

SUPPLEMENTARY DATA

Senolytic Treatment Triggered by Carotid Occlusion Confers Protection Against Later Acute Ischemic Stroke in Aged Rats

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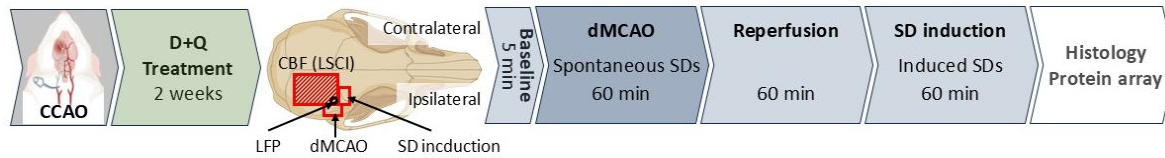


Figure S1. Schematic representation of the experimental protocol. Carotid stenosis was mimicked in rats by unilateral common carotid artery occlusion (1CCAO), followed by a two-week course of senolytic treatment (dasatinib + quercetin, D+Q). Under isoflurane anesthesia, a parietal cranial window was prepared by thinning the bone for laser speckle contrast imaging (LSCI) and local field potential (LFP) recording; a temporal cranial window provided access to the distal middle cerebral artery for occlusion with a microclip (dMCAO); and a small burr hole anterior to the parietal window was prepared to trigger spreading depolarizations (SD). The experimental protocol consisted of a 5-min baseline period, 60 min of ischemia induced by dMCAO, 60 min of reperfusion following microclip removal, and a subsequent 60 min interval during which SDs were triggered by topical application of 1 M KCl. At the end of the protocol, brain and blood samples were collected for histological and protein array analyses.

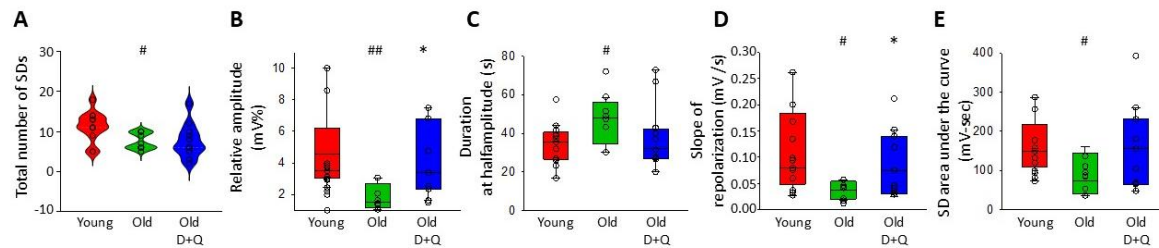


Figure S2. Dasatinib and quercetin (D+Q) counterbalance features of KCl-induced spreading depolarizations (SDs). **A**, Total number of SDs detected over 60 min of stimulation, observed either as negative DC potential shifts or as the typical cerebral blood flow (CBF) response to SD. **B**, relative SD amplitude. **C**, SD duration at half amplitude. **D**, slope of repolarization from SD. **E**, area under the curve of the SD-related negative DC potential shift. Data are presented as mean ± SD, with individual data points overlaid. Data normality was assessed using the Shapiro–Wilk test (A, $p = 0.324$; B, $p = 0.650$; C, $p < 0.001$; D, $p < 0.001$; E, $p < 0.001$; F, $p < 0.001$). For normally distributed datasets, one-way ANOVA with Holm–Sidak’s post hoc test was used, for non-normally distributed data, Dunn’s post hoc test was applied. Significance levels: $p < 0.05^{\#}$ and $p < 0.05^{\#\#}$ vs. Young; $p < 0.05^*$ vs. Old.