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Bushen Zhichan Formula Affects Neurofunction and Fas/FasL Signal in Rats with Parkinson's Disease by Regulating Microglial Polarisation

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ABSTRACT The researchers have assessed the effect of Bushen Zhichan Formula (BSZCF) on the neurofunction and Fas/Fas ligand (FasL) signal in rats with Parkinson's disease (PD) by regulating microglial polarisation. Sham group, PD group, BSZCF group and DBSJ (levodopa and benserazide hydrochloride tablets) group were established for random allocation. The pole-climbing time, neurological function score, tumor necrosis factor-á and interleukin-6 levels in the substantia nigra, ionised calcium-binding adaptor molecule 1 (IBA1) cluster of differentiation 86 (CD86) cell count, CD86/CD206 ratio and Fas and FasL protein expressions significantly declined, whereas the Tamm-Horsfall protein expression, hanging score, and number of $IBA1^{+}CD206^{+}$ cells in the substantia nigra significantly increased in BSZCF and DBSJ groups compared to those in the PD group ($P<0.05$). BSZCF can alleviate neurological injuries and repress dopaminergic neuron loss mediated by the Fas/FasL signalling pathway.