



**Figure S1:** Metabolic pathway of GALC gene substrates. Sphingosine is first acylated to Ceramide, which is converted to Galactosylceramide by Ceramide Galactosyltransferase (CGT). The Galactosylceramide is considered a type of Hex-Cer. The CGT enzyme can also galactosylate the sphingosine directly to form Psychosine. Both Galactosylceramidase and Psychosine are degraded by GALC, which is absent in HOM mice of this study.