@gnu.ac.kr; Tel.: +82-55-772-1345

† These authors contributed equally to this paper.

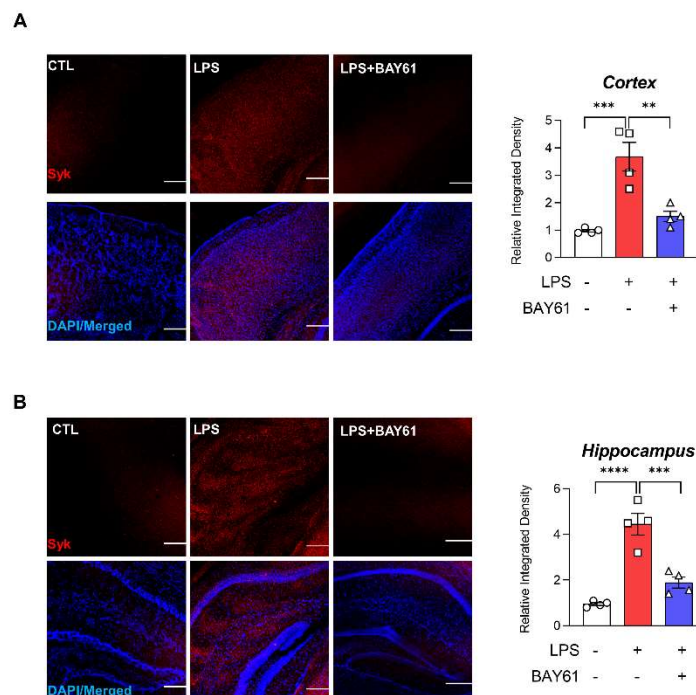


Figure S1. LPS-induced Syk expression is suppressed by BAY61-3606. Representative immunofluorescence images of Syk expression in (A) cortex and (B) hippocampus in LPS-induced mice with or without BAY61-3606. Scale bars, 100 μ m. Values indicate the mean \pm SEM, * $p < 0.05$, ** $p < 0.005$, *** $p < 0.0001$, **** $p < 0.00001$ compared with a group of interests and determined by one-way ANOVA followed by Tukey's multiple comparison test.

A

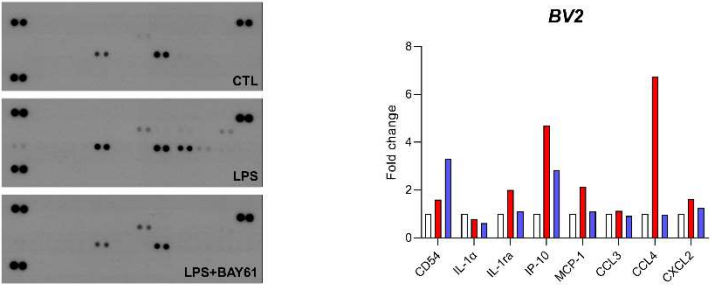
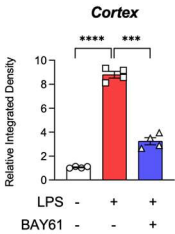
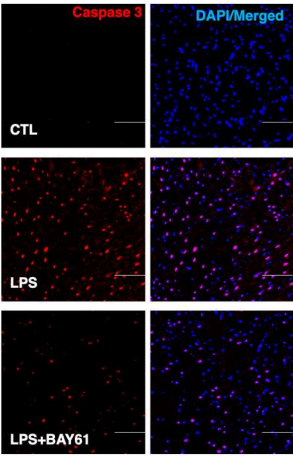


Figure S2. BAY61-3606 suppressed LPS-induced pro-inflammatory cytokines. (A) Dot blot of proteomic profiles for detecting inflammatory cytokines and quantification (Average of two independent experiments).

A



B

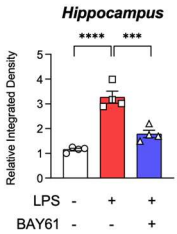
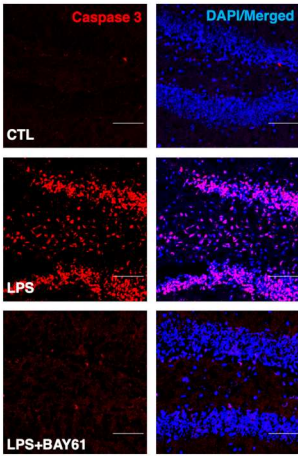


Figure S3. LPS-induced Caspase 3 is suppressed by BAY61-3606. Representative immunofluorescence images of Caspase 3 expression in (A) cortex and (B) hippocampus in LPS-induced mice with or without BAY61-3606. Scale bars, 25 μ m. Values indicate the mean \pm SEM, *** $p < 0.0001$, **** $p < 0.00001$ compared with a group of interests and determined by one-way ANOVA followed by Tukey's multiple comparison test.

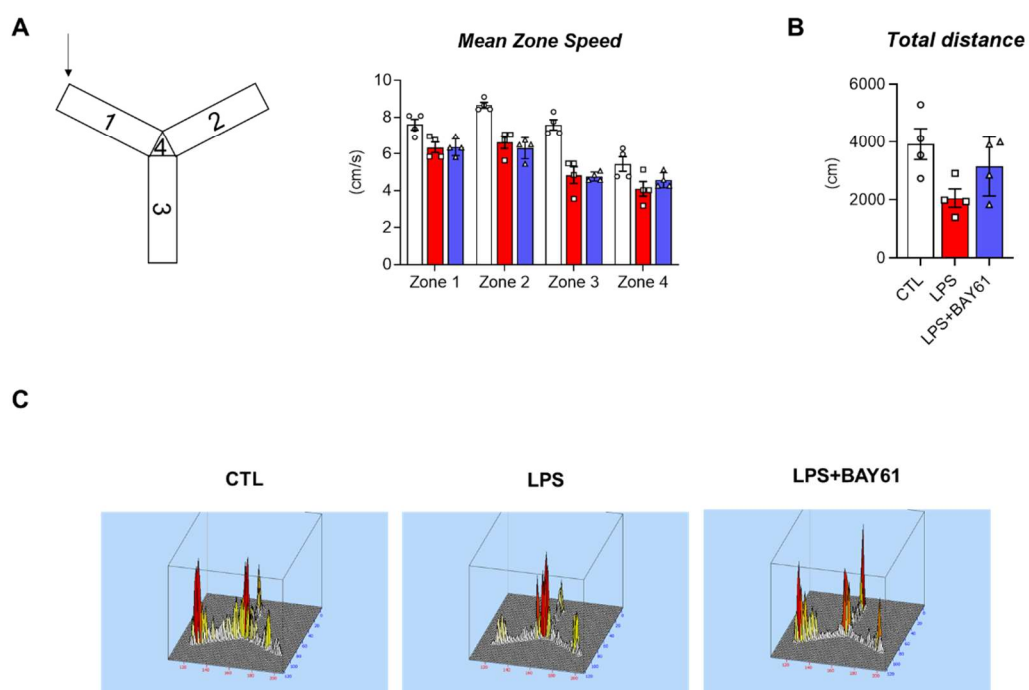


Figure S4. Effects of BAY61-3606 on LPS-induced spatial learning and memory impairments. **(A)** Definition of Y-maze zone (left) and mice speed in each zone. **(B)** Total distance in Y-maze zone. **(C)** Trajectory map of mice movements in Y-maze.