**ADDITIONAL FILE 1**

**Aryl Hydrocarbon Receptor Modulates Stroke-induced Astrogliosis and Neurogenesis in the Adult Mouse Brain**

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**Figure S1. Representative immunohistochemical staining for AHR intracellular distribution.**

Depending on the status of AHR expression and the availability of AHR ligands, which is presumably different among cells, AHR ligands would bind to cytoplasmic AHR for its activation and nuclear translocation dynamically. Compared with the normal AHRcKO which had little AHR immunoreactivity (B), the normal AHRflx/flx (A) showed predominantly nuclear distribution of AHR immunoreactivity, and to a lesser extent in the cytoplasm in Iba1-positive and Iba-1 negative cells.

**C:\Users\user\Desktop\neurogensis array-12(藥物基因統整).tif**

**Figure S2. The expression levels of 84 candidate genes and 5 housekeeping genes from the ipsilesional hemisphere by neurogenesis array.**

(A) The array data obtained by real-time polymerase chain reaction (RT-PCR). Changes beyond 1[±](https://tw.answers.yahoo.com/question/index?qid=20070702000016KK08383&p=%E6%AD%A3%E8%B2%A0)0.5-fold are shown as differentially expressed genes. The WT-Vehicle group show the upregulated gene expression of *S100β*, *Cxcl1*, *Bmp2*, *Tgfβ1*, *Odz1* and downregulated *Mef2c*, *Ngn2* and *Ngn1* at 48 hours after MCAO. In contrast, the WT-TMF group downregulated the gene expression of *S100β*, *Cxcl1*, *Bmp2*, *Tgfβ1*, and *Odz1* and upregulated *Mef2c*, *Ngn2* and *Ngn1* compared with vehicle treatment after MCAO. (B) On the other hand, in the AhRflx/flx group, upregulated *S100β* and *Cxcl1* gene expression was observed after MCAO. In AhRcKO mice, downregulated *S100β and Cxcl1* and upregulated *Ngn2, Nr2e3* and *Cdk5rap2* gene expression were noted compared with the AhRflx/flx group after MCAO (n=3/each group). (C) In summary of the 84 gene expression regulation, the common changes by pharmacological inhibition (TMF, marked in blue) and AhRcKO mice (marked in pink) were *S100β*, *Cxcl1*, *Ngn2,* and *Ngn1* (marked in purple). #p<0.05 compared with the respective normals. \*p<0.05 WT-TMF compared with the WT-Vehicle and AhRcKO compared with the AhRflx/flx.