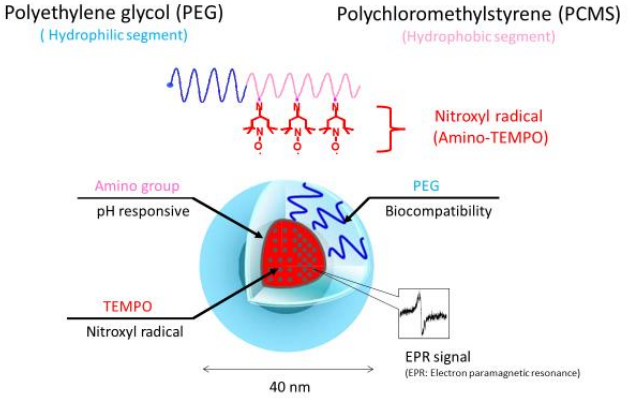
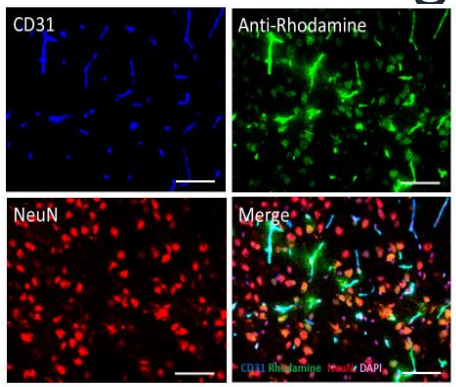
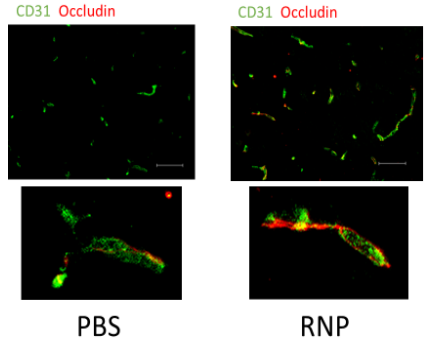
From Laboratory of Neurosurgery

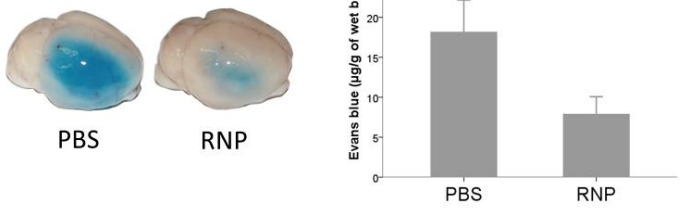
Neurovascular Unit Protection from Cerebral Ischemia–Reperfusion Injury by Radical-Containing Nanoparticles in Mice



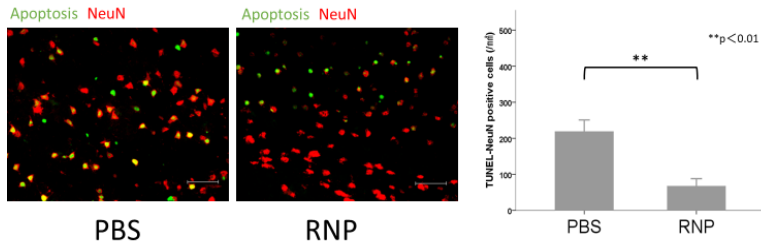


Rh-RNP were distributed in ischemic brains 3h after injection.

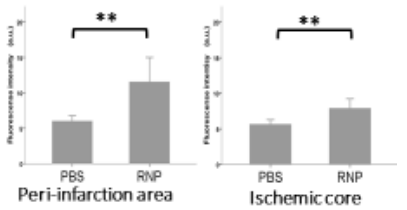




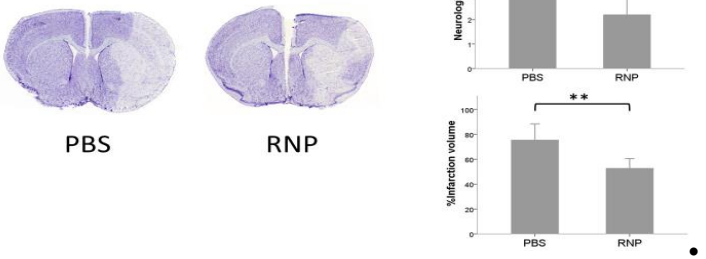
RNP attenuated Evans Blue extravasation in ischemic hemisphere.



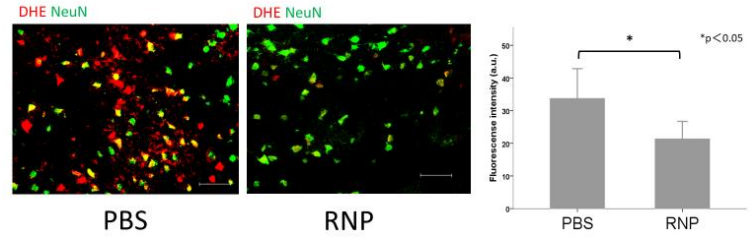
RNP reduced apoptosis in the infarction area.



RNP prevents degradation of microvessels and their tight junctions.



RNP improved neurological deficits and reduced infarction volume.



RNP suppressed superoxide anion generation and oxidative DNA damage.

- **Our study suggests that RNP is a useful nanoparticle for treating cerebral ischemic-reperfusion injury.**
- **An intra-arterial RNP injection could be a promising treatment strategy for neurovascular unit protection by reducing infarction volume and BBB damage and improving multiple ROS scavenging capacities.**

References: Hosoo H, et al., *Stroke.* 2017; 48: 2238–2247
Contact : Dr. Aiki Marushima