

主な研究課題・発表代表論文

臨床神経学講座（旧神経内科学講座）Neurology

研究領域 脳・神経病態制御医学

教授

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主な研究課題

- ・自己免疫性神経・筋疾患の発症機序の解明へ向けた細胞生物学的研究
- ・血液脳関門，血液神経関門の人為的操作による免疫性神経疾患および神経変性疾患の新規治療法の開発
- ・ギラン・バレー症候群の病態解明および新規治療法の開発
- ・末梢神経疾患の臨床病理学的研究

発表代表論文

- 1) Fujisawa M, et al. Exploring lipophilic compounds that induce BDNF secretion in astrocytes beyond the BBB using a new multi-cultured human in vitro BBB model. *J Neuroimmunol*. 2022; 362: 577783.
- 2) Nishihara H, et al. Intrinsic blood-brain barrier dysfunction contributes to multiple sclerosis pathogenesis. *Brain*. 2022 Jan 27;awac019.
- 3) Shimizu F, et al. GRP78 antibodies are associated with blood-brain barrier-breakdown in anti-myelin oligodendrocyte glycoprotein antibody-associated disorder. *Neurol Neuroimmunol Neuroinflamm* 2021; 9: e1038. .
- 4) Takeshita Y, et al. New BBB models revealed IL-6 blockade suppressed the BBB disorder, preventing of onset of NMOSD. *Neurol Neuroimmunol Neuroinflamm* 2021; 8: e1076.
- 5) Nishihara H, et al. Advancing human induced pluripotent stem cell-derived blood-brain barrier models for studying immune cell interactions. *FASEB J* 2020; 34: 16693-16715.
- 6) Shimizu F et al. GRP78 antibodies damage the blood-brain barrier and relate to cerebellar degeneration in Lambert-Eaton myasthenic syndrome. *Brain*. 2019 ; 142 : 2253-2264.
- 7) Shimizu F et al. Increased IP-10 production by blood-nerve barrier in multifocal acquired demyelinating sensory and motor neuropathy and multifocal motor neuropathy. *J Neurol Neurosurg Psychiatry* 2018. pii : jnnp-2018-319270
- 8) Koga M et al. Distal limb weakness phenotype of Guillain-Barre syndrome. *J Neurol Sci* 2018 ; 392 : 83-88.
- 9) Shimizu F et al. Glucose-regulated protein 78 autoantibody associates with blood-brain barrier disruption in neuromyelitis optica. *Sci Transl Med*. 9 ; pii : eaai 9111. 2017.
- 10) Takeshita Y et al. Effects of neuromyelitis optica-IgG at the blood-brain barrier in vitro. *Neurol Neuroimmunol Neuroinflamm* 2016; 4: e311.

- 11) Sano H, et al. Establishment of a New Conditionally Immortalized Human Skeletal Muscle Microvascular Endothelial Cell Line J Cell Physiol. 232 : 3286-3295, 2017.
- 12) Nishihara H, et al. Identification of galectin-3 as a possible antibody target for secondary progressive multiple sclerosis Mult Scler. 23 : 382-394, 2016.
- 13) Shimizu F et al. Sera from patients with multifocal motor neuropathy disrupt the blood-nerve barrier. J Neurol Neurosurg Psychiatry. 2014; 85: 526-37.