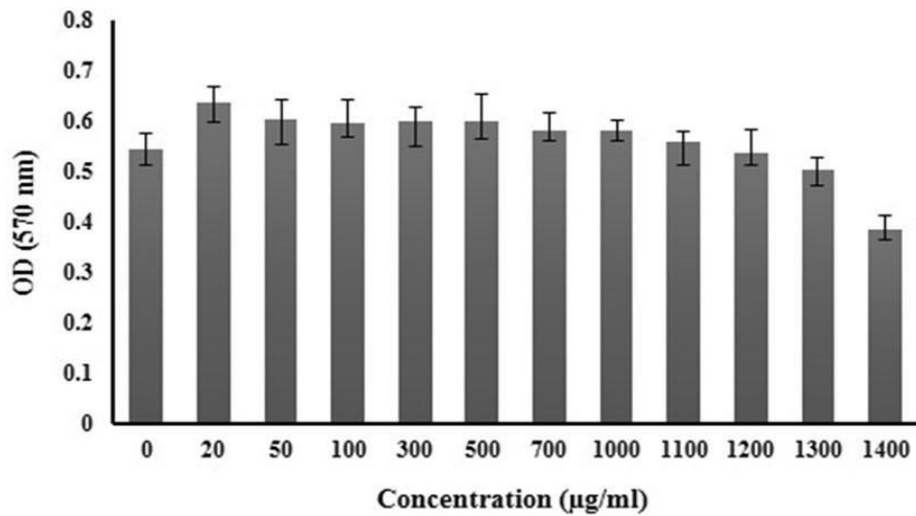
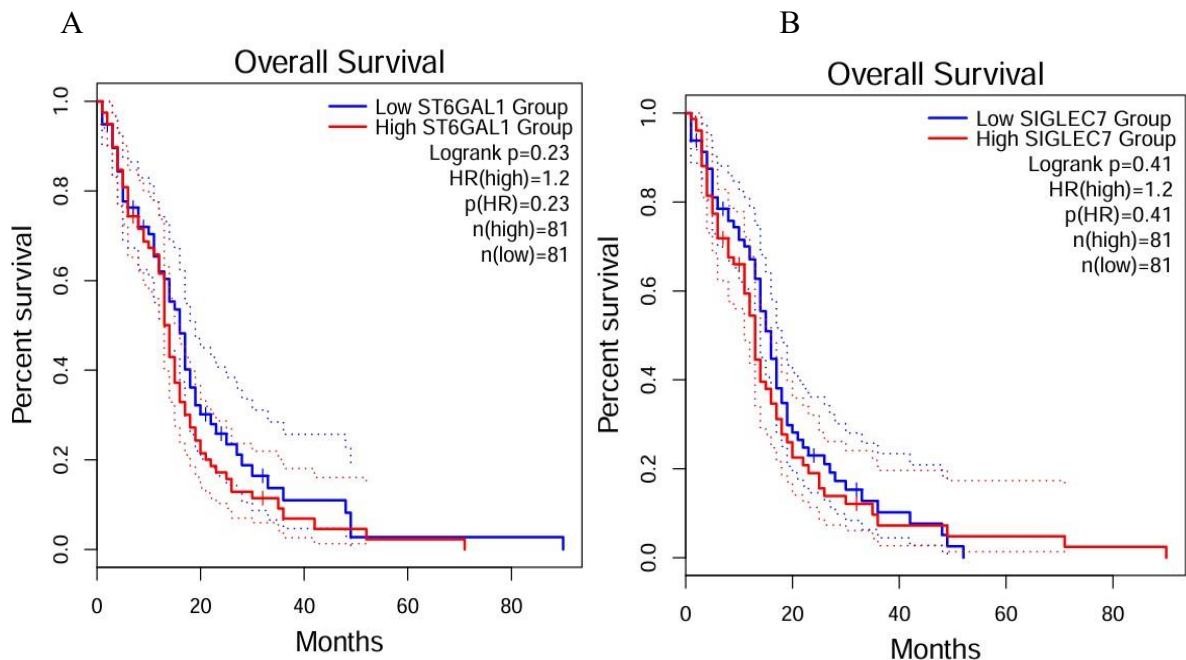


Supplementary Figure S1



Supplementary Figure S1. Changes in Glial cells viability in response to sialic acid. Glial cells viability was monitored under the effect of various Sialic acid (µg/mL) treatments. Optical density was measured at 570 nm. Error bars represent ± standard error for 8 replicates.

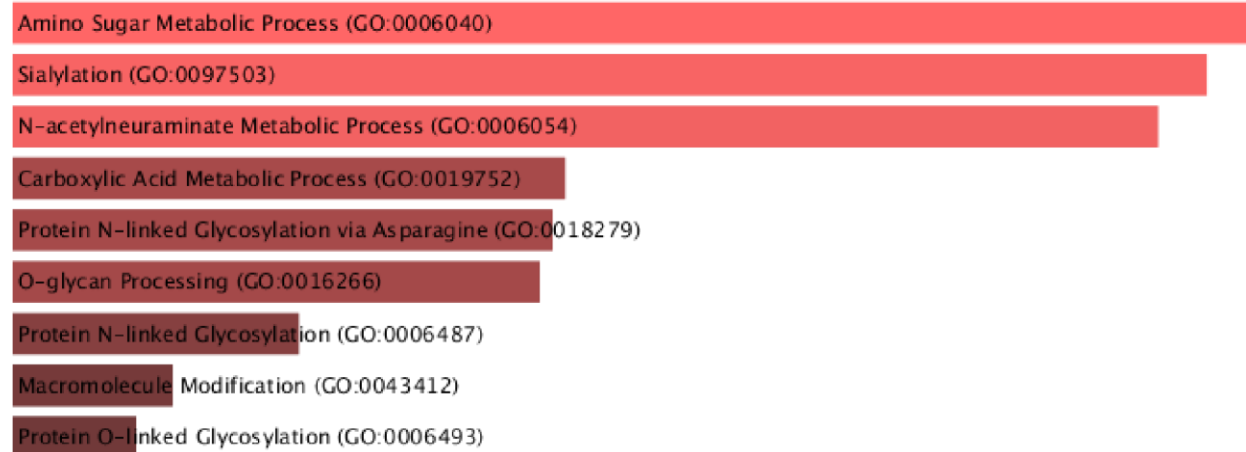
Supplementary Figure S2



Supplementary Figure S2. Kaplan-Meier survival analysis of ST6GAL1 and SIGLEC7 in LGG patients. Kaplan-Meier curves comparing overall survival between patients with high and low expression levels of (A) ST6GAL1 and (B) SIGLEC7 in the TCGA-LGG cohort using GEPIA2. The log-rank test revealed no statistically significant difference in survival between the high and low expression groups for either gene (ST6GAL1: log-rank p = 0.23, HR = 1.2, n(high) = 81, n(low) = 81; SIGLEC7: log-rank p = 0.41, HR = 1.2, n(high) = 81, n(low) = 81), indicating that expression levels of these genes are not associated with prognosis in this cohort.

Supplementary Figure S3

GO: BP



GO: CC



KEGG



Supplementary Figure S3. Functional enrichment analysis of differentially expressed genes. The figure shows the significantly enriched terms in Gene Ontology (GO: BP, CC) and KEGG pathways. Terms are ranked by statistical significance (adjusted p-value < 0.05).