

Special Issue

Steering Functional Pathways, Genomic and Non-genomic, to Keep Neurodegeneration in Check

Message from the Guest Editor

TSPO was discovered in the early 1970s, and it is becoming more and more understood that TSPO can be targeted to treat neurological disorders. From its location in the mitochondria, TSPO is able to modulate various intracellular molecular biological mechanisms and, thus, regulate various cellular mechanisms, thereby affecting tissue and organ functions—for example, transport of molecules over the outer mitochondrial membrane, including Ca^{++} , ATP, ROS, cholesterol, tetrapyrroles, cytochrome c, etc. Here, programmed cell death, gene expression, and metabolism is regulated. Consequently, the TSPO regulates inflammation and immune responses, as well as cell proliferation, migration, adhesion, differentiation, regeneration, wound healing, and angiogenesis. These are all essential functions related to various brain disorders and their healing. Interestingly, it is not only TSPO and its ligands that are able to do this; similar effects can also be achieved also via other functional pathways and proteins. Hopefully, the expansion of our knowledge of TSPO and other pathways will lead to efficacious treatments for various brain disorders.

Guest Editor

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