

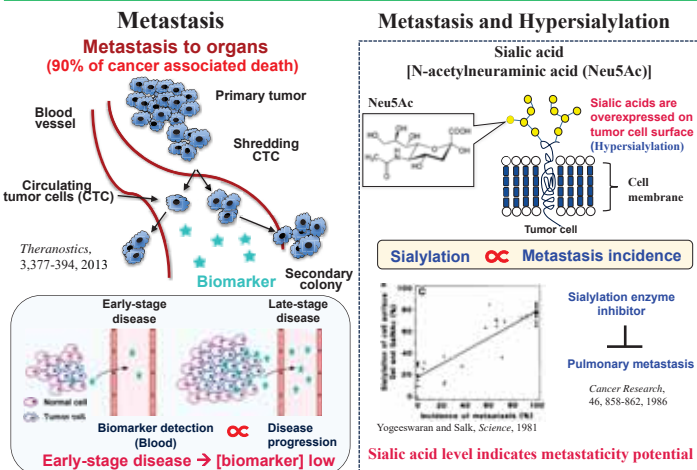
Detection of hypersialyated metastatic cancers by surface enhanced Raman scattering

表面増強ラマン散乱による シアル酸高発現転移性癌の検出

概要

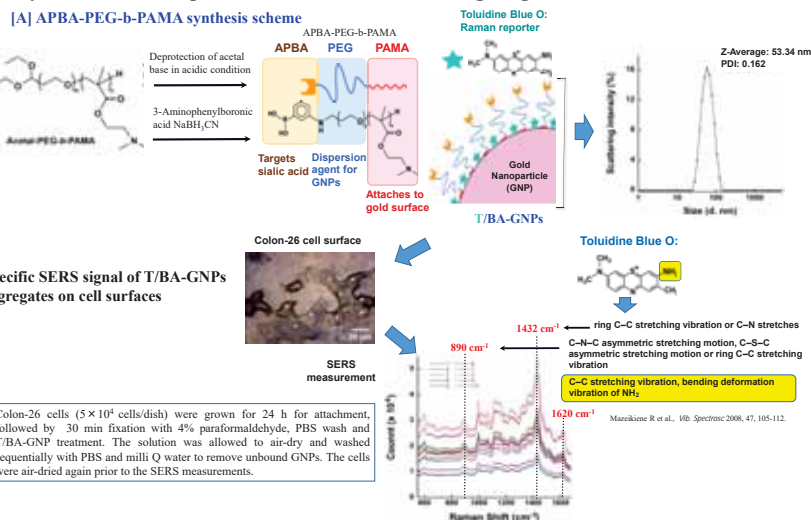
- [1] Application of phenyl-boronic acid-installed PEGylated (APBA-PEG-*b*-PAMA) gold nanoparticles (GNP) coupled with Toluidine blue O (T/BA-GNPs) as surface enhanced Raman scattering (SERS) probes to target surface hypersialyated (N-acetylneuraminic acid, Neu5Ac) metastatic cancer cells and tumors tissue explants.
- [2] Reactive oxygen species (ROS)-mediated abrogation of sialylation pathway in cancer cell lines by nitroxide-radical containing nanoparticle (RNP)

INTRODUCTION



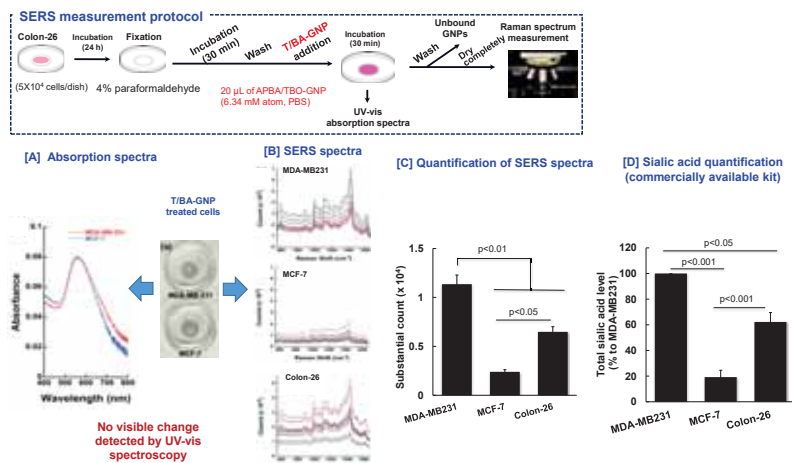
This study

Synthesis of SERS probe APBA-PEG-*b*-PAMA targeting sialic acid

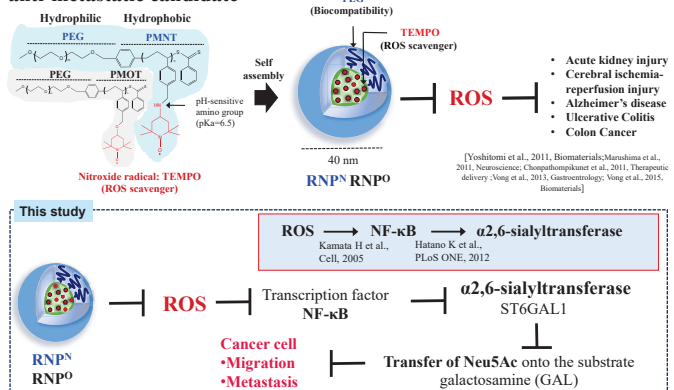


RESULTS

[1] SERS intensity correlates with metastatic potential in breast cancer cell lines

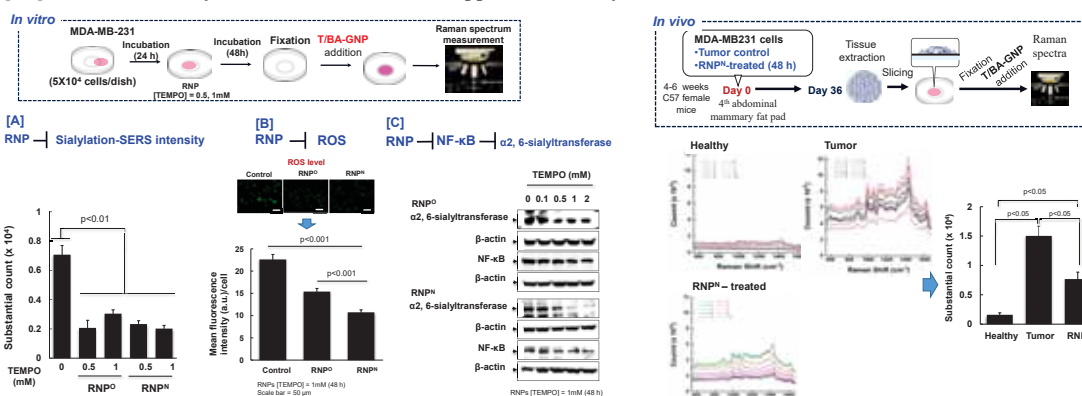


[2] ROS scavenging nitroxide-radical containing nanoparticles (RNPs) as anti-metastatic candidate



CONCLUSION

[2.1] RNPs inhibit sialylation via ROS-mediated suppression of sialyltransferase



T/BA-GNP-SERS Potential cytodiagnostic system

